TELECOMMUNICATIONS REGULATION

Richard A Epstein

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Telecommunications Regulation

The general question that I have been asked to address is this: how to think about telecommunications regulation. My comparative advantage is not in particular knowledge of the ongoing New Zealand dispute on how heavy- or light-handed telecommunications regulation ought to be, although I have some weak instincts on that subject that I will share with you in due course. Instead, it is probably better for me to approach the topic by talking about the stages of network communication deregulation in the United States as it evolved through to the 1996 Telecommunications Act. As is so often the case, it is critical here to speak not only of the statutes involved, but also of their administrative and judicial interpretation. One of the great perils of telecommunications regulation is that the need to create ongoing administrative oversight opens the door to massive political influence that is extremely difficult, even in the best of circumstances, to counteract.

The breaking up of the American Telegraph and Telephone Company

Let us start by defining the basic problem with telecommunications regulation. If subscribers want to get into the communication network through one provider, how can they reach other subscribers of other companies? We want to have seamless integration of the various providers

on a single network at the same time that we have the competitive provision of basic telecommunications services.

Unfortunately, this is not always how the problem has been described. In the history of US telecommunications regulation, the seamless nature of the network was often regarded as the first priority. Over and over again, before its break-up in 1982, the American Telegraph and Telephone Company (AT&T), otherwise known as the Bell system, kept up the mantra that the system mattered above everything else. There was no need to worry about interconnections between rival suppliers on that network because there was only one supplier and that was Bell. It guaranteed communications reliability and, in exchange for the monopoly, was willing to submit to a system of rate regulation, which it could influence but not control. So there was a trade-off in the American system: it was comprehensive and exclusively private, which is perhaps better than a state-run system, but it was a system subject to government regulation of its rates.

Indeed, in order to obtain the monopoly over the common carrier business, AT&T sold all of its radio stations in the 1920s to make sure that it was a single focus company. It then defended successfully the unification of the telephone system, almost to the point of absurdity. The costs of this strategy were revealed in the famous case of *In the Matter of Hush-a-Phone Corporation et al*, 20 FCC 391 (1955), 238 F 2d 266 (DC Cir 1956) which concerned the use of an attachment to a telephone that muffled outside noises. AT&T argued that this device tampered with its equipment. Its move was economically odd, because the success of the Hush-a-Phone should have increased the demand for the complementary good – telephone service. Yet to the Bell system, that short-term economic gain was dwarfed by its overriding political objective of keeping all potential competitors out of the basic system. AT&T actually got its way inside the Federal Communications Commission (FCC). It took litigation in the federal courts before consumers could use the Hush-a-Phone devices. That litigation revealed the judicial uneasiness about a much larger

question – the Bell system's determination to prevent privately beneficial activities that were not detrimental to the integrity of the system as a whole. The complications about system integrity raised by electronic interconnections were not apparent in this context at all.

Although the *Hush-a-Phone* decision had few long-term consequences in and of itself, it laid bare the disadvantages of the unified system under Bell's control. A monopoly provider under rate-of-return regulation has some impulse towards innovation and cost cutting, but the push for efficiency will not reach the same intensity that it would under a competitive system. In addition, the placing of all phone services under the same umbrella fostered the creation of hidden cross-subsidies. These cross-subsidies were tolerated because the American attitude was always that any company that produced the right bottom-line result (that is, in terms of profit and loss) was not in a position to complain about the losses that it was forced to bear in one discrete line of business. Happily for the regulators, if one service was priced too high and a second too low, the two errors would cancel each other out in the overall rate-of-return of the regulated firm. However, in terms of the economic efficiency of the telecommunications system as a whole, the results of this type of pricing are far worse than those endured by the company, because these errors do not cancel: they cumulate. Thus if the regulator prices one element too low, the consequence is excessive consumption; if it prices another element too high, the consequence is insufficient utilisation. The upshot is two inefficiencies, both of which have negative effects.

This old unified system also gave the regulators considerable flexibility, much of it mischievous. Historically, the United States had dual objectives for its telecommunications law. One was to create a comprehensive network; the other was to have some income or wealth redistribution among the users of that network. Those users who could not afford to pay the full price for telephone services received a subsidy from individuals who could. The former group included poor people, but there were two more important and controversial beneficiaries under the prevailing

ideology. These were residential customers, some of whom were quite well-to-do, and rural users, for whom it was expensive for the company to provide a widely dispersed service. Under the universal service obligation, AT&T was obliged to supply these customers at below cost, resulting in lost transparency. So long as the bottom line on profit was acceptable, nobody knew the exact cost of these obligations.

The US system of regulation was complicated further by an element mercifully absent from New Zealand, namely federalism. It might seem appropriate for the federal government to control exclusively a national telecommunications network, but section 152 of the Communications Act of 1934 contained a clear reservation of rights to state governments and local commissions to set local rates. Indeed the US Supreme Court held that this division was important, so much so that in *Louisiana Public Service Commission v FCC*, 476 US 355 (1986) it held there could be two rate-making procedures with respect to the same piece of equipment, involving, for example, rapid depreciation under the federal system and slow depreciation under the state system. Each regulator could adopt a different policy with respect to write-offs, depreciation and subsidies. (These factors, by the way, are not simply of academic or historical interest today. As we shall see, they go to the core of the difficulties experienced by the telecommunications sector in making the transition from the previous system of regulation to that introduced by the 1996 US Telecommunications Act.) By the late 1970s there was a clear level of industry dissatisfaction. Pressures to break up the Bell system were growing.

The profound changes that followed in the United States were not instigated by administrative action, let alone political action. Rather, they were initiated by judicial decision. The late Judge Harold Greene, in *United States v American Telephone & Telegraph Co*, 552 F Supp 226 (DDC 1982), ordered the break-up of AT&T, and constituted himself as a kind of permanent council of review that would regulate what happened after the break-up. The basic structure and logic of Judge Greene's system set the stage for the 1996 telecommunications reform.

Judge Greene decided that there would be seven regional Bell companies, each of which would have a monopoly over the local loops for both commercial and residential traffic. They would be barred from engaging in long-distance business. AT&T, which was the other half of the Bell system, would be a free-floating long-distance carrier in competition with other providers. MCI was the main competition at the time. So there was an attempt to create a system of competition in the long-lines market without disturbing the local monopolies retained by the Regional Bell Operating Companies (ROBCs). However, it was necessary to be able to link these two systems, which raised the technical question of interconnection and interface. An elaborate set of discussions resulted in a series of connection charges computed in a multitude of ways. As might be expected in a dynamic technological industry, the cost of connection fell more rapidly than the regulated rates. The result was a systematic upward bias in prices for access charges that, naturally, upset many of the long-distance carriers.

This did not necessarily mean that the local companies retained super-profits, because under Judge Greene's break-up order the universal service obligation devolved to them. So it could never be shown how much of the overcharges, if any, that had existed in the long-lines market and in the interconnection fees compensated for the subsidies previously poured into the local loop. Judge Greene's regulatory scheme turned out to be the source of immense difficulty and it is hard to describe today the persistent and simmering bitterness and antagonism that existed between the judge and the local companies. Every time they proposed an innovation he would have endless procedural and substantive objections. Time and again the need for judicial approval proved to be the bottleneck to innovation. To make things even more complicated, often the judge would not move until he got the informal advice of the Department of Justice, thereby creating the worst of both environments. There was judicial oversight over technical administration and informal administrative oversight over the judicial oversight.

The 1996 Telecommunications Act

Nonetheless, as everywhere, the telecommunications industry flourished in the United States, driven by insatiable consumer demand and much technical innovation. But clearly this jerry-built system of regulation that included courts, the Justice Department, state agencies and the various carriers was not going to last. Extensive lobbying led to passage of the Telecommunications Act 1996. The Act tried to undo the local monopolies established under the 1982 court order and to create competition at every level of the system.

There was a sense in which the new system was wildly oversold. When people talk about the creation of competition in the telecommunications business, the image they project is often of one company engaged in a constant competitive struggle with another, as in many other industries. But an examination of the telecommunications statute makes it clear that even though the aim was to create competition in the consumer market, the networked interdependencies were not simply going to disappear.

Putting aside the jurisdictional complications, the 1996 reform proceeded in two stages. The first stage was an obligation to bargain in good faith on the provision of access to the local loop. Each of the RBOCs owed this obligation to the new industry entrants, which were bound by a reciprocal obligation to the RBOC. But the symmetry could not be perfect because the RBOCs had the basic franchise, and surely had (as they still have) much to lose when entry takes place. The point of the good faith obligation is to induce each side to consider only the costs it bears from hooking up, and to ignore the potential gains from holding out. However, these costs and gains too were larger in the case of the RBOCs. The question is how to temper those predictable manifestations of self-interest.

That said, where does the impulse for good faith in bargaining come from? Not from telecommunications law that has been narrowly conceived; rather it stems from a tradition that makes monopolies an exception to the common law rule that allows people to sell their goods

and services at whatever price they see fit. Firms in monopoly positions have always had to bargain in good faith and to accept reasonable rates, however conceived, even though they could bargain for more. The original impulse behind the 1996 Act was to impose this sort of good faith obligation; there were no strong notions of how it was to be enforced, and if the two parties could agree amicably, nobody would go behind their agreement to see whether or not it was in conformity with some economic pricing system. If they could not agree, then a government agency would force the parties into compulsory arbitration to examine the cost structure of the two firms and to ferret out any attempt to engage in hold-out behaviour.

The choice of the good faith language then makes some conceptual sense. But it is quite a different matter to ask how that loose prescription is turned into a set of operative rules. Public choice theory predicts aggrandisement by the administrative agencies charged with implementing the scheme and, on this score, the FCC, which had to draft within six months the regulations for implementation, did not disappoint. The lobbying on all sides was, of course, intense. By the time the FCC had drawn up rules to determine when people were acting in good faith, the process had become more complicated than anyone could have imagined when the bill was passed, to much jubilation, six months before. The original statutory mandate was addressed to the one problem in telecommunications that does require a distinctive response, namely, how to forge the network with rival carriers. But the FCC changed substantially the nature of the game. It determined that new providers should come in neither with any systematic disadvantage or advantage vis-à-vis the incumbent. However, when the FCC set out the rules for implementation – and I think this may be an object lesson for New Zealand – it introduced a clear tilt into the process. The aim of the statute was to create a level playing field between two parties with unequal positions. The administrators of the statute believed that such an environment was reached only if there was actual full-blooded

competition in the market. They therefore saw their job as being to hasten entry by new firms into local markets. They did not see it as the protection of the infrastructure that the local firms had created at their own expense.

The interconnection problem

What were some of the tools the FCC used to achieve this structural imbalance? The first question was that of how to price the services. Should historical cost be the basis for calculation of the interconnection charges or a forward-looking method, in particular Total Element Long-Run Incremental Cost (TELRIC)? There were also suggestions of the FCC using an efficient component rule.

The greatest difficulty in the application of TELRIC is not some fundamental theoretical defect; rather it is an issue that is systematically underestimated in dealing with regulatory regimes as an abstract matter, but which weighs extremely heavily in practice. This is the question of transition from one legal regime to another. The word 'transition', to a lawyer or a businessperson, means trouble. In ordinary life, it is the transition from street to car, from parking lot to road, that holds the greatest risk of accident. In regulation and common law adjudication, the most difficult problems arise in the transitions between systems of property rights, such as moving from one system of water rights to another. So in this regard, the transitions in the telecommunications industry lived up to their expectations as a source of trouble.

Why is the transition problem so serious? The key point to remember is that the previous system did not use regulation to assign cost to a given entity or to make sure that services were accurately priced in the periods in which they were delivered. Rather, it became common practice very early on to allow the costs incurred in one period for the benefit of one group of consumers to be recovered only in a later period, where necessarily they had to be recouped from a different group of consumers. For example, the systematic bias of the state regulators, as opposed to the federal regulators, was to reduce the burden on the current consumers. They favoured relatively slow rates of capital recovery and, to achieve that

end, they set extended depreciation schedules. Given this policy, it was common, for example, to set a 10-year depreciation schedule for equipment that was out of service after five years. So for the next five years, some people were going to have to pay for something that was not in service at the time. Just a whiff of a Ponzi scheme under regulation, which might remind New Zealanders of the odd accounting practices that led to the crisis in the New Zealand system of accident compensation.

In moving to the new regulatory regime under the 1996 Act, the FCC had to confront the issue of whether the incumbents should be allowed to recover the elements of retired costs that had been built into the old regulated system. In a forward-looking system, a new company naturally asks why it has to pick up costs unrelated to the provision of any services. On the other hand, the incumbent Bell company expected to be given an allowance for the retired costs, but now the state was proposing to renege on that promise, dressing up its case with reference to changed circumstances.

This regulatory posture created immense debate over the terms, express and implied, of the political compact between a regulated industry and its regulators. The United States has a constitutional regime that protects property from confiscation. Although that protection has been far from uniform over the constitutional history of the United States, the basic constitutional understanding is that if a private party invests in a certain kind of business and the state intervenes in a way that destroys the investment, then some allowance must be made for the recovery of the capital plus a reasonable return to avoid the constitutional command against confiscation. Those who resent this constitutional imposition seek to wriggle out from under the command by arguing that the incumbent should have known of the risk of regulatory changes: the claim is that the constitutional compact does not preclude that assumption of risk defence. To implement this programme requires courts to assess the allocation of risk with respect to a regulatory change that neither party can accurately foresee. In principle, a risk component built into the

original rates structure might accommodate this problem by providing some additional premium as a kind of public insurance against the change in legal regimes. But given the range of plausible rates of return under a regulated rate-of-return system, it would be difficult to calculate in practice. In my judgment, a heavy burden is on the state for it to make out that it has acted with such benevolent foresight in its usual rate-making proceedings when the political pressures typically keep those rates at the bare minimum. I do not see any evidence in the rate-making practices of the FCC and of the various states that suggest that such an allowance was contemplated.

There are other severe problems with the TELRIC system. One such difficulty is that the entire programme assumes that the incumbent has put together the ideal network at the lowest possible cost. Thus if there is a mistake, the cost will be borne by the incumbent, and any newcomers will be connected at their aliquot portion of the idealised cost. The reality is that when complicated networks are created, mistakes are going to be made. If all the benefits and all the costs are internalised, mistakes are not a concern. But if all the costs are internalised and some or all of the benefits are externalised, then a systematic advantage is necessarily created for the new entrant, because mistakes in designing a complex network will always creep in somewhere in the process. One possible justification for advantaging new entrants is that incumbents may engage in stalling behaviour, as resistance to new entrants to the telecommunications industry is very strong.

A second major issue that arose in the transition to the new regulatory regime concerned exactly what elements of the incumbent's exchange network had to be up for sale in order to forge network interconnections. This is a technical and somewhat arcane matter. What is the obligation of incumbents to transfer, and at what price, Unbundled Network Elements (UNEs) from their own operation to somebody else's?

To put the matter in its proper perspective, it is useful to note that new entrants can take two different paths to get into the tele-

communications business. One is simply to buy the output of the incumbent and resell it. This is essentially a risk-free venture for the new entrant, because it only buys those service units for which it already has contracts. Pricing is accordingly based upon the retail price less the avoided cost, the theory being that if the new entrant is more efficient in how it sells capacity, its costs will be less than the avoided cost of the incumbent. For those who are familiar with the Baumol-Willig rule, this looks remarkably like efficient price component selling. The alternative is for a new entrant to buy the UNEs and then to put them together in its own system. This gets us to the definition of UNEs, because incumbents have already bundled these elements together. By doing so, they have invested a lot of intellectual property and knowhow into the configuration of their network. Indeed that is the area for maximum gain. So, one of the great debates before the FCC was whether already bundled elements had to be transferred bundled, or whether the incumbent could unbundle them before sale, following which they would be reconfigured.

The argument of the new entrant was, of course, that to unbundle things already bundled together creates social waste. The incumbent's argument was that without unbundling there was effectively confiscation of the intellectual property and knowhow. The Supreme Court has tended to side with the FCC and to allow the systematic transfer of information and technology. In *AT&T Corp v Iowa Utilities Bd*, 525 US 366 (1999), the Court used a very broad definition of what counted as an Unbundled Network Element. My conception is that a UNE is any kind of blockage that hampers the linkages needed to run a unified system. The current Supreme Court definition for a UNE is anything that allows the provider to run a better telephone system. This choice of definition has major implications. If attention is concentrated on bottlenecks, the number of forced exchanges required to complete the network will be minimal, and for everything else (items that can be competitively supplied) the new entrant will deal in the marketplace. If, on the other hand, we adopt the broader Supreme Court definition, then the new entrant can acquire from

the incumbent, under a forced purchase regime, things that are capable of being competitively supplied. The effects of this practice could be quite one-sided.

Nobody knows how to price these elements. So when the FCC, at great administrative cost, comes up with a price, it is always too high or too low. If it is too high, the outsider will go elsewhere to purchase the desired unit. If it is too low, the new entrant will buy it in large quantities and make a killing. The asymmetry of the situation creates a free option for the entrant. This is one example of how the statute has been systematically construed in favour of new entrants as against incumbents, in a way that goes beyond its original intention and also, more importantly for comparative purposes, beyond the dictates of sound institutional arrangements.

I noted earlier that under the old system each company had to be content with a comprehensive rate of return. If there was a reasonable average level of return on invested capital, nobody bothered to figure out how much was lost here and what super-profits were gained there. Once there was competition in the long lines, and to some extent in the local loop, the subsidies had to be measured in order to be able to allocate the amount across the different carriers. Nobody has ever developed a satisfactory methodology for that purpose. The FCC has spent several years coming up with words like 'reasonable joint income', which indicate that there is a real problem but do not constitute a means of solving it.

Another point that might be relevant to New Zealand is that when the issue of telecommunications reform first came before the Congress, only technocrats appeared on each side of the argument about interconnection pricing; the public took no interest apart from relying on the broad promise of the benefits of competition. The moment the universal service obligation became an issue, the people who appeared before the Congressional hearings suddenly changed; there were concerned groups of consumers, racial minorities, farmers and so on. These lobby groups were able to transform the nature of the obligation

substantially, so much so that there was a run on the Treasury far in excess of the anticipated costs. These groups succeeded in extending the universal service obligation to cover below-cost wiring of libraries, health institutions, schools and the like. All sorts of opportunities arose to expand it further. If the government was prepared to subsidise an internet wire, might there be an opportunity to rip out a whole floor, put a wire in and rebuild it, and then send the entire bill to the federal government, not as housing construction or as new facilities construction but simply as internet connections? There was more silliness on this issue and more overruns in costs in a short period than anybody had expected until AT&T led an industry rebellion by threatening to publish a separate item on its billings showing how much the universal service obligation added to consumer expense. The FCC, of course, took a dim view of transparency, which it regarded as being against the public interest.

So that is where the transition is at in the United States, and it is not at all clear that it has been a success. The United States did not start with a nationalised system but with a regulated local system. The key feature of local regulation was price caps. That is a system in which you start from some historical point, regardless of how you got there, and allow prices to go up to reflect increased costs and to come down for technological improvement, so that the suppliers are constantly squeezed to the point where they have to innovate or die. It was not a pure competitive system but it worked after a fashion. And in a world of second best, one cannot attack the admitted imperfections of one system without showing how some other system works better.

Possible lessons for New Zealand

So what lessons from all this could I draw for New Zealand?

The first thing to say is that no matter what approach you take, I do not think New Zealand will ever duplicate some of the expense and mischief that occurred in the United States. That is, the heaviest light-handed regulation is still lighter than the regulation under the US system.

New Zealand does not have the federalism overlay or the independent agency overlay, so it is better off with the worst of all the local proposals than it would be with the best of those canvassed in the United States.

That said, how should the case for regulation be evaluated? First, it is very important to limit the objectives pursued through telecommunications regulation and to be explicit about what they are. Next is simply the question of whether and where there are powerful monopoly constraints. Only in the event of such constraints should there be some way to force interconnections to break the local monopoly – if it exists at all. My own instinct is that the better way to break up monopolies is not through regulatory incrementalism but by encouraging new technologies to overtake existing technologies. The two obvious candidates for achieving this are mobile telephony, which in effect means that the last mile does not matter at all, and fibre optic cable.

In my view, the first best strategy is to do whatever is needed to introduce cellphone competition, including, if necessary, facilitating some system of interconnection charges between the cellular systems and the fixed-wire systems. The same thing could be said of cable. The local loop is of trivial concern for urban business services, since that market is so valuable that new entrants will invest in new fibre optic cables.

Secondly, it is necessary to make explicit the cost of the local universal service obligation; in New Zealand's case the Kiwi share obligation. It is striking that nobody can give a conclusive answer as to whether the rates charged by Telecom for the standard residential service are (a) subsidised for the consumer to the extent that nobody will try to undercut them, because that will simply mean losing more money; or (b) above the market rate, which induces others to enter. I do not know what the answer to this question is. In Wellington, when Saturn entered the market, Telecom responded immediately by cutting prices and the Commerce Commission sanctioned its decision. That was the right response. It is much better to have low prices in one market and higher prices in another than higher prices across the board. Unless competitive pricing is allowed, an improvement in the position of Wellington consumers will not take place

except if there is also an improvement for Auckland consumers, which may mean that there are no improvements at all. Alternatively, if Telecom cannot respond in the Wellington market, a different monopoly called Saturn is likely to emerge because it will win all the business.

Given that elementary framework, where does New Zealand go from here? There is no basic principle that will tell you confidently whether to prefer historical cost, TELRIC, the Baumol-Willig rule or anything else. My own instinct is to keep a relatively light hand on regulation because technological innovation is driving rates down in all the key markets. As long as there is downward pressure on rates, the fact that somebody is earning a monopoly profit – if indeed it is a monopoly profit rather than a (perhaps) temporary economic rent – is secondary. If the same situation existed as in the US local markets, where rates have not moved downward at all in the three years since the introduction of the Telecommunications Act of 1996, then there may need to be a reassessment.

Generally speaking, I do not like disclosure regulation because you cannot administer a system of selective disclosure. Whatever is disclosed to somebody is disclosed to everybody, customers and competitors alike. In some hands the information might be put to beneficial uses, but in others it might not. In addition, if there is open disclosure there is the risk that the production of information will be reduced. The constant problem of intellectual property is how to get the widest use of information without reducing the likelihood of it being collected and produced in the first place.

Thus if prices seem to be firm and going up, there may be a case for the US price-cap system to force a steady ratcheting down of prices over time instead of a steady ratcheting up. If, on the other hand, prices are steadily falling, there seems to be no strong case for intervention. In New Zealand today the situation seems quite satisfactory, with the possible exception of the local loop where the relationship between cost and price and the case for the Kiwi share obligation need to be examined.

Respondent: Michael Lear, deputy secretary, Ministry of Commerce

Thank you very much for the opportunity to respond to Professor Epstein's comments. What I thought might be useful would be to canvass briefly where New Zealand has got to with the telecommunications regime. I think this lecture is particularly timely. It is 10 years almost to the day since the New Zealand telecommunications market was deregulated. Some other countries deregulated before New Zealand but only in parts of their telecommunication sectors. New Zealand was the first country to deregulate comprehensively across the entire sector with, I might add, a lot of advice from US economists. The result is a unique regulatory regime that relied almost entirely on general competition law to safeguard competition. The only additions were some information disclosure requirements and, when Telecom was privatised, some so-called Kiwi share obligations that are roughly equivalent to the US universal service obligations. Most other countries that deregulated either left in place or created telecommunications regulatory authorities, detailed industry-specific regulations and extensive controls on retail and interconnection prices. We have already heard today how the United States went down this route.

One would have thought that after 10 years the verdict on whether New Zealand's regulatory approach was a success or a failure would be

clear-cut. Unfortunately, that is far from the case. If anything, the debate on our regulatory regime is more vigorous than ever. We have numerous reports and studies that seek to show that the New Zealand regime is either a great success or an abject failure. Supporters of the regime, including Telecom, claim it has been a resounding success. They point to substantial improvements in service; competition in most if not all sectors of the industry; some 11 interconnection agreements between Telecom and its competitors; and continuing falls in prices. The price reductions have been most notable in national and international calls, especially in the last year, but in the period since deregulation the overall basket of residential services has fallen some 25 percent in real terms. We have the steady introduction of new technologies and services, substantial and continuing capital investment, and the emergence of competition in the local loop in certain areas. Some supporters of the regime argue that there will be perverse outcomes from any strengthening of regulations and that any indication by the government of willingness even to review the regime simply encourages gaming behaviour and lobbying.

Critics of the regime, led by the non-Telecom players, have an entirely different point of view. They tend to agree with *The Economist* which, in a 1997 survey of telecommunications, singled out New Zealand's regulatory regime as a case study of how not to regulate telecommunications. The critics argue that reliance upon general competition law and the courts for enforcement has meant in practice that Telecom is the *de facto* regulator. The uncertainties in the law, combined with the costs, time and uncertainties involved in taking court action, means, in the view of the critics, that Telecom remains in a dominant position. The effects of this, they argue, are onerous and unfair terms and conditions for interconnection; relatively weak competition by at best healthy dwarves; huge profits for Telecom; excessive prices for access to the local loop; and overall, far weaker benefits from deregulation than should have been achieved. Often the critics, somewhat paradoxically in my view, say that they do not advocate a move away from a light-handed regulatory regime or the introduction of detailed regulation, perhaps with

an eye on the US experience. Instead, they say that all that is required are 'a few simple rules'. Recently, the chief executive officer (CEO) of one of the competitors argued that such rules could be introduced with 'a stroke of a pen'.

Both supporters and critics of the regulatory regime have being trying, through a series of studies, to prove their point by demonstrating that the outcomes from competition in New Zealand are either particularly bad or particularly good when compared with those achieved in other countries with different regulatory regimes. Attempts are made to compare interconnection prices, prices for a basket of residential or business services, or the profitability of Telecom with telecommunications companies in other countries. These studies have inevitable complexities and the result is a series of claims and counterclaims.

Key questions about these studies are:

- do they compare like with like?
- is the methodology robust?
- are the modelling techniques and assumptions appropriate if modelling is used?
- are the input data correct?
- are nominal exchange rates or purchasing power parity used? (the difference in outcome is quite significant) and, of course;
- do the study results support the explicit or implicit conclusions that have been drawn?

These are all issues that the government has to form a view on, even if it is only that the studies are inconclusive or do not in themselves present a compelling case for change. In the meantime, the government has taken the view that aspects of the regulatory regime require improvement. It has decided that the general competition law, the Commerce Act 1986, needs an overhaul. A bill will be introduced into parliament that is intended to strengthen the penalties and remedies substantially. In addition, a discussion paper has been released canvassing some amendments to two key sections of the Commerce Act 1986: section 36, relating to anti-competitive behaviour and section 47, relating to mergers and takeovers.

The information disclosure regime for telecommunications will also be strengthened, so I was interested to hear Professor Epstein's comments that New Zealand should not go down this route. A discussion paper released by the Ministry of Commerce in November 1998 proposed that Telecom prepare and disclose separate financial statements for the local loop and for its other businesses and disclose transfer payments between the local loop and for its contestable activities. Disclosure of any losses made by Telecom under its Kiwi share obligations, while these form part of the interconnection prices, was also proposed. These proposals are aimed at putting pressure on local loop costs and prices. I was interested in Professor Epstein's view that the better way to advance may be price control, but I think that that probably goes further than we would feel comfortable about contemplating. The information disclosure requirement also aims to discourage cross-subsidisation between Telecom's local loop and more contestable businesses and to facilitate interconnection negotiations. Perhaps not unexpectedly, Telecom has objected vigorously to the proposals, while some competitors have said they do not go far enough. Certainly we appreciate that the complexities of information disclosure are non-trivial, but if information disclosure is to be a key part of the regime, the disclosed information must be robust or it is a waste of time for everyone.

Lastly, the government sought to facilitate the development of arrangements by the telecommunications industry for efficient number administration and portability, with the threat of regulation if Telecom refused to agree to arrangements that the government considered would result in efficient and timely outcomes. In the event Telecom did agree to a Number Administration Deed that had the effect of taking the administration of numbers and the further development of number portability out of Telecom's control. The Deed is currently before the Commerce Commission for an assessment of its acceptability under the Commerce Act 1986.

The New Zealand government is thus prepared to enhance the regulatory regime where it believes a compelling case exists for it to do

so. It is firmly of the view, however, that it should not do so lightly. Without doubt, the US experience is salutary: rules beget more rules. One thing is certain: telecommunications regulation will remain highly contentious in New Zealand, just as it is in all jurisdictions internationally. No country has escaped controversy over its telecommunications regulatory regime.

Respondent: Henry Ergas, economic consultant

Thank you very much Professor Epstein for some very interesting and helpful comments about the US situation. I am not going to talk about the United States but about comparisons between Australia and New Zealand.

Some days ago, I had the unfortunate task of reviewing the latest version of the Australian Consumer and Competition Commission (ACCC)'s facility access code. The code is intended to regulate the terms on which Telstra's competitors can access Telstra's telecommunications facilities and mainly applies to ducts, radio masts and towers. It is not about interconnection but rather the shared use of facilities. It forms a relatively small but important part of the Australian telecommunications access regime.

Three features of this code are especially striking. The first is its sheer length. The code itself, together with its explanatory material, covers over 100 pages of text. The second is that it is well nigh impenetrable. With all respect to my lawyer friends, it is a tangled jumble of legalese, all pretence of plain English drafting having long been abandoned.

The third feature is that when you finally understand it, or believe you understand it, the provisions of this document are really quite extraordinary. For example, there is a provision that stipulates that if a carrier builds a facility it cannot deny a third party the use of that facility, even if the use by that third party would displace its own use. So I might

build a radio mast expecting to locate a receiver on it and then Telecom New Zealand comes along and says "I am operating as a carrier in Australia and I would like your radio mast". Unless I can show that I have actually commissioned the antenna, I cannot refuse Telecom New Zealand access. Moreover, when this happens there is no presumptive claim on the part of the owner of the facility to a payment from the access user, compensating for forgone use. Rather, the code stipulates that opportunity cost is merely one of the factors that the ACCC may or may not take into account in determining the terms and conditions of third-party use.

When I read material of this kind, it naturally leads me to wonder quite how we got where we now are. I say this with a tinge of personal regret, having been in one way or another involved in quite a few of the worst decisions. In September 1987, the late Peter Wilenski, Secretary of Australia's recently created Department of Communications and Transport, asked me to be an external member of and economic adviser to a task force of officials that he was setting up to examine the scope for telecommunications reform in Australia. For the next eight months or so, a group of about a dozen officials did a lot of quite good work. Yet the structure that was the outcome of those reforms has certainly not developed as I, at any rate, hoped and expected.

At about the same time New Zealand was grappling with much the same issues. The starting position in New Zealand was even worse than in Australia. Australia at least had begun the commercialisation of what had previously been the Postmaster-General's department in 1974 as a result of the Vernon Commission of Inquiry into the future of the Australian Post Office. New Zealand in 1987 was about where Australia had been in 1973, and it showed. I came to New Zealand with a study group of officials at that time. We found that prices here were high and the quality of service was low. The best that could be said for productivity levels in New Zealand was that they made the Australian carriers look good, which was a considerable feat. So New Zealand had a long way to go. Australia had been mightily influenced by the Thatcher government that set up the Office of Telecommunications (OFTEL), and by Professor

Bryan Carsberg, the first director-general of OFTEL, who was a very powerful publicist for the OFTEL regime. Australia put in place an industry-specific regulatory regime, but New Zealand's fourth Labour government simply decided to remove all the statutory barriers to entry. I put the proposition to the then Australian minister of communication, Gareth Evans, that the simplest thing to do was to liberalise the industry completely and he said "not in my lifetime". New Zealand just removed the barriers to entry and exposed the industry to the full disciplines of the Commerce Act 1986, something Australia did not do the equivalent of until 1997. Put simply, in the early stages we thought this was clearly and completely wrong.

Now, as Mike Lear observed, it is almost 10 years to the day since those reforms were implemented in New Zealand. Its regulatory arrangements have remained largely stable since then. In Australia, meanwhile, there has been a gradual process of market opening. While the key features of the regulatory scheme have not changed and, in particular, industry-specific regulation has remained the cornerstone of the institutional edifice, that regulation has become ever more sweeping in its scope, detailed in its administration and potent in its powers and penalties. Indeed, the other day I had to archive some 40–50 files of instruments produced under the Australian regime because I simply had no room left in my office for them.

Given this process in Australia and relative stability in New Zealand, it is not unreasonable to ask how well each of the regimes has worked, notably in terms of outcomes for consumers. Mike Lear referred to this line of inquiry when he said that everyone is trying to show that the system is either terrific or disastrous. Emma Clark, an economic consultant, and I recently tried to address the question "how would New Zealand consumers fare if they faced the prices charged by Telecom's equivalents overseas rather than Telecom New Zealand's own prices?". We tried to do an international price comparison exercise. We started from the New Zealand consumption basket, ie the actual mix of local calls and national/international toll calls made by New Zealanders, and we then applied to

that basket the prices charged by Telecom in New Zealand and by its counterparts in a number of other countries.

Such exercises involve a significant number of assumptions. We tried to be consistently conservative in the assumptions we made. The work was commissioned by Telecom and so we had a strong incentive to be squeaky clean as there would obviously be a great deal of scrutiny. So, for example, we corrected the prices charged by Telecom in New Zealand for the discounts actually received by consumers. For the other countries we corrected them using the largest discount available in each country, regardless of whether consumers actually qualified for or took up the plans required to obtain those discounts. As a further check on the robustness of the results we used two independent data sets both obtained from consultancies that specialise in monitoring telecommunications prices.

The comparisons show that New Zealand consumers are doing rather well. But what is even more interesting is that the three countries that on this simple measure score highly are Sweden, Finland and New Zealand. These are the three countries that rely most heavily on economy-wide competition laws rather than specific regimes to regulate telecommunications. Conversely, countries such as the United Kingdom and Australia (and even more so, Japan) that have highly intrusive industry-specific arrangements do not seem to be faring as well.

One cannot make too much of these results. In particular, it is difficult to say whether the scale used is necessarily the right one, given the differences between the countries. The sensitivity testing that we have done, however, indicates that the rankings would not be materially altered and that these rankings are revealing in respect of the costs of industry-specific regulatory arrangements. This can be illustrated by Australian experience. In essence the Australian regulator has had a dual mandate, first to deliver benefits to consumers and second to promote competition. Neither of these tasks is easy; technological change does provide scope for prices to fall but once the more obvious catching up is over, the gains do not provide a really sharp contrast with the preceding regime. The

emergence of efficient competitors also takes time, especially in those parts of the industry where significant investment is required. So, faced with these constraints, successive Australian regulators have been nearly overwhelmed by the fear that the reform experiment would be viewed as a failure. As a result they have been driven to quick fixes that could rightly or wrongly be portrayed as benefiting consumers and strengthening the emerging competitive alternatives. In practice, there is only one possible source of these quick fixes and that is wealth transfers.

What the regulators have done in Australia is to dress up as pro-competitive, measures that primarily transfer wealth from the owners of the incumbent to the owners of its new competitors. Such transfers allow the regulator to point to decisive results that could not have been achieved without the industry-specific powers on which the regulator has relied. Many examples could be given of this practice, but I will cite only a couple. The ACCC recently determined on the basis of one sentence in a speech given several years ago by Telstra's then CEO that Telstra's costs were 30 percent higher than world best practice. On no greater evidence than that, the ACCC disallowed several hundred million dollars from Telstra's charges to its competitors. The regulator also recently decided that satellites were now cheaper than other transmission options for remote parts of Australia. This ignored the fact that the technical standards imposed by the very same regulator mandate the provision of local service of a quality that, at least in the period for which the cost claim was being made, satellites could not deliver. As a result, the regulator disallowed several hundred million more dollars from the compensation provided to Telstra for meeting universal service obligations.

If you add up those two decisions, the total disallowance of costs comes to close to a billion dollars. Nonetheless, the regulator claims that the provision of the universal service obligation was effectively riskless so that no premium for risk need be included in the regulated rate of return. In both these cases, and many others, the regulator's actions were enthusiastically greeted by Telstra's competitors as well as, oddly, by

consumer organisations. Although the Commission said that these measures could lead to very large price wars, it never said whether those price wars would be sustainable.

The result was that Telstra was left standing in a lonely corner and portrayed as defensive, procrastinating and litigious when it sought to alter the decisions being taken. If, on the other hand, Australia had not had this apparatus of industry-specific rules and the ACCC had sought to act under general powers vested in it by the Trade Practices Act 1994, there would have been a much stronger reaction. The reason is not because Telstra has many friends, but rather because so many others in the industry would fear that what was being done to Telstra would one day be done to them. As matters now stand, companies outside the telecommunications sector generally have no interest in the complex machinations of the telecommunications regulator. Decisions taken in that area are not a precedent for what the ACCC can do elsewhere. This in turn makes it virtually impossible for an effective counter-coalition to be organised against a group that includes the Commission, Telstra's competitors and a self-proclaimed lobby for consumers. The motto of the industry-specific regime, in other words, is divide and conquer.

The Australian regime accentuates this problem by using unique statutory tests in the telecommunications context, even with respect to otherwise familiar concepts such as the definition of a service. This effectively shelters the Commission from any need for consistency and it has indeed approached telecommunications regulation in a quite different way from that in which it has approached other industries. The fact that many of the decisions have a substantial technical element increases the scope for this kind of behaviour. We have, for example, spent some 12 months fighting over the details of what are claimed to be forward-looking cost models. I say claimed to be forward-looking cost models advisedly, because it is obviously unrealistic to act as if today's largely voice-orientated network will ever be recreated *de novo*. Yet that is precisely the scenario that the models attempt to cost. Now in the course of these proceedings, which have cost some millions of dollars,

the ACCC has decided to reduce substantially the allowances for the number of copper pairs provisioned for a line in operation. When you build a network, if you have to connect one customer, you do not only provision one pair, you provision more than one pair, because that customer may want a second line or may have a fault on the first line and it is easier to use the second line instead of repairing that fault. In the United States, it is accepted that for each pair in operation, between two and six pairs are provided and hence need to be included in the regulatory cost base. The UK cost networks also use between two and six pairs. "But", said the Commission, "we have looked at this and, frankly, we think you could get away with 1.3 pairs per site".

Telstra pointed out that this reduction would make it impossible to meet the ever more stringent quality of service targets that were being imposed by these very same regulators. For example, if you live within 100 metres of existing infrastructure, Telstra has been able to supply you with up to five new lines within seven days of a service request. So, if we just look at this as a statistical problem, it is obviously going to be very difficult to meet this requirement if, in the network, there are only 1.3 pairs per service-in-operation (SIO) and if Telstra breaches that standard there are fines applicable that run into millions of dollars. Whilst the Commission accepted that it was conceivable that the standard would be breached, it said essentially that unless Telstra could demonstrate the costs of the breach and show that these were greater than the cost of reverting to the original provisioning level, it would simply retain the reduced pairing assumption it had made. The result was that about a billion dollars was written out of the model's asset base.

The Commission's attitude strikes me as being poorly informed, but I recognise that the ordinary consumer and even many widely educated and interested people, if they are outside the telecommunications costing community, will not feel terribly confident about expressing a view on such matters. It also must be said in fairness to the Commission that the approach it adopted was less ludicrous than the approaches that some of Telstra's competitors had suggested. Optus's view was that about 1.1 pairs

per site was ample, even though they do not provision their own network that way. But so long as these wealth transfers are made under the guise of essentially technical decisions, they can be effected with little or no public scrutiny.

In short, industry-specific regulation as we have had it in Australia removes the checks and balances that would operate under an economy-wide regime. In addition, it creates a dynamic that can progressively magnify the costs associated with it in two ways. The first and perhaps most important of these is that complaints by competitors become a one-way bet. When Telstra's competitors complain to the ACCC they have nothing to lose. The worst that can happen is that the ACCC does not offer them anything better than they could get by commercial negotiation. The result is that the Commission is swamped with complaints. It reacts by saying that it has to be seen to act; that it cannot simply ignore all these complaints. Until now, its speed of response has been somewhat hindered by provisions of the Act to do with natural justice. So the Commission has now sought and has obtained support in principle from the government for what we call a 'shoot before you look' power. Nice to have if you are a regulator, but not so good if you are on the receiving end.

Second, once decisions have been taken, there is a natural interest in seeing them work. If you lure in competitors by wealth transfers, you inevitably come under pressure to protect them from the realities of competition. As a result, transfers that were one-offs are converted into continuing subsidies, so it is hardly surprising that even tighter constraints are being sought on Telstra's ability to compete aggressively. Regulations prevent Telstra from de-averaging local prices in response to competition. So if Optus prices at, say, 20 cents in the Melbourne central business district for local calls, Telstra cannot reduce its price to 20 cents unless the reduction flows through within a year to all consumers, including those in country areas where current prices are already well below costs. This provision was introduced with the enthusiastic support of the odd

coalition of Telstra's competitors and the self-proclaimed advocates of the consumer interest I mentioned earlier.

These features of industry-specific regulation can be usefully contrasted with those associated with the courts under economy-wide competition law. In a court system the precedent-creating effect of decisions ensures that there is close monitoring of cases by a range of potentially affected parties. There is a rigorous standard of evidence, and court action, far from being a one-way bet, imposes significant potential costs on the plaintiff. All of this makes the outcomes I have described in Australia less unlikely.

There are, of course, costs involved in relying on the courts: litigation takes time, the courts are often poorly equipped to deal with complex technical issues, and continuing surveillance of conduct is a function not readily discharged by the courts. However, our admitting that these costs exist should not induce us to rush into the alternative. The Australian experience ought to be a salutary warning. It could be argued that in Australia consumers have ended up with the worst of all worlds. There is intrusive regulation, much of which serves to keep prices up. There is unending regulatory proceedings, which are wonderful for lawyers but not so good for the consumer. Increasingly there are disputes in courts as well; indeed, I suspect that there is now more telecommunications litigation in Australia than in New Zealand.

When Australia set out on the process of liberalisation some 10 years ago, it hoped to correct what appeared to be substantial market failure arising from monopoly power. It may be that it has offset some of that market failure but it has done so at a substantial cost in terms of regulatory failure. Unfortunately, there is no theory that allows us to say with confidence quite how institutional arrangements should be devised, so we have to rely on the time-tested axiom that the proof of the pudding is in the eating. Australia largely bought the UK recipe. Today, when prices are examined, it seems Australia is eating the UK pudding, and a rather stodgy one it is. New Zealand chose its own approach and the outcomes do not seem to taste so bad.

Questions

Professor Epstein, I am interested to get an idea of whether you are more interested in dominance that arises from state-owned monopolies or dominance that arises from successful competition in the market place.

It is clear to everybody that if you have a state-owned monopoly and built-in vested privileges, the case for regulation is strong. In that situation it is impossible to tell whether you are getting economic rents because you are a more efficient producer or because of restraints of trade. In a market that is open to competition, however, there is a risk, as Henry Ergas said, that the regulator will treat the incumbent as the villain whereas in fact it is the new competitors who often get implicit subsidies. We have to remember the first principle of regulation: where we do not have strong theories, there are always two kinds of error, one in each direction, and to focus on one only may mean that you drive that kind of error to zero but the other may go out of control.

If we currently had no regulation and you were looking to regulate the market in some way, would you do so and if so how?

Given the level of innovation in telecommunications, I think regulation is a perilous enterprise. For regulation to work well you must be dealing not only with natural monopolies but also with a relatively static environment. That is the last way of characterising the telecommunications industry. So I tend to be cautious. I do not know whether I would regulate the local loop but I believe that price-cap regulation is a far less intrusive

form of regulation than rate-of-return regulation. The risk of excessive confiscation is least in a system in which you have the cap going down at a rate which is intended to track – perhaps conservatively – the level of technical innovation. So it is not just a choice between no regulation or regulation. The choice of type of regulation can be very important.

Can I just clarify that point? I do not think there is anything in the information disclosure proposals that is based on a rate of return. I guess the issue is whether or not losses from the Kiwi share obligations get incorporated into interconnection prices. If they do, then you do need to know what those losses are. You need to have information as to how they are calculated and this needs to be disclosed publicly, along with the underlying methodology and assumptions that are inevitably contentious.

That is where the difficulty comes. Information disclosed has two uses: to calculate losses, and to assess your competitor's strategies. I am always concerned about whether disclosure intrudes into the area of commercial secrets. Things such as pricing strategy, the way the company aims to keep customers and how it wishes to supply them are all sensitive matters. I understand that commercially confidential information only gets disclosed to the Commerce Commission. This may reduce concern that disclosure for one purpose will allow people to take advantage of the information for another purpose.

One of the litmus tests in a technologically progressive sector is whether prices are going up or down. In New Zealand access prices have been going up in real terms. Should that set alarm bells ringing?

The first question to ask is why prices have increased. It is pretty clear, at least in the US setting, that there has been a strong determination to keep pricing in the local loops below cost and to try to offset losses from the commercial market. To the extent, therefore, that you get price increases in that regulatory environment, they can be regarded as a correction of a past subsidy that has been ended by competition. If you

could show that there was no internal subsidy and yet there was pressure on local prices, the next question would be whether sufficient adjustments have been made for any quality improvements in the loop as we have to compare like with like in a very dynamic business.

If, having done this, it is still clear that prices are going up, and that no new entry is occurring through cable or satellites, then the issue arises of whether to regulate. I do not think disclosure will be the answer; it is rate regulation or nothing. This is a standard conundrum: whether a monopoly will erode over time, in which case you live with temporarily high prices until new firms come in, or whether you think that the barrier to entry really is an unclimbable cliff, in which case rate regulation becomes preferable, so long as it can be sensibly administered. I do not know the answer to that question in this particular market but it seems to me that entry is more feasible with respect to local communications today than it was 10 years ago, as a result of technological advance.

I am going to be talking this week about the market for corporate control and about age discrimination in the employment market. Those are markets where there are no problems about competition working with beneficial results if you just leave things alone. Telecommunications is an industry where even the question of whether there is a contestable market is a contestable question. In the end the public choice dimension – the impact on the quality of regulation of competing vested interests – is more important than the technical pricing issues. Indeed it is the dominant issue.

My question is directed both to Professor Epstein and Henry Ergas. The essential facilities doctrine that arose under the common law is being applied to industries in which technology is rapidly changing all the time. Even if you have a monopoly problem and decide to impose regulation at some stage, at what stage in the future do you remove it? Are we going to reach a situation in Australia where we are seen to have adequate competition and regulation gets removed, or have we created a situation in which the government is always going to have a role in regulating the industry because it has given people rights of access?

Richard Epstein

It depends on what the system is. Let us go back to the essential facilities doctrine in the rail business in the United States. Where you had bridges and turntables, the obligation was that any carrier who came in on the network on any line owned by any carrier could have its cars turned and switched. It was very simple in this industry because the pricing problem was easy to solve. All that was required was a non-discrimination provision. Was this a perfect remedy? Answer no. What happened was that if monopoly prices were charged, the firms who owned the facilities paid the monopoly profits to themselves and other companies paid monopoly prices to the owners. So the non-discrimination provision did not solve the monopoly problem but it did solve the access problem. The monopoly problem turned out to be self-terminating because the railroads gave way to the highways.

If the cellular system in telecommunications is in fact a viable alternative to fixed lines, then the problem may also take care of itself. Perhaps this is becoming the case. My evidence is my daughter. I know her cellphone number but I do not know her home number and the reason is that 90 percent of the times she calls me, she uses her cellphone. She reports that many of her young New York friends have no base phone any more; they only have a cellphone. Because they are hardly ever home, their policy is to use cellphones and have one phone instead of two. This is in an area where the local loop is the cheapest and the densities are highest. At this point, we are talking about people in the 'go-go' set and not your average New Yorker. However, if prices drop to the point where they are comparable on service and quality with ordinary telephones, and if you can afford to buy another cellphone rather than having to sit at home waiting for repair staff if your phone breaks down, then cellphones will become more popular. If this prediction is correct, there are profound implications for operators like Telecom.

If short-term allocative efficiency comes at the cost of long-term dynamic efficiency, which do I care about more in the tele-

communications industry? The answer is dynamic efficiency. The strategy followed so far in New Zealand reflects this priority, and it is so far on the side of sanity compared with what has been done overseas. Hence what we are arguing about is essentially the fine points.

Henry Ergas

I happened to re-read recently a paper I had written for a conference in Sydney in 1987 on how we should reform telecommunications. It is always a mistake, at least in my case, to re-read something you have written, especially so long ago. Describing the Australian reform process it said that it was a case of hard bread today for jam tomorrow. There would be some years of pain, partly associated with the fact that we clearly needed to rebalance rates and increase loop prices. Until 1987 we had very little explicit regulation. So, the argument ran, we needed to have some explicit regulation for transitional purposes and with such regulation, competition would develop and the need for regulation would disappear.

Re-reading the paper the other day, I was reminded of descriptions of the dictatorship of the proletariat, a phase of transition from capitalism to communism in which, unfortunately, it would be necessary to treat millions of people harshly but which in the long run would usher in a whole new society. Historical experience has not been entirely favourable to those who believed that the dictatorship of the proletariat was a transitional phase, at least a transitional phase to utopian communism. Equally, our experience in Australia suggests that once you create a regulatory system it is very difficult to dismantle it. This is because any attempt to do so threatens the rents that people have secured one way or the other, and we now have the peculiar situation where the regulatory constraints themselves impede the development of competition.

For example, we still have local loop prices that are well below cost. A typical monthly residential rental in Australia is $11.65. I do not know anyone who claims that the average cost across Australia of providing the residential local loop is $11.65 a month. It is obviously much more than that. As a result, entry into the local loop is not commercially attractive outside very limited parts of the country. You also do not get as much

substitution of mobile for fixed telephony as you would if prices were rebalanced. At present, for example, it is substantially cheaper to get Telstra to put a fixed line in to a beach house than to use your mobile phone when you are there. So we have a lot of very sparsely utilised copper in large parts of the country.

Can we say that competition has now developed and the infant is no longer an infant so we can remove some of the constraints? The answer is that we now have a very peculiar phenomenon in mobile telephony in that we have three rather robust competitors, and the prospective fourth and fifth competitors are claiming that they need infant industry protection from the existing three. The ACCC is edging towards a determination that although we have competition we do not yet have fully developed competition, which is presumably some nirvana like the notion of perfect competition. If that is where we are headed then we are extending rather than removing regulation, all of which leads me to concur with Professor Epstein's analysis. We certainly get the hard bread, but whether we will ever get the jam remains very speculative indeed.

I was interested in the comment about Saturn and Telecom because I am one of the lucky customers getting both offers. As soon as we got the Saturn offer, Telecom came back and said it was going to match that offer and beat it by $3.00 a month. But in the fine print Telecom says the offer applies only as long as there is a choice of provider, so presumably the intent is to drive out Saturn and increase prices again. Now I do not know what the solution is, because obviously there are problems with a regulation requiring everyone to be charged the same price. But if it is feasible for Telecom to service me for $10.00 dollars a month less than it was previously charging, why should that change as soon as Saturn has gone?

Richard Epstein

It seems that you are assuming that there are some monopoly rents in the system. But suppose that there is a significant element of fixed costs that could be allocated to one part of the system or another. Telecom will allocate the fixed costs to those areas where the demand is most inelastic. When Saturn enters a particular local market, Telecom has to shift those

fixed costs somewhere else and the moment the threat disappears, it may shift them back. So if a regulator insists that the rate charged in response to Saturn's entry becomes the benchmark for the entire system, Telecom may well not be able to cover its fixed costs. Why is it that the new entrant cannot simply hold its price at the level Telecom is willing to offer for that particular component? Surely a new entrant would have expected some kind of competitive response by the incumbent. The public choice dynamic of responding to the situation by regulation is to introduce a system of rate rigidity and the risk of cartelisation and cross-subsidies. Non-discriminatory posted pricing is, of course, exactly what cartel members engage in. So what the regulation does is make cartels easier to form by having the state provide the comparisons.

Henry Ergas

My understanding of the situation is that Telecom matched the prices being offered by Saturn. If Saturn believed its price was profitable, it would hardly have been surprised to see Telecom match it. Moreover, as far as the effects are concerned, the relevant question is presumably whether the price that was posted by Telecom was one that covered its marginal costs.

It is interesting to note what happened under the so-called anti-discrimination provisions that have been applied in Australia, which are rather similar to what has been done in the United Kingdom and the United States. The ACCC required Telstra to post its prices and Telstra was not allowed to deviate from them. Moreover, there were fairly severe restrictions on its ability to target discounts to individual groups of customers.

Thus in practice Optus, which was the only new entrant in Australia at the time the rules were introduced, could perfectly observe Telstra's prices. Meanwhile Telstra could observe Optus's quantities, because Telstra started with 100 percent of the market and could more or less work out what share was being lost to the competitor. Moreover, most of the usage minutes flowed through the Telstra network one way or another. The result was four months of price competition from when Optus entered the

market until it established its reputation. At the end of that period Optus's prices settled to be about 2 percent below Telstra's for the medium-to-high usage residential consumer. From the middle of 1992 until August 1997 the prices fluctuated between 1 and 2 percent around Telstra's prices. There was absolute lockstep pricing and in that period there was also the greatest difference in price trends between Australia and New Zealand. In New Zealand prices kept on going down, partly under the weight of competitive discounts. In Australia there was none of that, with the result that consumers were missing out on 3–4 percent price reductions annually over a seven-year period, a very considerable tax from this regulatory arrangement.

Professor Epstein raised the issue of price caps. The Australian experience suggests some caution. There is a curious politics to price caps. Australia had a regime of loose price surveillance under an economy-wide statute, the Prices Surveillance Act 1983, and when it moved away from the Prices Surveillance Act 1983 to the price-cap regime, the results were not all that we could have hoped for. Under the previous arrangements, there was a notification procedure for price changes, but with the price cap the minister had to stand up and announce what was going to happen to prices for a five-year period. So there was immense pressure on the minister to announce good news. The result was that if the advice to the minister was that national and international toll charges could be left to find their own level but that local residential charges should go up by, say, 40 percent over five years, the political minders would describe this advice as 'extremely courageous', to use Sir Humphrey's favourite phrase. To get a sensible outcome, there had to be good news that could be delivered to the minister. So Australia ended up with price caps that made very little sense from an economic point of view. Rather than fixing the problem they aggravated it because successive ministers made it impossible to move, for example, towards timed local calls. An essential element of the Coalition's platform in two elections has been that no Australian will ever have to pay a time-related charge for a local call.