Criterion b and production process exemption, s44B(f)

Submission to the Productivity Commission review of the National Access Regime in response to the Draft Report

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Disclaimer

I make this submission as an individual. The views expressed here do not necessarily represent those of my firm, the Sapere Research Group.

Productivity Commission's draft conclusions on the production process exemption

I welcome the Commission's acknowledgement of submissions by Professor Fels and myself that the production process exemption is related to the role played by transaction costs in determining the boundaries of the firm. However, having accepted that point, the Commission's Draft Report reaches two conclusions concerning the production process exemption that are problematic, in my view.

First, the production process exemption is said to provide a "*useful initial filter*." (Draft Report, p. 150) Given the unfortunate history of litigation of this exemption, it is questionable how useful this initial filter has proven to be in practice. The proposition that blending of iron ore through train scheduling constituted a production process took years to progress through this filter.

While it may be true that it is difficult to define a broad production process exemption by enumerating exempt types, it would surely be possible to state explicitly in legislation that the test for a production process requires analysis of transaction or coordination costs. That would be no more difficult than the reliance on economic concepts in other parts of the Regime (for example, the criterion a test for promotion of competition in markets.) An explicit statement that coordination cost minimisation is the definitive characteristic of a production process would at least provide the courts with a concrete and economically useful decision criterion in future matters where that exemption is invoked.

Second, criterion b is identified as the appropriate testing point at which to give consideration to coordination costs. "*Consideration of coordination costs in criterion (b) will assist in preventing declaration from inefficiently breaking up highly integrated supply chains.* " (Draft Report, p. 147)

It is important to consider precisely how the treatment of criterion b could do so. The type of test used for criterion b (i.e., private profitability, natural monopoly, or net social benefit) strongly influences the probability of properly reflecting coordination costs. Let us consider each of the three tests, in the context of an application for declaration of a facility that would suffer high transaction costs if access were granted. The outcome that is desired in this context is that declaration would be prevented because criterion b would not be satisfied. Is that what would happen?

Consider first the private profitability test. In the first instance, reference would be made only to the entrant's business case, in which the incumbent's future transaction costs do not directly figure. The incumbent's post-entry price levels would influence that business case. However, neither these prices nor the pre-entry prices reflect the transaction costs of third party access, because third party access does not take place in the private profitability test. Consequently, there is no scope to consider the incumbent's post-declaration coordination costs in the private profitability test. Coordination costs do not make private profitability of entry either more or less likely.

Next, consider the natural monopoly test. The fact that the incumbent's business is configured in such a way as to minimise its coordination costs simply strengthens its natural monopoly. Rather than making declaration less likely, consideration of these coordination costs would make it more likely under the natural monopoly test. The Commission's recommendation would have the opposite effect to the intended one: it would be more likely to break up highly integrated supply chains.

Finally, consider the net social benefit test, which was rejected by the Courts and the Commission. Here, the social benefits of competition through declaration would be directly compared to the coordination costs of breaking up the incumbent's supply chain, if they could be measured reliably. Such a comparison would (uniquely) take proper account of the coordination costs. Unfortunately, as has been pointed out, a criterion b test undertaken on such a basis would strongly overlap with criterion f, and may therefore be legally invalid.

In conclusion, the Commission's preference for recognising the coordination cost issue in criterion b appears logically inconsistent, and would fail to have the desired effect. Instead, it would be more desirable to reframe the production process exemption so that it makes explicit reference to the coordination cost issue, allowing the courts to apply that exemption in a concrete and economically useful manner.

Observations on the economic rationale for a natural monopoly test

If the incumbent's prices are cost-reflective then private profitability and natural monopoly tests will give the same results. However, in situations likely to give rise to a declaration application, the incumbent's prices will be greater than cost-reflective levels.

If that is so, then it is conceivable that a new facility, albeit of a smaller capacity than the incumbent facility, could be privately profitable for the entrant, despite its construction increasing average costs to the industry. The post-entry price levels (hence the viability of entry) depend on the interplay of entrant and incumbent strategies. These depend on many factors and are difficult to foresee in general.

Criterion b is premised on the notion that the threat or actuality of bypass tends to discipline the conduct of incumbents regarding pricing or refusals to deal. The foregoing points suggest that situations exist in which an entrant could find it privately profitable (even in the long term) to construct an alternative facility, but that this construction would fail to discipline the incumbent's conduct.

The chief problem in these situations is not so much that the alternative facility should not have been built (although there would be a degree of suboptimal investment) but rather that this construction event would fail to have the anticipated pro-competitive influence on the incumbent.

Observations on the likely implementability of alternative criterion b tests

Two polar extreme situations can be identified which strongly contrast the implementability and economic utility of natural monopoly and private profitability tests.

Clear-cut natural monopoly

At one extreme, the facility in question has significant spare capacity, low short-run marginal costs, and very high replacement costs. The evidence required to establish that the facility has these natural monopoly characteristics would be readily available, and probably uncontroversial. Relatively simple analysis would be sufficient to make the case. Declaration applications for Freight Australia (Dec 2001) and the airside services at Sydney Airport (Nov 2003) provide pertinent examples.

In cases such as these, the natural monopoly test would give the intended result. Whether the private profitability test would also do so depends on two factors: the availability of an investment opportunity in a substitute facility, and the strategic interaction between entrants and incumbent. Where the construction of a viable substitute facility is clearly infeasible in the medium term, the private profitability test would also give the intended result.

Clear-cut private profitability

At the other extreme, the facility in question has already been duplicated, or plans to construct a competing facility have advanced to the point of financial commitment. The evidence required to establish that the facility is, or is about to be duplicated—establishing the private profitability of this act, would be readily available, and again probably uncontroversial. Gas Code applications for revocation of the Tubridgi Pipeline (the first of two applications for that pipeline, in July 1999) and, perhaps more controversially, for coverage of the Eastern Gas Pipeline (June 2000) provide pertinent examples.[1]

In cases such as these, the private profitability test would have given the intended answer, but the natural monopoly test did not, in my view. The competing facilities did indeed create competitive pressures on the incumbent that served to discipline its pricing conduct. Nevertheless, the NCC appeared to take the view that it was socially sub-optimal for the competing facility to have been constructed, and so declaration (at least on that criterion) was indicated.

The outcome was perverse in two respects. First, the incumbent was effectively punished for its competitor's apparent lack of regard for social costs. Second, the entrant, too, was liable to face declaration of its facility through a symmetry argument.[2] The best that one could say about this

1 While the Gas Code is a separate piece of legislation from Part IIIA, the coverage/ revocation/ declaration criteria are nearly identical, and the NCC plays an eqivalent role there.

2 Coverage of the Eastern Gas Pipeline was sought at the time it was constructed.

outcome is that it might provide a very weak signal[3] to incumbents in future to try harder to accommodate entrants on their facilities. The worst that one could say is that it may provide a further disincentive (if one were needed) for competitive entry.

Less clear-cut cases

In cases that conform to neither of these polar extremes, the evidentiary requirements of both the natural monopoly and private profitability tests would be onerous.

Demonstrating the existence of a natural monopoly would require detailed examination of costs and demand in a range of hypothetical scenarios. When the NCC has confronted these less clear-cut cases, it has not addressed the evidentiary question in a satisfactory manner, in my view. For example, the NCC's Final Recommendation on Application for revocation of coverage of the Tubridgi Pipeline System under the National Gas Access Regime (the second of the two applications for that pipeline, in 27 Feb 2006) concluded that criterion b was met without carefully considering cost data particular to that facility.[4] The logic leading to the conclusion was explained at paragraph 4.37:

> *4.37 Pipelines are commonly identified as having natural monopoly characteristics. This is because the costs of constructing and operating a pipeline are largely sunk and fixed, while the variable costs of increasing output are relatively low. For this reason it is uncontroversial to state that it is generally cheaper (in terms of scale economies) to provide a pipeline service via an existing pipeline than to construct another pipeline for that purpose.*

In other words, gas pipelines have natural monopoly characteristics. The Tubridgi Pipeline System is a pipeline. Therefore, criterion b is met.

At the same time, any demonstration of private profitability of a hypothetical investment would be subject to the accuracy of forecasts of highly uncertain parameters: price levels, facility-specific demand and possibly costs. While the disciplines of project finance and project evaluation could be brought to bear, the history of toll road BOOT schemes in Australia highlights the perils of reliance on such long-term forecasts.

These considerations do not establish a clear preference for either the natural monopoly or private profitability tests on pragmatic grounds. However, they do show that implementation of the natural monopoly test would only be straightforward in certain clear-cut cases, where either test would likely give the same result. In other cases that are clear-cut in a different sense, the private profitability test would work as intended but the natural monopoly test would not. In less clear-cut cases, both tests would prove difficult to implement.

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3 The incumbent calculus would weigh the certainty of conceding access on cost-reflective terms now against the uncertain and distant possibility of having to do so after many years of litigation. Absent punitive arbitration terms, the incumbent would likely find refusal to be the dominant strategy.

4 The NCC Final Recommendation cites two widely differing replacement cost estimates ($16m and 'in excess of $50m') provided by parties advocating coverage. It is not clear which of these estimates the NCC relied upon, nor is it clear whether these capital sums would represent a significant barrier to entry in the North West Shelf gas industry.