

Adapting Competition Policy for Developing Countries — a comparison of Australia and Indonesia

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Competition was first introduced into countries where the network was developed under monopoly conditions that had allowed the cross-subsidy of access from calls. But where the network is less developed, the competitive model needs to be modified to achieve network development goals. Some issues and options concerning price rebalancing and the interconnection regime are discussed using Australian and Indonesia as case studies of the different contexts for the introduction of competition.



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INTRODUCTION

The context in which competition is being introduced into countries opening their markets today is very different from that of countries that first experienced competition. In the early cases, competition was introduced into mature telecommunications markets with high levels of access and affordability in order to promote choice and efficiency. The new context is that of developing countries where there is little existing infrastructure and access and affordability are still major issues. This paper uses Australia and Indonesia to illustrate these different contexts for the introduction of competition and the implications for policy.

DIFFERENT CONTEXTS

Figure 1 highlights the key differences in context between Australia and Indonesia which are thought to be typical of developed and developing countries respectively. The figure notes large disparities between these countries in Gross Domestic Product per head and fixed lines per head, which are the basic measures of economic and telecommunications development. GDP per head is a good indicator of the potential market for telecommunications services and is also a measure of a country's capacity to build infrastructure. Fixed lines per head do not reflect the growing importance of mobiles in telecommunications development. So, a more inclusive measure of telecommunications development is to take total (ie both fixed and mobile) services per head. On this basis, Australia has over 100% teledensity while Indonesia still has less than 5%.

| Developed Economy | Developing Economy |
|--|--|
| <p>-- AUSTRALIA -- -GDP/head > US\$20,000</p> | <p>-- INDONESIA -- -GDP/head < US\$5,000</p> |
| <p>Fixed Line Teledensity > 50%</p> <ul style="list-style-type: none"> • Policy focus “choice & efficiency” • Broadband focus • Established network so entrants initially rely on existing customer access network • Fixed network focus • Mass demand for communications • Country can afford some duplication and mistakes | <p>Fixed Line Teledensity < 5%</p> <ul style="list-style-type: none"> • Policy focus “build-out & WTO” • Narrowband focus • Little network so entrants are expected to build customer access networks • Mobiles a new option for build-out • Affordability a major issue • Country poor in investment and foreign exchange resources |

Fig 1 – Key Differences in Context

Since developed countries have mature telephone networks the policy focus in these countries is now on developing broadband service. But for developing countries the priority is still to get basic telephone service. Fortunately, a major advantage enjoyed by late starters in network development is the availability of mobile technology that can be rolled-out very quickly and cheaply compared with fixed networks. Mobile networks are also less vulnerable to theft than fixed copper networks and, with pre-paid cards, mobile service is easier to market and bill for customers who move around or have affordability issues.

Other differences are noted but the most critical one that we have already stated is that competition is being introduced at different stages of network development. So what?

IMPLICATIONS FOR CROSS-SUBSIDY

In most countries, the extension of universal service has been promoted by the cross-subsidisation of access from call revenues. In a monopoly context where access and calls are joint in both supply and demand, this is possible. But, in the competitive model which has usually been applied to fixed networks, new entrants feed off this cross-subsidy undermining the financial viability of the incumbent operator and, if tariffs are rebalanced to eliminate the cross subsidy, threatening the affordability of universal service.

In Australia, the USA, UK and other developed countries the competition model required not only “terminating access” (ie to ensure “any to any” connection across networks) but also mandated “originating access”; also known as “equal access”. With originating access, customers of the incumbent fixed network operator are able to use other carriers for long distance calls by means of “over-ride” (ie dialling extra digits ahead of the number being telephoned) and/or “preselection” (ie getting all long-distance calls routed via a chosen operator without dialling extra digits).

A micro indication of the financial impact on the incumbent of mandating “originating access” is given in Figure 2, which shows the situation in Australia at the start of long-distance competition [1]. Where Telstra received retail revenue of A\$1.66 for a 5-minute call between Melbourne and Sydney, it received only A\$0.27 at the wholesale level for providing both originating and terminating access for a similar call placed by the customer through the new entrant, Optus. The only infrastructure required by Optus was billing as initially the trunk component of the call was leased from Telstra. Since Optus charged the customer \$1.54 (sufficiently lower than Telstra to win market share), it made a profit of over A\$1 on the call and Telstra lost even more in terms of the contribution to network costs.

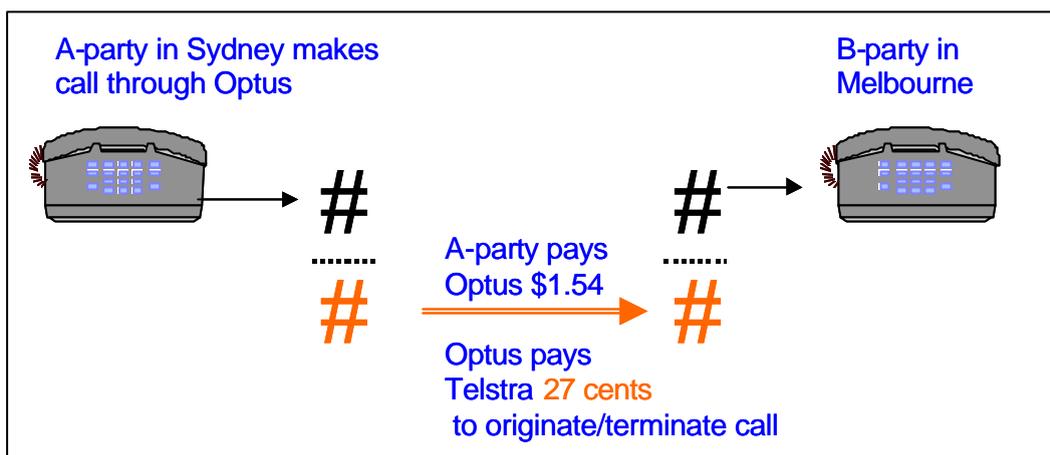


Fig 2 – Australian Competition Model

Another way of looking at the financial threat to the incumbent is by comparing service revenues with stand-alone and incremental service costs, as in Figure 3. Although the estimates are based on 1988 using detailed public data from the BTCE's major costing study [2], the relativities would have been unchanged at the start of competition in 1992.

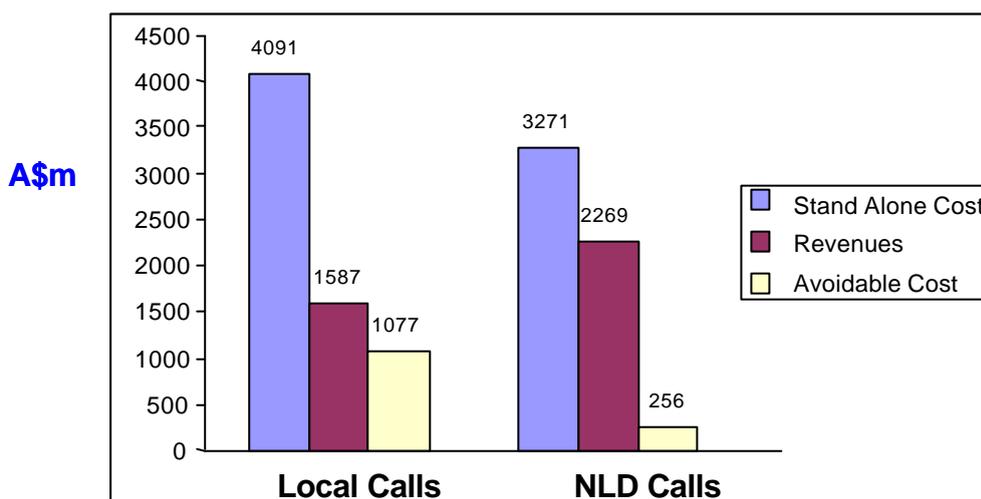


Fig 3 – Call Cost Structures

Figure 3 shows that both local calls and national long distance (NLD) call revenues each covered their own avoidable service costs but not their respective stand-alone costs [3]. The key point is that NLD revenues made a contribution of over A\$2 billion to network costs when total company profit was only A\$0.8 billion. It is no surprise then that new entrants target NLD (and international) calls, especially since interconnection rates are much lower than NLD retail tariffs.

TARIFF REBALANCING

It is also no surprise that we have seen major “rebalancing” of retail access and call tariffs in developed markets with competition. If the cross-subsidy from calls to access is no longer possible because it is partly taken by new entrants, then the retail cost of access must be increased to eliminate the cross-subsidy before competition does. This logic is inescapable but politically hard to accept.

During the first phase of long-distance competition the price (cap) control regime required Telstra to reduce the basket of services comprising residential line rentals, local calls and connection fees by 2% in real terms (ie sub-cap was set at CPI-2). However, in the current price cap regime which runs for 3 years from July 2002, the sub-cap for residential line rentals alone is set at CPI+4; signalling a new willingness by government for Telstra to pursue tariff rebalancing.

The levels of Telstra's retail line rentals 10 years before and after the commencement of long-distance competition in 1992 are shown in Figure 4, which includes the line rentals effective August 2002. Note that the 2002 figures do not include tax to show only what Telstra receives. From 1 July 2001 a value added tax (ie the GST) of 10% applies to most goods and services. Including GST, residential line rentals are nearly double what they were at the start of competition.

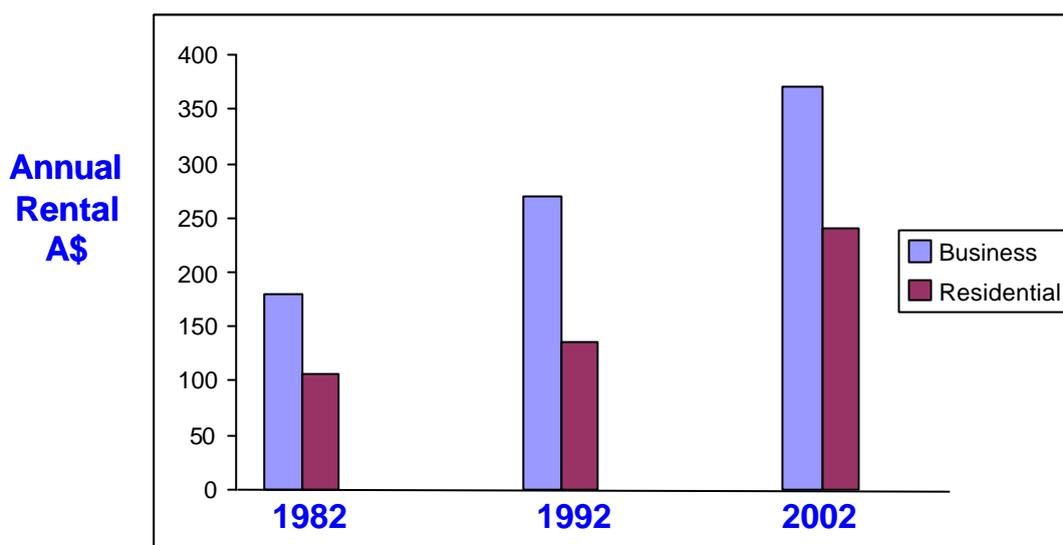


Fig 4 – Australia Still Raising Rentals

Naturally, there is concern that increasing line rentals may cause some people to drop off the network; which is why special concessions are now targeted for groups at risk. However, while such increases in rental tariffs are literally a marginal problem when most people are already on the network (and appreciate what it can do for them), such levels of line rental would create a serious hurdle to getting people on a network where it has yet to be built or few people are connected. Of course, in developing countries it may not be a bad idea to discourage extension of the fixed network and to encourage take-up of the mobiles network if the latter is cheaper to provide.

While raising line rentals allows call prices to be reduced, most of the reductions which have taken place have been driven by competition. It is better to reduce margins than to accept interconnection revenues which carry no contribution to general network costs. Typical call prices for Telstra, again 10 years before and after the onset of long-distance competition, are shown in Figure 5.

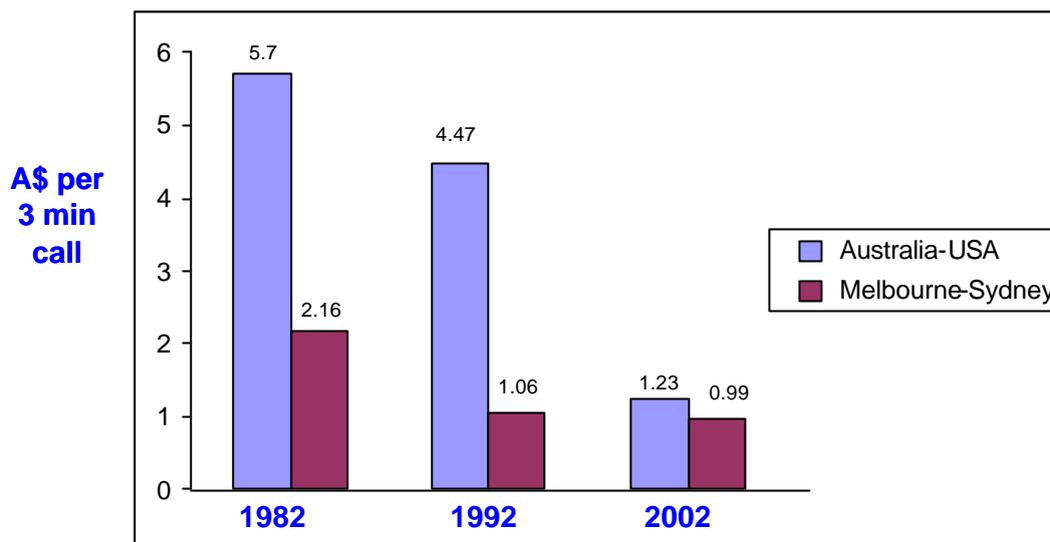
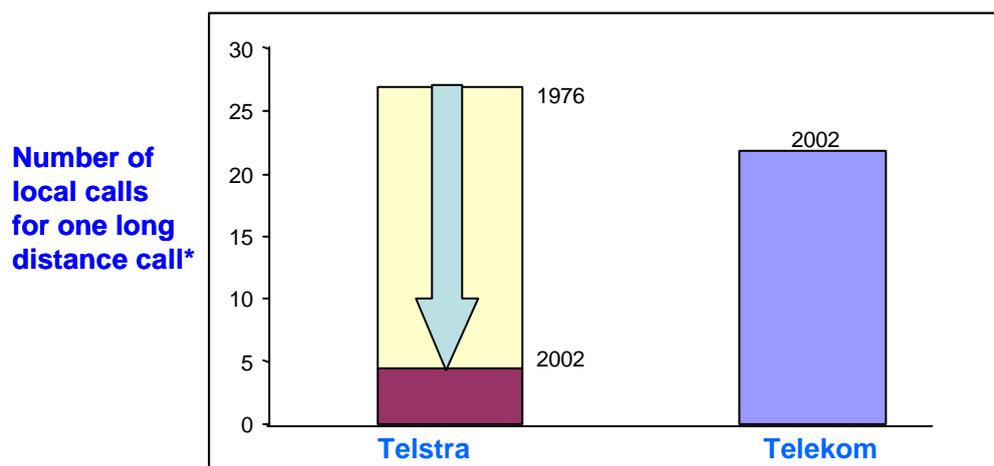


Fig 5 – Long Distance Call Prices

INDONESIA

While Telstra's rebalancing issues have been large, for developing countries like Indonesia the task is even bigger. The tariff relativities in such countries are 25 years behind Australia. This reflects the comparable stages of network development.

Figure 6 shows that the number of local calls that could have been had for the price of a 3 minute long-distance call has fallen from 27 to 3 for Telstra between 1976 and now. For Indonesia, the current ratio is 22 because local calls are very cheap. The standard price of the (untimed) Australian local call is A\$0.22 but the Indonesian (timed peak rate per 2 minute pulse) is about A\$0.04 (based on an exchange rate of A\$1=5,000 Rupiah). The per minute long distance price (peak over 500km) is about A\$0.57; which exists where there is no long distance competition at present.



*** NLD call is 3 minute Melbourne-Sydney and equivalent for Indonesia**

Fig 6 – Long Distance to Local Price Relativity

Figure 7 provides another indication of the trends that Indonesia may expect to follow. It shows the number of 3-minute long-distance calls that can be purchased at the same price as

a month of business or residential line rental. Again, the Indonesian ratios are currently at about the same level as in Australia twenty five years ago. The number of long distance calls per month of rental has increased in Australia both because long distance prices have been falling and also because line rentals have been increasing. This is rebalancing at work and the ratios give an indication of how far behind Indonesia and many other developing countries are in starting this important task.

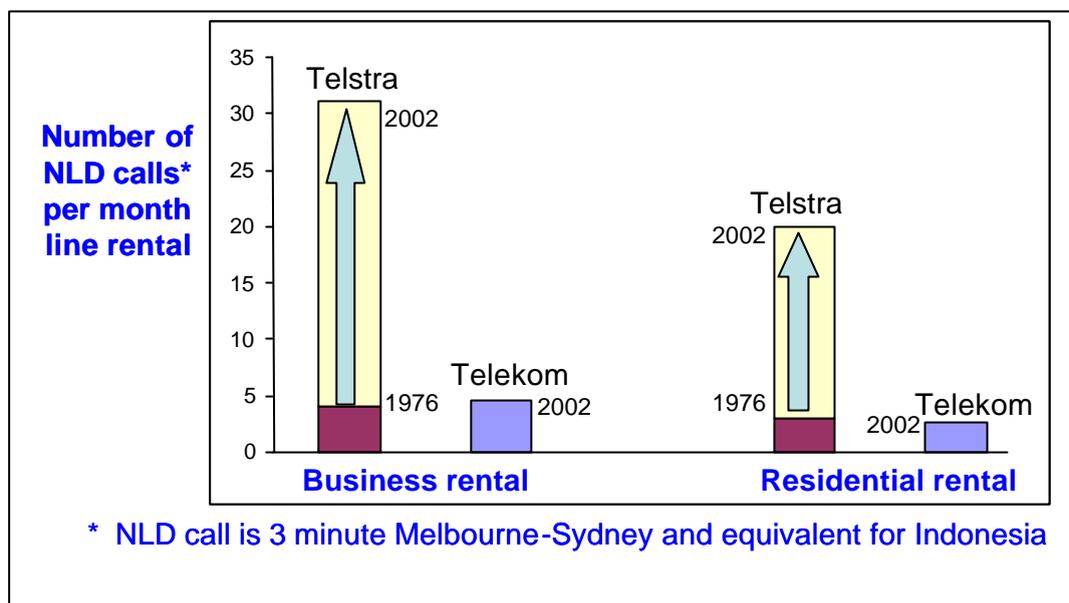


Fig 7 – Rental to Long Distance Price Relativity

POLICY OPTIONS

It is no fault of the Indonesians (or other developing countries) that they are in this situation now. Australia and other developed countries had similar price ratios even when they had more developed networks than Indonesia has now. Network extension depended on subsidised access. Given that competition and cross-subsidy seem incompatible, what can developing countries do to ensure network development?

The economist's response to the issue of competition and cross-subsidy is usually to suggest immediate tariff rebalancing. But, this would make affordability even worse than it is already and dampen demand for connection to the network. This does not serve the goal of universal access.

The standard textbook solution to funding industries with large fixed or shared costs is to provide a government subsidy which permits marginal cost pricing. This option has not generally been pursued in developed countries but it is a real option in the green-fields situation currently found in developing countries. It is not unrealistic to offer capital grants subject to tender to, say, provide tele-centres or payphones in villages.

Another option is to modify the competition model to mandate only terminating access. This is illustrated in Figure 8 using the same data used in Figure 2. In this model, the new entrant has to build customer access networks to play in the long distance market. It has a reasonable expectation of recovering any cross-subsidy in the provision of access to its customers because outgoing long distance call revenues are not diverted to other carriers by originating access. This might seem strange in a fixed network context but it is actually the model used for mobiles. It makes sense where incentives must be provided to encourage build-out of networks, whether fixed or mobile.

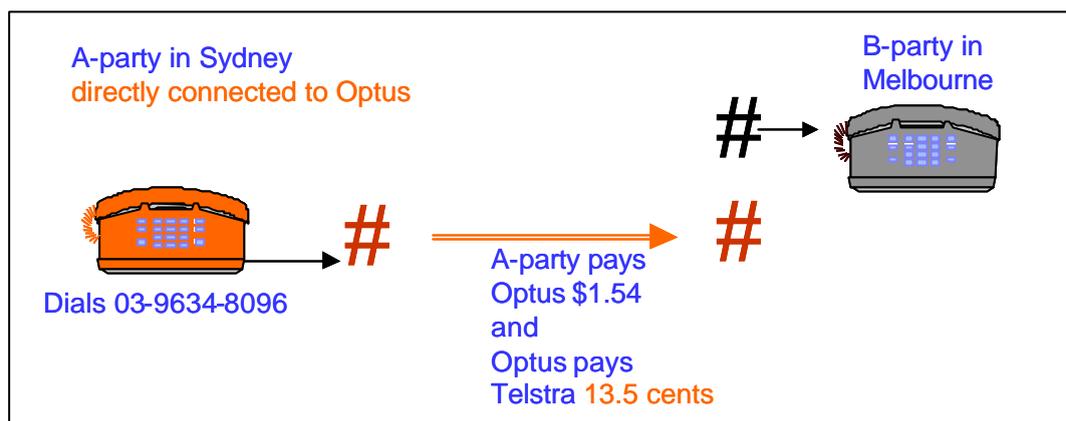


Fig 8 – Terminating Access Only Model

As mentioned earlier, Australian policy makers and regulators accept that there is an access deficit and a possible threat to universal service so various industry self-funding arrangements have been established. For example, the access deficit is part funded by a surcharge on the interconnect fee (accounting for 0.69 cents of the 1.53 cents per minute per end regulated interconnection rate for 2000). There is also a Universal Service Obligation (USO) funding arrangement based on the estimated net avoidable costs of providing service to uneconomic groups of customers. In practice, the incumbent still wears most of the costs because its scale leads it to bear the greatest share of costs.

Subject to these mitigating regimes, the incumbent has to manage the transition to sustainable competitive pricing by superior pricing and marketing strategies. It will seek contributions to fixed costs from products subject to competitive pressures, demand elasticities and price controls while recognizing that pricing is both an art and a science.

While the calls to access cross-subsidy remains significant, developing countries would do well to consider mandating only terminating access. Importing the “equal access” model will discourage development of access infrastructure when that is still the primary goal. Excluding originating access will not guarantee network development, but more importantly it will not handicap it.

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John de Ridder is a telecommunications consultant with expertise in competition, regulation and pricing. While Chief Economist, he led Telstra’s team in the path-breaking study on the cost of universal service. As one of the first managers in Telstra’s Interconnect Unit, he was directly involved in setting interconnect prices and the first comprehensive interconnect agreement. In Corporate Marketing, he played a leading role in competitive pricing from the start of competition.

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