Productivity Commission

Inquiry into the National Access Regime

Some observations on economic arguments advanced on behalf of infrastructure owners in relation to the Productivity Commission inquiry into access regimes

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Overview

Any form of mandatory access regime for infrastructure which limits the infrastructure owner's ability to confer or deny access on such terms as he pleases must necessarily more or less limit the scope for infrastructure owners to maximise the extraction of monopoly rents.

It is therefore hardly surprising that submissions put forward for infrastructure owners have sought to advance economic arguments in favour of reduced or zero regulation. What is more surprising is that some of the economic arguments advanced appear to call into question basic postulates of theoretical economics, such as the optimality of short run marginal cost pricing, the inefficiency of monopoly rent seeking and the imputation of factor returns.

In order to provide an analytic framework for discussion, it seems worthwhile to outline the basic economic arguments advanced on behalf of infrastructure owners.

1. *Monopoly Does Not Really Exist*

The most basic argument has been to assert that infrastructure providers do not enjoy monopoly positions. The argument can be put on the basis that there is always some competition, for example, electricity versus gas, road versus rail. Sometimes this argument appears to be based on a mistaken interpretation of Schumpeterian competition.

2. *Monopoly Does Exist But is Desirable*

A second argument acknowledges that infrastructure owners may enjoy monopolies but argues that such monopolies and the extraction of monopoly rents from them can be justified as the price of investment. In other words, what may seem from a static welfare economics perspective to be monopoly rent seeking is in a dynamic sense a process of entrepreneurial profit seeking which brings forth investment in infrastructure which would otherwise have not existed. From this point of view, the owners of monopoly infrastructure may be seen as public benefactors.

3. *Monopoly Rents Exist But Cannot Be Identified*

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A third argument acknowledges that monopoly rents exist and are undesirable but goes on to argue that monopoly rents cannot be distinguished from entrepreneurial profits *in practice* and therefore "light handed" regulation is required to avoid creating disincentives for efficiency in infrastructure provision. This is especially important since, without the requisite profits, infrastructure will not be built or maintained and the welfare losses in that case will greatly exceed any monopoly rent mistakenly allowed by the regulator as necessary profit on investment.

Other arguments

Although the Productivity Commission's issues paper showed some interest in the so-called efficient components pricing rule (ECPR) and whether structural separation of bottleneck monopolies would avoid the need for access regulation, infrastructure owners' submissions did not uniformly support such notions and in some cases, flatly rejected them (correctly).[2]

In regard to ECPR, it was noted that ECPR is irrelevant when final prices are not controlled. As for structural separation, it was also correctly noted, in a submission endorsed by major infrastructure owners, that structural separation does not remove the incentive for a bottleneck monopolist to practice monopoly pricing.[3] As such pricing amounts to a distorting quasi-tax, it can hardly be desirable.

Analytic Omissions

The arguments put forward for infrastructure owners depend crucially on analytical omissions.

For example, infrastructure investment is often portrayed as a 2 player game of infrastructure investor versus users. It is then argued that any truncation of expected returns to the infrastructure investor will deter investment.[4] But in reality, infrastructure investment is a 5 player game. The players also include the Crown (as the granter of franchises and tax-collecting beneficiary of economic development) and landholders giving (or being forced to give) access to their land and reaping increased land values from infrastructure investment. In addition, there are other potential infrastructure providers who might compete for a franchise.

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[2] Laffont and Tirole (2000, pp 34, 166-167) note the success of Telecom New Zealand, advised by Baumol and Willig, in using the ECPR rule as an incumbent monopolist against an access seeker. They note that subsequent criticisms have been conceded by Baumol and Willig's admissions that ECPR was designed for a different regulatory climate and is only a partial rule. Finally we observe that AAPT, a subsidiary of Telecom New Zealand, has not advocated ECPR to the inquiry, presumably because it knows that what its parent wanted as an incumbent monopolist in New Zealand is not what it wants as an access seeker in this country. See also King (2000, pp 20-23); Energex (2000, p 24)

[3] See NECG (2001, pp 4, 10-11)

[4] King (2000, pp 12-15); Moran (2000, pp 5-6). Once the limiting assumptions are removed, the logical substratum for recommendations such as Moran's recommendation 2 for limiting scope of access regimes or King's proposal for "access holidays" starts to collapse.

The most egregious omission is the persistent ignoring of the grant of Crown franchises via monopoly rights to easements or rights of way. As Newbury (1999, pp 18-21) points out, the historical reality is that infrastructure networks need (and were granted) access over public and private lands. It is extraordinary that anyone can discuss "access" regimes for infrastructure without examining the legal, historical and economic basis for the granting to infrastructure utilities of access rights over public and private lands. *This is the prior access question which no infrastructure owner's submission addresses.*[5]

A further omission is the ignoring of beneficial externalities. Network infrastructure was traditionally and correctly seen as a form of land improvement work which benefited landholders whose land was serviced. It is theoretically incomplete to discuss access regimes which seek to recoup the whole fixed cost of infrastructure from users only without examining the scope for rating benefited land.

Other analytic errors

Sometimes, policies advocated appear to depend on hidden assumptions. For example, some submissions argue strongly that price controls are superior to rate of return regulation, because such light handed regulation would maximise a utility provider's incentive for cost minimisation. However, price controls are usually anathema to economists as representing distortions of market outcomes, resulting in reduced economic welfare. In particular, the usual criticism of price controls is that supply might not be forthcoming. One assumes that submissions arguing for price controls rest on an implicit assumption that prices are already high enough to embed monopoly rents and that what is being argued for is some degree of retention of these monopoly rents over time.

1. *Monopoly Does Not Really Exist*

The argument that infrastructure providers do not enjoy monopoly positions is put forcefully by Moran (2000, pp 3, 5-6 and) who declares-

> *That ACCC philosophy has a strong focus on the detrimental effects of monopoly which is seen to be able to charge excessive prices to customers. In fact most such monopolies are short-lived since if they extract high prices this rapidly attracts competition. ...*
>
> *Infrastructure built by private enterprise in the "post-Hilmer" era should not be required to grant access or be subjected to price restraints. The builders of such infrastructure are responding to a profitable opportunity that they foresee, one that, by definition, also confers gains on the buyers of the service. The two parties obtain a mutual gain. The sharing of the gain is one for bargaining between the parties but the consumers of the goods that the facility supplies cannot be worse off since without it they would not have that particular access route and perhaps not the product that the access delivers. ...*

[5] It is a question which has not escaped local government now that Telstra and Optus no longer enjoy the shield of the Commonwealth Crown and councils now seek to demand rents for themselves for use of "their" streets. Whether *anyone* should be extracting monopoly rents is a question we address later.

For its part, the owner of the new facility in this "post-Hilmer" era, cannot obtain gain from it by virtue of some form of government granted privilege.

Similarly, King (2000, p 33) argues

Bottleneck infrastructure causes a problem when it involves an essential facility. But a new railway that does not presently exist cannot, by definition, be an essential input for any existing downstream producer. These producers have been operating without any rail services and to the degree that rail investment creates new competition to supply inputs, the relevant downstream firms can only be made better off.

These dogmatic statements are quite false in relation to monopolies which are based on exclusive or limited easements or rights of way granted by Parliaments. The number of pipelines, water mains, telephone lines and electricity conduits that can be laid through everyone's backyard is limited and it is indeed usually inefficient usually to have more than one.[6] In these circumstances, Parliaments *do* grant monopoly privileges – unlimited freedom of entry simply does not exist. What is being assiduously ignored is that all network infrastructure owners need grants of access over private and public landholdings: how does one describe this other than as a government granted privilege?

No pipeline owner or railroad builder could negotiate with several thousand landholders, any one of whom could veto the project on pain of extracting an opportunistic toll charge.[7] What was true of Britain in the 19th century with railroad legislation remains true today. It is not a simple case of bargaining between two parties but an absolute practical necessity for infrastructure providers to obtain the aid of the State in overriding any objections by landholders.[8]

Finally the argument that there are gains from trade is true but specious. All that is being said is that even if the infrastructure owner extracts monopoly rents there is still some consumer surplus left - that high-priced infrastructure is better than having none. But such a situation can hardly be described as optimal or efficient.[9] Being alive is usually considered, in the words of Maurice Chevalier at the age of 80, "Wonderful when one considers the alternative" but it does not mean one is in the best of health.

Another version of the argument that monopoly does not exist in a practical sense is put forward by King (2000, p 2) who argues -

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[6] This explains why pipeline owners have been willing to invest in new pipelines under regulatory regimes which, while limiting any monopoly prices they may be tempted to charge, also limit economically wasteful – and mutually ruinous - competition from multiple entrants, see Makholm and Quinn (2001). The fact is that free competition is neither possible nor desirable and not wanted by experienced market participants themselves.

[7] Which is why the Coase Theorem is irrelevant, a point not lost on Hayek (1979, pp 44-45)

[8] Proposals for a Very Fast Train between Sydney and Canberra needed legislative support on this account, though the project was vetoed by a Treasury which wanted to benefit but not to pay.

[9] Thus the possibility that a disgruntled user may construct inefficient by-pass or duplicate facilities does not mean that monopoly pricing well above average (let alone marginal cost) is a satisfactory situation so long as it remains just below the maximum rent extraction level which would trigger by-pass or duplication.

For access to be a problem, the vertical production chain must be economically dysfunctional. There must be little or no competition in the provision of the upstream good or service. There must be little or no competition in the downstream market from alternative products that do not require the relevant input.

King (2000, p 10) goes on to argue that the following "could replace s 44G2a and b.

The Council cannot recommend that a service be declared unless it is satisfied that (a) access (or increased access) to the service will substantially increase competition in the market for a final good or service;

The requirement that there be little or no competition in the downstream market from alternative products which do not require the relevant input seems incorrect. Imports do not need any Australian infrastructure but if one let Australian infrastructure providers charge unfettered monopoly rents, Australia would lose industry and national income. The proposed condition to replace s 44G2a could never be satisfied if there are no tariffs and free import competition. Making these conditions cumulative would seem to mean that no infrastructure could ever be declared. That this is not a fanciful possibility is shown by King's later argument that urban rail and general freight and passenger rail systems operate in competitive markets -

Urban rail systems are best thought of as 'convenient facilities' for the purpose of access. Urban rail probably involves a natural monopoly technology. Given the level of demand for these services, they are most efficiently supplied using a single rail network. But urban rail operates in a broader, competitive market. Reform of urban rail might involve an access regime. For example, it might be desirable to allow competing private train operators to operate on an urban rail system and an access regime would facilitate this. At the same time, alternative methods of operation, such as the use of franchise contracts, may be preferred. Regardless of the method used to operate urban rail systems, however, they are not essential facilities.

Like urban rail, many companies that provide general freight and passenger rail services operate in a highly competitive market where road transport provides a viable and effective alternative. ... Overall, general freight and passenger rail is not an essential facility and should not be subject to a general access regime and constrained by standard access pricing rules. .... Many commodities, such as coal and iron ore are sold into world markets where Australia is effectively a price taker. While it is in the interest of Australian firms to produce these bulk commodities as efficiently as possible, it is not clear that allowing rail access will increase competition in any final market for a good or service. (King, 2000, pp 27-28)

It seems odd to argue that if Australia has no tariffs and there are freely competing imports, monopoly pricing of access to network infrastructure does not matter. One might have thought that Australia has an interest in being internationally competitive and having the highest possible national income and that therefore cost burdens on Australian industry, like tax burdens, do matter. In a sense, there is always some competition, for example, electricity competes with gas, road competes with rail, and planes compete with cars. By redefining the market, one can easily define monopoly or monopoly advantages out of existence. However,

such semantic games cannot conceal the fact that there are natural monopolies protected by barriers to entry in the form of necessary franchises.

Another line of argument which seeks to downplay or remove the significance of monopoly is based on a mistaken interpretation of Schumpeterian competition. For example, Energex (2000, p 16) argues -

> *In the view of the critics, what the regulators are applying is a corporate finance version of the perfect competition model of neoclassical economics in which prices match or track costs. By definition there is no innovation or dynamic efficiency from this model where 'non-real world' assumptions and short term conditions rule.*
>
> *In opposition, the eminent economists and other experts referred to in Chapter 1 consider that regulators should be attempting, rather, to emulate effective competition in imperfect (Schumpeterian) markets if there is to be dynamism. For instance, Professor Steven Littlechild and Michael Beesley are recognised as the founders of true incentive regulation and have acted as regulators. As Beesley notes:*
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>> *"...The competition which is being 'mimicked' is not neo-classical competition but Schumpeterian. The Regulator is playing both the role of creating the possibility of earning innovatory gains and that of the 'perennial gale' of competition which tends to blow them away over time". [Beesley, 1996, p213]*
>
> Professor Littlechild reaffirmed the need for such a model on a recent visit to Australia, and Professor Johns argues the case for the Schumpeterian model in his submission [Johns, 1999, p1]. Indeed, Professor Hilmer noted at a Treasury seminar in 1995 that the Committee's ideas had grown out of the ideas of Schumpeter and Michael Porter (Harvard).

However it is worth stepping back and examining what it was that Schumpeter and his fellow Austrians such as Hayek and Kirzner were objecting to in the neoclassical model of perfect competition - and why. They were not idiot savants living in a Panglossian world but were seeking to identify concepts of monopoly and competition which could give greater logical coherence to industry policy than a naive "trust busting" of large firms *merely because they were large.*

What they were objecting to was the unreality of a model of perfect equilibrium where all speculative profits had been competed away - where competition in the real-world sense had done its work. They saw competition as a *process* of adjustment during *disequilibrium* and they quite correctly observed that neither high profits nor sole producer status were evidence of monopoly in any harmful sense. In the real-world of disequilibrium, windfall profits may be the reward to successful entrepreneurship rather than evidence of monopoly rent seeking.

Thus Schumpeter (1952, pp 82, 83, 84) wrote "Capitalism, then, is by nature a form or method of economic change and not only never is but never can be stationary ... The opening up of new markets, foreign or domestic, and the organisational development from the craft shop and factory to such concerns as U.S. Steel illustrate the same process of industrial mutation – if I may use that biological term – that incessantly revolutionises the economic

structure *from within*, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in.... in capitalist reality as distinguished from its textbook picture, it is not that kind of [static price] competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organisation... competition which commands a decisive cost or quality advantage and which strikes not the margins of the profits and the output of the existing firms but at their foundations and their very lives."

Schumpeter (1952, p 99) then observes that literally "Monopolist means Single Seller. Literally therefore anyone is a monopolist who sells anything that is not in every respect, wrapping and location and service included, exactly like what other people sell ... This however is not what we mean when talking about monopolists. We mean only those single sellers whose markets are not open to the intrusion of would-be producers of the same commodity and of actual producers of similar ones ... But if accordingly we do define it like this, then it becomes evident immediately that pure cases of long-run monopoly must be of the rarest occurrence... The power to exploit at pleasure a given pattern of demand ... can under the conditions of intact capitalism hardly persist for a period long enough to matter for the analysis of total output, *unless buttressed by public authority*, for instance, in the case of fiscal monopolies ... *Outside the field of public utilities*, the position of a single seller can in general be conquered - and retained for decades - only on the condition that he does not behave like a monopolist."[emphasis added]

Hayek (1979, pp 83, 72-73) picks up the point when he declares "The chief point to remember, which is often obscured by the current talk about monopoly, is that it is not monopoly as such but only the prevention of competition which is harmful. These are so very far from being the same thing that it ought to be repeated that a monopoly that rests entirely on superior performance is wholly praiseworthy - even if such a monopolist keeps prices at a level at which he makes large profits and only just low enough to make it impossible for others to compete with him successfully... Just as nobody dreams of attacking the 'monopoly' price of the unique skill of an artist or surgeon, so there is no wrong in the 'monopoly' profits of an enterprise capable of producing more cheaply than anybody else.... neither the existence of monopoly nor size as such are on economic or moral grounds undesirable or comparable with any acts aiming at the prevention of competition... Sometimes, however, the appearance of a monopoly (or of an oligopoly) may even be a desirable result of competition, that is, competition will have done its best when, for the time being, it has led to a monopoly. .... If such a position appears objectionable to many people this is chiefly due to the false suggestion of the word monopoly that it constitutes a privilege. But the best fact that one producer (or a few producers) can meet the demand at prices which nobody else can match, *does not constitute a privilege so long as the inability of others to do the same is not due to their being prevented from trying.* The term privilege is used legitimately only to describe a right conferred by special decree (*privi-legium*)[10] which others do not have, and not for an objective possibility which circumstances offer to some but not others." [emphasis added]

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[10] The historical pattern of private railway Acts or special easement rights for electricity other authorities will not escape the reader.

Kirzner (1973, pp 131-132, 199) makes the point that there can be competition to seize the unique resources or advantages necessary to sustain a permanent monopoly and that the concept of monopoly does not make practical sense unless one can find a barrier to entry in the form of an inability to secure the use of a necessary resource. Kirzner (1973, pp 238-242) does raise the possibility that competition to secure a monopoly through capturing a unique opportunity may still be preferable to an alternative state of the world: in particular the breaking up of monopolies so captured may act as a disincentive to future entrepreneurial actions of that type.[11] That of course may be no bad thing. Some "entrepreneurial" activities may be privately profitable but socially disadvantageous[12], as when a public asset is sold at a discount to a favoured tenderer. The general question of whether monopoly rents exist and are desirable is taken up in the next section of this paper.

Neither Schumpeter nor Hayek nor Kirzner deny the existence of monopoly in the area of network public utilities. The Austrian approach to monopoly theory is valuable because it focuses the mind on how barriers to entry must be traced back to unique privileges of one kind or another. In the case of network infrastructure, a key feature is invariably the privilege of being granted access over public and private land. Even where such a grant is not exclusive, the first recipient of a grant inevitably has an advantage over later comers and if left unregulated can effectively destroy late entrants through selective predatory pricing at the point of entry, a point not lost on Hayek (1979, p 84).

For the moment, however, it is sufficient to note that appeals to Schumpeterian or Austrian analyses of competition do not mean that monopoly can be defined out of existence in the case of network utilities. Further, it might be noted that the periodic resetting of access regimes at the end of review periods *does* mimic competition in the Schumpeter sense, since monopoly rents are not completely eliminated at all times. As with dynamic capitalism, the utility owner is allowed to enjoy transitory rents for a period after which they will be swept away through regulatory review which re-examines the cost of service and anticipated expenditure.

2. *Monopoly Does Exist But is Desirable*

A second strand of argument acknowledges that infrastructure owners may enjoy monopolies but argues that such monopolies and the extraction of monopoly rents from them can be justified as the price of investment. In other words, what may seem from a static welfare economics perspective to be monopoly rent seeking is in a dynamic sense a process of entrepreneurial profit seeking which brings forth investment in infrastructure which would otherwise have not existed. From this point of view, the owners of monopoly infrastructure may be seen as public benefactors, even if they are extracting monopoly rents. Essentially, the argument is that what is seen as monopoly rent *ex post* is really only entrepreneurial profit *ex ante*. The argument is that *ex post* regulatory taking of monopoly rents today will

11 The argument prefigures the kind of argument advanced by Moran but is not well developed by Kirzner. The point here is that Kirzner has no difficulty accepting, as did Schumpeter and Hayek, that real monopoly does exist where would-be competitors cannot get access to resources such as easements.

12 The slave trade and child labour are probably among the most notorious examples and sanctity of property or contractual rights did not stop legislation to abolish both. Though Moran cites Hayek in support of property rights (a support most people would generally sympathise with), he does not note Hayek's criticism (1979, pp 86-87) of absolutely unfettered freedom of contract.

mean no infrastructure investment will proceed in the future, as investors will be "once bitten, twice shy".

This view is reflected in Moran (2000, pp 2, 5) when he argues that

> *It is worth re-stating that individually owned, secure and transferable property rights combined with vigorous competition between sellers are the kernel from which our present prosperity has grown. Free competition and secure property rights are the two arms of a pair of scissors, neither of which is useful without the other. ... The earliest development of the modern economy took place in England and, albeit more slowly, other parts of western Europe because the sanctity of personal property rights that evolved encouraged the setting aside of income and leisure to allow improved future income levels. Early economists like Adam Smith (in his Lectures on Jurisprudence, 1760, rather than The Wealth of Nations) considered "preventing members of society encroaching on each others' property, or seizing what is not their own" to be "the first and chief" aim of government. Jean-Baptiste Say (1803) wrote, uncontroversially, that only with secure property rights can production achieve its highest output, a matter he regarded as "so completely self evident that demonstration is quite superfluous".... The competition authorities that have been expanded or created in the wake of the Hilmer Report have placed considerable emphasis on the promotion of rivalry as a means of enhancing output and living standards. But they have often been less cogniscent of the importance of property secure from measures by government (including their own arm of government) that constitute expropriatory "takings" and reduce the value of that property. ...*
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> *For its part, the owner of the new facility in this "post-Hilmer" era, cannot obtain gain from it by virtue of some form of government granted privilege. The owner will, moreover, usually be building a project that carries some economic risk. Such risk may emanate from a failure of the market to develop in the predicted way, new competitors, or the "howling gales of creative destruction" stemming from a technology that renders existing approaches archaic.*
>
> *Thus, in deciding to push ahead with the facility, the supplier had no lien on the idea and no lock on the supply itself. Once built, the facility is not protected from imitators. It may be that a successful facility becomes immensely profitable, like Microsoft Word. But it can only do so if it provides value in excess of that which imitators and new approaches provide.*
>
> *Such mutual gain is at the heart of the private enterprise system. Attempts to "redistribute" it can only harm the process. This can be illustrated in the case of a new pipeline. The owner of the pipeline will usually have considered a spectrum of alternative market projections (and perhaps a spectrum of cost projections). There is uncertainty and, implicitly or explicitly, the owner will weight each scenario in making his investment decision. If his threshold is a rate of return of 15% and he is considering scenarios that might yield rates ranging from 25% to 5% but provide a weighted average rate of 15%, cutting off the potential to earn the higher rates will reduce the weighted average to something less than the threshold. The regulatory action would then eliminate the commerciality of the project. In such a case, the sponsor and the customers would both be losers.*

Even if, in this case, a new developer were to arrive and build the pipeline, that developer would have done so in the light of the experience gained by the original developer. The process would still result in an inferior outcome because the regulatory process would have demonstrated a cost in originating new ideas and will deter investment in searching out new opportunities.

Similar concerns are expressed by King (2000, pp 12-14) and may be traced back to Kirzner (1973, pp 238-242).

The emphasis on property rights is well taken. However, not all property rights are consistent with vigorous competition nor are all property rights sacrosanct.[13] For example, legislation has abolished property rights in public service sinecures and in the case of public utilities legislation avoids the waste of 30 power and telephone companies running over everyone's backyard by conferring limited or exclusive easements on a few utilities. Security of property *in what one has produced is one thing* but security of property in a purchased monopoly is another. Considerations of the security of property did not prevent governments abolishing slavery in the 19th century nor Mrs Thatcher in the 20th enforcing leasehold enfranchisement against the wishes of the Duke of Westminster.

It might be noted that Adam Smith was not so enamoured of property rights as to accord the same respect to property rights in respect of monopolies. For example, he was less than enamoured of the monopoly rights afforded to the East India Company. Similarly, John Locke defended property rights on the theory that a man was entitled to the produce of his labour and to appropriate natural resources in the process but only on condition that any appropriation left enough and as good for others – in other words, there had to be equality of access and opportunity. The utilitarian defence of private property as the essential to progress was strongly pressed by writers such as James Mill, but as his son John Stuart Mill noted, such a utilitarian defence of private property rights did not extend to things not produced by human hands and awarded as property by the State. Where by Crown grant or State action, a utility has privileged rights, such as easements or rights of way over the property of others and any other would-be service provider does not enjoy similar rights, questions naturally arise about lack of equality of access and lack of competition, inevitably raising in turn the questions of monopoly rents being charged to the public.

Finally, the arguments of Moran and others forget that the underlying property in question belonged to the Crown as landlord on behalf of the people in the first place. Just as builders offer less for leaseholds where there are site/building ratio restrictions, an infrastructure developer can adjust *ex ante* for the risk of truncated *ex post* returns by bidding less for his easements. If the Crown, on behalf of its subjects, says to an infrastructure developer "You may have these easements for your infrastructure on condition that, having been granted free access, you will not abuse your conferred monopoly, by charging more for access than your costs" what is there to complain of? If the conditions attached to the franchise rights are

[13] Nor, from a legal point of view, does everything which *affects* the use of property amount to a *taking* of property. Whatever one might argue about the economic incentives, while the Australian Federal Constitution prohibits taking of property other than on just terms, the High Court in *Australian Capital Television Pty Ltd v Commonwealth [No 2]* (192) 177 CLR 106 held this did not prevent free time being legislated for election broadcasts by political parties. Further, an access regime which gives a more than fair return on actual invested capital (rather than revalued monopoly rights) is more than just in any case.

onerous, an infrastructure provider is free to offer less for them (and if he has paid nothing to the Crown for them he can hardly be heard to complain).[14]

It should be noted that King's (2000, p 15) proposal for "access holidays"[15] is only another version of this argument, differing only in suggesting a *temporary* rather than *permanent* enjoyment of monopoly rents may be sufficient to elicit entrepreneurial activity.[16]

The argument that either permanent or temporary monopoly rents are the price of investment is really quite remarkable in the context of received economic theory. The marginal productivity theory argues that returns can be imputed to the factors of production, that is to say, the returns to land, labour or capital will exhaust the product. What is really being argued here is that monopoly rents (a return to land easement rights) should be attributed to capital as its return. On this theory, it would be almost as logical to argue that Christopher Columbus's descendants should be charging rent to the European inhabitants of the Americas in order to have induced his setting sail.

3. *Monopoly Rents Exist But Cannot Be Identified*

A third argument acknowledges that monopoly rents exist and are undesirable but goes on to argue that monopoly rents cannot be distinguished from entrepreneurial profits *in practice* and therefore "light handed" regulation is required to avoid creating disincentives for investment and dynamic efficiency in infrastructure provision. Thus the Network Economics Consulting Group (NECG, 2001, p 16, 19, 20, 22) argues -

> *High access prices can have the same practical effect as a refusal to provide access. In part, this is why regulation has tended to focus on reducing access prices.*
>
> *However, the important role of ensuring incentives for ongoing efficient investment is easily overlooked when the focus is on removing the potential for monopoly rent extraction. It is pertinent here to emphasise that facilities fall under Part IIIA because they are essential and have a nationally significant character. Given this essentiality, ongoing investment and the access revenue required to support it are surely equally essential.*
>
> Ideally, access pricing of bottleneck facilities would involve prices low enough to protect access seekers and end customers from the exercise of monopoly power, but also high enough to support the investments needed to deliver the essential services at efficient levels of quality and quantity.

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14 This makes plain the absurdity of claims by utilities that they should be allowed to value easements on a replacement cost basis.

15 A curious term. Contrary to intuition, it does not mean the public pays nothing for access.

16 The analogy with patents is clear but does not help. Appeals to the example of Microsoft (Moran, 2000, p 6; NECG, 2000, p 28) are hardly persuasive. Many in the computer industry would question whether Microsoft has been an innovator or a copier or suppressor of innovation. There is also a growing literature which argues for winding back patent protection as a form of rent seeking. See, for example, Christopher May *A Global Political Economy of Intellectual Property Rights: The new enclosures?*, Routledge, London, 2000

In reality, determining efficient costs with any degree of accuracy is very difficult, if not impossible. This is true in any area of economic activity; but the problems that confront administrative determinations of costs are especially great in infrastructure industries. As a consequence, access price estimates are often the result of a series of subjective decisions. The problem is not one of inadequate or inappropriate regulatory behaviour, but rather of limited information. A regulator cannot be expected to know with sufficient precision the efficient cost of current operations or future investment requirements of the firm.

In using their discretion, regulators effectively face a choice between (i) erring on the side of lower access prices and seeking to ensure they remove any potential for monopoly rents and the consequent allocative inefficiencies from the system; or (ii) allowing higher access prices so as to ensure that sufficient incentives for efficient investment are retained, with the consequent productive and dynamic efficiencies such investment engenders.

There are strong economic reasons in many regulated industries to place particular emphasis on ensuring the incentives are maintained for efficient investment and for continued productivity increases. The dynamic and productive efficiency costs associated with distorted investment incentives and with slower growth in productivity are almost always likely to outweigh any allocative efficiency losses associated with above-cost pricing. ....

Failure to invest in timely renewal or replacement can have serious consequences. The continuity of key business and household inputs is often taken for granted, but the rare failures are dramatic and widespread in their effects. ...

Given uncertainty about efficient costs, policy makers face a choice as to whether they would prefer the regulator to err on the side of lower access prices and seeking to ensure that any potential for monopoly rents is removed or, on the other hand, allowing higher access prices in order to be confident that sufficient incentives have been provided for efficient investment with the consequent productive and dynamic efficiencies.

Setting low access prices will sometimes deliver better short-term outcomes by improving allocative efficiency. Whether there will be sustainable long-term gains is, however, more complex. In assessing these short run and long run effects it is important to distinguish income transfers between consumers and producers on the one hand and welfare gains on the other.

Commonly, monopoly pricing is attacked because it involves a transfer of wealth from consumers to the monopoly producer. However the most serious problem caused by monopoly pricing is the loss of social welfare, which results from the monopolist's profit maximising restriction of output. ....

In the long-run situation, the welfare effects of overpricing versus underpricing are not equivalent. In the first place, it is no longer true in the long run that a supplier would continue to provide service when the regulated price is below its average cost.

In the long run, all costs are variable, so a regulated price that is below average cost would be below variable cost. ...

If the long run average cost curve were downward sloping or flat, then the consequences of a regulated price which is below the equilibrium level would be very serious from a welfare perspective. There would be no level of output greater than zero at which the supplier could recover its long run variable costs (equal to long run average costs). Faced with this situation, the supplier would either exit the industry when reinvestment was required, or would attempt to modify its long run average cost curve by degrading service quality or investing in assets with low capital cost and high operating costs. If the output level is reduced to zero, then the welfare losses will be maximised.

This argument is essentially the argument that supply at some price is better than no supply or that the deadweight loss caused by an infinite price will exceed that caused by a finite price. This is perfectly true, but it does not logically follow that monopoly rents should be tolerated. This is like saying that, rather than complain about service failures, users should simply pay more to increase profits for the infrastructure provider in the hope (but with no contractual guarantee) that things will be better next time. If high prices are the price of system renewal, why is not the excess earmarked to an escrow fund to be spent only on such system renewal and maintenance?

As William Vickrey (1987 p 207) pointed out long ago, escrow funds could be made mandatory whether for infrastructure augmentation, replacement or maintenance and such escrow funds could be mandated as a condition of any infrastructure franchise, just as licensees under the *Life Insurance Act* are required to have the certification of an actuary before amounts are released from statutory funds for distribution to shareholders as opposed to policyholders. Users have no means of observing the quality or safety of service and directors have a bias towards extracting dividends or profits for shareholders. In these circumstances, it is not irrational to deal with these conflicts of interest by requiring third party certification that licence conditions have been met. For example the British rail disaster at Hatfield was due to excessive deferral of rail maintenance but in the meantime, dividends were being declared. Rather than attempting the impossible and clawing back dividends which ignored the need for proper maintenance, prevention is better than cure and a system of certification of expenditure on maintenance and provisions for maintenance and repairs as a condition of any franchise licence may be preferable in dealing with this moral hazard.

More fundamentally, this argument forgets that monopoly supply situation only exists because the Crown grants exclusive or non-exclusive franchises. Why should the Crown, as ultimate landowner, be a passive underwriter of monopoly rents? The Crown, as trustee for the public interest, should be an intelligent and interested landlord rather than a passive and foolish one. The Crown can play-off would-be monopolists against each other by offering the franchises on leasehold basis. Rather than being a 2-player game of monopolist versus users, infrastructure is a 5-player game of infrastructure supplier, other would-be infrastructure suppliers, the Crown granting franchises and reaping taxes from increased economic activity, landholders being benefited or burdened, and users who may be producers of intermediate goods or final consumers. The argument abstracts from externalities and franchise bidding arrangements which would allow infrastructure suppliers to adjust their

periodic franchise bids for onerous supply conditions or for arrangements allowing them to recouped specified, agreed, capital costs from rated lands.

At the end of the day, the problem is no different to the case of a tenant's fixtures and covenants to keep buildings in good repair. Just as a landlord grants a leasehold to a tenant on condition that he maintain the building in good repair and the lease can be forfeited for non-compliance, so the Crown can grant easements and utility franchises subject to service performance conditions and a regulatory regime which limits monopoly rent extraction. If these are too onerous no one will want to bid for the infrastructure franchise, just as no one takes up a leasehold if he is not satisfied that he will be properly compensated for sunk tenant's fixtures at the end of the lease. If a tenant proposes to quit, most landlords look for another tenant before immediately granting concessions, so why should the Crown not ensure that it can take over or engage another operator if an incumbent monopolist threatens to exit? The Suez Canal was built on a 99 year lease but that did not mean the Egyptian Government was so desperate to stop the Suez Canal Company from exiting as the lease approached expiry that it offered more monopoly rents to the Company - on the contrary, the Egyptian Government courted war to seize the rents for itself earlier!

Curiously, Gans and King (2000, p ii) in their report for the Regulated Businesses Forum acknowledge that there can - and should - be competitive bidding for franchise licenses to serve the market where those licenses specify pricing and quality standards. Neither they (nor those who commissioned their work) appear to have recognized that such an eminently sensible approach can be applied on leasehold basis - meaning that monopoly rents are competed away by would-be infrastructure providers and accrue to the Crown. In other words, the proposal to force infrastructure providers to compete for the market is an admission that –

(a) monopoly rents do exist;
(b) can be identified; and
(c) their retention by the infrastructure investor is not necessary to induce investment.

If it were otherwise, no one would bid for a licence.

This conclusion is fatal for the "investment incentive" argumentation put forward for light-handed regulation. It undermines the logical basis for recommendations such as those of Energex (2000, p 27) to remove access regimes or of King (2000, p 15) for access holidays or of NECG (2001, pp 27-29) for "incentive" regulation.

If monopoly rents can be captured by the Crown through competitive bidding, the real issue then becomes an entirely different one: should the Crown through infrastructure regulation aim to maximize monopoly rents extractable from franchises or should it try to eliminate them? What is the socially optimal pricing policy for infrastructure access and how can it be financed if that optimal price is a short run marginal cost below average cost?

Space does not allow us to develop the argument here but we refer the reader to the works of William Vickrey who capably defended the classic case for short run marginal cost pricing. Beneficial externalities provide the missing clue. Briefly, the answer is that maximizing monopoly rents adversely affects the productivity and hence the rents of lands served by the infrastructure (what is lost there exceeds the monopoly rents - if all roads were charged out to

maximize monopoly rents for government, one can easily envisage the economic damage which would be done). The optimal pricing policy is the traditional rule of short run marginal cost. This will usually result in "access deficits" but these can be recouped by rating the enhanced values of the lands served by the infrastructure. That in turn provides a rule of thumb for new infrastructure investment: will the investment so raise the productivity of capital and labour in the area served by a spatial network that the induced increased value of lands served can be rated to pay for it? Interestingly, we observe such a "rating solution" for financing "access deficits" of public utilities precisely conforms to Hayek's (1979, pp 43-45) prescriptions for supplying collective goods where there are negotiation problems (large numbers), externalities and free riders. It is the failure to consider the full implications of beneficial externalities which, by contrast, so limits the analysis in most of the submissions to the Productivity Commission inquiry and holds them forever in the thrall of second and third best.

Practical implications

Returning to the world of second best, if short run marginal cost pricing is optimal, regulation should definitely seek to ensure that user charges do not give rise to monopoly rents, whether appropriated by the Crown or the infrastructure owner.

This has immediate relevance to the debate over what constitutes effective and efficient regulation. Infrastructure facilities owners have sought to roll-back regulation by complaining about 'over-regulation' or 'heavy-handed' regulation Thus AusCID (2000, p 6) claims:-

> *"The supposed 'light-handed' approach promised at the time of asset sales and in the Hilmer report has been lost. Instead 'heavy-handed', intrusive, information intensive and expensive regulation has been delivered."*

Whilst the infrastructure facilities' owners have not been specific about what constitutes 'light-handed' regulation, it may be assumed that what they are urging is the adoption of the CPI-X price-cap regulation approach, originally proposed by Professor Stephen Littlechild (1983). This was envisaged to be a proposal for 'light-handed' regulation, which would be superior to the traditional USA regulatory practice.

Drawing on the experience of British gas regulation Carpenter and Lapuerta (1999, p 1 and 2) concluded:-

> *"Although attractive in theory, the implementation of light-handed regulation in the United Kingdom has faced several problems. First, light-handed regulation has not worked as anticipated to avoid the need for lengthy regulatory proceedings. Second, light-handed regulation has unintentionally created inefficient incentives for regulated companies. Third, light-handed regulation has not successfully constrained the monopoly power of incumbents".*

Moreover, Carpenter and Lapuerta (1999, p 22) noted that:-

> *"Regulators have had to confront issues related to the measurement of assets, depreciation, rates of return and cost projections... Furthermore, light-handed*

regulation has exacerbated the information disadvantage of regulators, which has been exploited successfully by regulated companies".

However, in the Australian context, it is emphasised that, notwithstanding significant deficiencies in the Australia regulatory regime, it has in the short period to date, produced benefits to consumers and to the Australian economy. There have been price reductions in network charges, and service quality and reliability have improved. Productivity is considerably higher and the culture of formerly government-owned businesses has changed into one that is more customer-focused and oriented towards profit maximisation.

The Australian regulatory regime is evolving and doubtless identified deficiencies will be addressed by regulators. As experience is gained and skills are deepened regulators would no doubt learn from overseas regulatory experience, where regulators are seeking to adopt new techniques for incentive mechanisms (such as Data Envelope Analysis and Total Factor Productivity Analysis), more informed regulation utilising benchmarking, non-linear pricing, accelerated depreciation techniques, yard stick studies and the use of standardised regulatory charts of accounts. Changes in market developments enhancing competition between gas and electricity (and gas on gas competition) and the advent of multi-utilities, would require regulators to adapt to the evolving market conditions and to adjust regulatory activities accordingly. All of these challenges require informed (i.e. effective and efficient) regulation.

Regulatory Independence

There seems to be a suggestion that the ACCC is not an independent regulator as it is "perceived by business and investors to be a consumer focused organisation" (AusCID 2000, p 15). Whilst we would not always agree with the ACCC's determinations or actions there has never been any doubt about its independence (with respect to energy regulation), although there are concerns that they err on the side of the interests of network service providers given the regulatory approach adopted, including the use of the DORC asset valuation methodology. (King 2000, p 7). Its regulatory processes are transparent, and in the main, the Commission has usually gone out of its way to ensure all relevant stakeholders have the opportunity to participate in regulatory reviews in an informed way. Perhaps a strong attribute of the ACCC resides in its generally good governance structures, attributes perhaps lacking in some of the less established regulatory or quasi-regulatory institutions.

The reality of rates of return

We note the complaint that regulated rates of return have been too low.

> *"In AusCID's opinion there is no doubt that the attractiveness of Australia as an investment destination has suffered due to the recent series of decisions by Australian regulators both directly (investments in infrastructure) and indirectly (lack of investments leading to increased cost of doing business in Australia and perceived sovereign risk issues)." (AusCID 2000, p 7)*

> *"Speaking at AusCID's annual conference in Melbourne this year the head of infrastructure investment at AMP Henderson, Mr Danny Latham, said that "AMP has*

not invested in Australian infrastructure for two years because of perceptions that the sector was over-regulated." (AusCID 2000, p7)

But in reality, the rates of return approved in recent ACCC decisions do not seem ungenerous. They are above the average returns on shareholder funds for Australian business and are at the high end of international regulatory benchmarks. Pipeline operators nevertheless have the opportunity to demonstrate that investments may be deterred and the ACCC will take this into consideration. (APIA 2000, p 7)

For example, in Australia the return on equity for gas transmission for Victoria gas was determined by the ACCC in October 1998 at 13.2 percent. Other ACCC determinations were Central West Pipeline 15.4 percent (June 2000) and Moomba-Adelaide 13.0 percent (August 2000).

According to the ACCC, this compares favourably with the Australian superannuation funds pooled three year average return of 10.4 percent or the Australian Stock Exchange's return on equity over ten years of 11.3 percent. Further recent international energy decisions compare favourably. In the United States, gas and electricity returns in California were 10.6 percent and 11.6 percent (1998, 2000) and in the United Kingdom, Ofgem struck a rate of 6.0 and 6.5 percent for electricity transmission and distribution in 1998 and 2000. (AGA 2000, p 23-25)

Moreover, the ACCC values assets on a replacement cost basis, again an approach not likely to deter investments (and, in fact, likely to embed monopoly rents)

Finally, it should be noted that the returns above are not guaranteed. (AGA 2000, p 24). However, returns may well prove to be higher than the regulatory determinations because "incentive price mechanisms" are used.

Whilst the rates of return show that Australian regulated returns are clearly higher than overseas returns and comparable returns in alternative Australian investments, more pernicious from infrastructure users' view point is the use of replacement cost valuation by regulators to value sunk investments (including assets which have market values e.g. buildings, motor vehicles, computer systems). What should be noted is that not only are returns higher, they are based, for regulatory proposes on inflated asset values (i.e. the regulatory asset base) because of the use of the replacement cost asset valuation methodology. In other words users of the services provided by regulated businesses have to accept a double jeopardy. DORC valuations which generate rates of return on capital invested in excess of competitive market rates of return are not efficient, but merely forms of rent seeking.

The use of Mr Latham's comments in the AusCID submission is quite misleading. There is a huge difference between declining to purchase shares in companies enjoying capitalised monopoly rents and declining to invest in new projects involving infrastructure investment. No doubt prudent investors declined to invest in slaves in the United States from the late 1850s on, but this does not demonstrate that the abolition of slavery was inefficient from an economic point of view. The word "investment" in the popular sense connotes buying anything which yields profits but investment in the economic sense means the formation of new physical capital.

Conclusion

The reality is that utility owners are enjoying good returns, and that their revenues often include an element of monopoly rent which has been capitalized into their business valuations. The existing situation is far from optimal. Appeals for further access to monopoly rents by monopoly owners of infrastructure (who rarely wish to pay access fees for their monopoly rights over public and private land) should not be entertained. Rent seeking is a socially unproductive activity which constitutes a form of hidden taxation, lowering both the living standards of Australians and the productivity and international competitiveness of Australian industries.

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