

Qantas versus the Industry Commission: Optimal Tariffs or X-Efficiency?

Harry Clarke

Reader in Economics

La Trobe University

Abstract:

Some criticisms of Australian ASAs assume the demand for inbound tourism is highly own-price elastic and that rents cannot be extracted from foreign tourists because of possible international retaliation. If price sensitivities are low and retaliation is manageable then liberalising capacities on major routes could lead to substantial rent losses from foreign tourists and thus to unnecessarily costly ASA policy reforms. Elasticity estimates provide a guide to rent-maximising capacity levels and, given these, Qantas should be granted minimum desired capacity levels to meet its externality-generating "flag carrier" role. Capacity beyond such levels should be auctioned off to the highest bidder in a market where Qantas and current Australian domestic carriers are among the possible participants.

Contact Author:

Harry R Clarke
Department of Economics
School of Economics and Commerce
La Trobe University
BUNDOORA VIC 3083

Telephone: (03) 479 1732 Fax: (03) 471 0592

Clarke

Introduction

The recent Industries Assistance Commission (now Industry Commission) document **Travel and Tourism**, Report No 423, (hereafter the Report) sees a significant impediment to maximising Australian benefits from tourism in the area of transportation service provision. A particular source of inefficiency and high costs is seen to arise in the way international Air Service Agreements (ASAs) are negotiated. It is claimed this occurs to the advantage of the national carrier (Qantas) at the expense of the nation as a whole. This view has evoked a strong response from Qantas (and other groups) who see current capacity restrictions and consequent pricing policies as enabling Australia to extract rents from foreign tourists. The present paper evaluates these competing claims using some economic theory. It also comments on various suggestions for reform.

The IAC report

The Report begins by noting that international visitors spend about \$6b per year in Australia whereas domestic tourism expenditure contributes \$16b. The aggregate contribution of tourism is substantial: tourism outputs constitute 6% of GDP and employ over 440,000 persons. International visitors spend between 30-75% of their total trip costs on airfares to and from Australia and, once they get here, devote 18% of their total spending to travel within Australia. In aggregate, foreign tourists now spend about \$2.8b annually getting to and from Australia while resident Australians spend about \$2.2b on outbound tourism fares.

This statistical snapshot makes three things clear. First, resident Australians are the major consumers of tourism goods and services provided in Australia. Second, while foreign tourists spend a significant fraction of their tourism budgets travelling to and from Australia, resident Australians also spend substantially on outbound fares. Crucially, since resident spending constitutes a large fraction of both of these expenditure categories, it is clear that non-discriminatory pricing policies directed towards either market segment must account for their effects on residents as well as foreign tourists. Third and finally, it is also clear that if the Australian government wishes to act comprehensively to extract rents from foreign tourists then a viable avenue that should be considered for doing this is via air fares since these fares constitute a significant component of total tourist spending for which there are few close economic substitutes.

Air travel to and from Australia is highly regulated through ASAs. According to the Report, these limit the number of airlines that can fly, the total number of passengers they can carry and the proportions of passengers reserved for the various carriers. ASAs effectively limit the supply of seats and competition among carriers. They enable fares to be set well in excess of marginal costs. In addition, ASAs usually guarantee a minimum capacity entitlement for travel to other countries - in the case of Australia this entitlement accrues to Qantas alone. Because ASAs restrict competition and limit capacities, they bring about higher prices, fewer visiting tourists and a lower

level of Australian overseas travel. Moreover, the tourists who do travel have less to spend on arrival. In the absence of price discrimination Australian travellers also pay these higher fares leading to real purchasing power losses for Australians when they travel on foreign carriers. The perceived advantages of the arrangement stem from the foreign exchange savings Australia makes when its residents do travel overseas on Qantas and through the rents accessed by Qantas from international tourists.

This paper ignores the "import substitution" basis for maintaining a domestic fleet of aircraft (this is easily understood to be economically nonsensical in the absence of a comparative cost advantage in providing the service) and concentrates on the possibility of rental gains.

In this regard the Report concludes that the disadvantages to Australia from current restrictions exceed the advantages. Moreover, the implied costs are directly attributed to the ASA regulatory environment rather than the often-discussed fact that Qantas (and Australian) airlines are publicly-owned. The IAC treats the latter as a side issue.

The IAC strategy for dealing with these allegedly avoidable costs is to negotiate (internationally) to relax restrictions on competition and seat capacity whatever the nature of such restrictions might be (whether restricting entry of new airlines on established routes, setting total seating capacity or specifying shares in entitlements that accrue to each country). It is suggested that to begin with the reforms proceed by relaxing restrictions within current agreements but, as the deregulatory process develops, the scope for establishing new routes is also envisaged. After initial attempts to remove the major bottlenecks (and within five years), the IAC argues that a concerted attempt should be made to remove all capacity constraints on air services to and from Australia.

This is distinguished from an **open skies** policy since principles such as "national sovereignty in aviation" and the need for "reciprocal access" to other countries are accepted. The removal of capacity constraints is the "centrepiece of bilateral negotiations" but the IAC stresses that its intent is not "unilateral action" that would transfer rights to foreign carriers without ensuring expanded access to foreign markets by Australian carriers.

We do not dispute this advice but do argue that it is not well-supported by empirical enquiry. The first thing that needs to be determined is whether or not the demand for travel is very elastic. As we argue below, this does not seem to have been resolved - if anything the evidence tends to support the hypothesis of inelasticity. If demands are elastic on particular routes then it is hard to see why an "open skies" policy on such routes would not maximise Australia's economic advantage for the same reason that a price-taking country maximises its economic advantage from free trade. The only modification to this view would be an active intervention to support the role of the Australian "flag carrier" Qantas in flying the various routes should it be known that **external economic benefits** accrue to Australia by having this type of "national carrier" status symbol. (These external benefits are sometimes loosely discussed but seem hard to pin down. "Flag carrier" aircraft are supposed to enhance national prestige, "symbolise" a country and, particularly for emerging LDCs, to provide tangible evidence of "international presence". There could also be strategic and defence

advantages in maintaining a national carrier). Thus Qantas might justifiably be given preferential treatment to enable it to compete effectively in a competitive market where it operated with a cost disadvantage. The extent to which such treatment should be granted depends on the extent of beneficial externalities generated. In general, the costs of the policy (inclusive of consumption losses) should not exceed the value of such externalities to Australia. Apart from such considerations there is generally a strong argument given elastic demands for a liberal aviation and tourism policy.

What if travel demands on particular routes prove to be highly inelastic? Even in this event there is certainly not an automatic case for a restrictive "rent extraction" tourism/aviation policy. Additionally, we need to be confident that pursuing such a policy would not induce retaliation by countries involved in bilateral ASA negotiations with Australia. If these countries are already taxing Australian tourists travelling overseas through excessive fares, entry or exit taxes, hotel taxes etc., then a move towards corresponding charges on foreign tourists travelling to (or in) Australia could be interpreted as an attempt to "offset" such income losses for Australians. However, in economic terms such retaliatory policies are only sensible if foreign demands for Australian tourism are inelastic enough.

What we wish to stress however is that even should it be feasible that rents are extractable (without retaliation) from foreign tourists this does not necessarily support the current way ASAs are negotiated. To be clear, the only specific role for Qantas is the "flag carrier" externality role mentioned above. Thus, in terms of negotiating ASAs bilaterally, the only prescribed role for Qantas on a particular route should be the minimum supply of capacity (say q) necessary to achieve these external benefits. If the foreign carrier insists on equal reciprocal access rights, then it too should be given this same capacity entitlement q on the particular route. In the unusual situation where total assigned capacity exceeds the monopoly rent extraction capacity Q (so $2q > Q$), this assignment will define total route capacity. More typically, where the "flag carrier" benefits support only a modest level of assigned capacity (so Q greatly exceeds $2q$), benefits to Australia will be maximised by auctioning off the residual capacity $Q-2q$ to the highest bidder. The set of bidders here should be completely unrestricted and should include the domestic and foreign "flag" carriers as well as any other domestic and/or foreign carriers who wish to compete for such rights.

This arrangement seems preferable to merely splitting most capacity between domestic and foreign flag carriers. The reason is that, with this arrangement, the same level of rents accrue to the economy auctioning-off the capacity rights but the local "flag" carrier is now exposed to competition for the non-guaranteed portion of its capacity entitlement. There are pressures on the "flag" carrier to operate efficiently in order to be able to compete profitably for marginal capacity.

Implicit here is the idea that, in the absence of competition, a "high" cost carrier with guaranteed capacity may be characterised by x -inefficiency. This can be dealt with by exposing the carrier to competition at the margin and by collecting the rents directly from the various competing carriers. (This point has interesting implications for theory. It is widely argued that the presence of monopoly makes redundant the introduction of an "optimal tariff" for trade policy. The reason is that the monopolist will already be accessing the rents that would be gained by the introduction of such a tariff so, from an

efficiency viewpoint, the two policies would be equivalent. With x-inefficiency the equivalence between optimal tariffs on competitive industries and the rents yielded by monopoly suppliers breaks down. In fact, from the viewpoint of efficiency, it now makes sense to deal with a monopoly structure by first making it competitive and then subjecting the resulting competitive structure to the desired tax rather than simply allowing the monopoly to access the rents directly.

The idea of auctioning traffic rights has been discussed before: see Centre for Transport Policy Analysis (1988, chapter 10). This study states that:

"...levying any charge at all for access to aviation rights will lead to a loss of economic well-being, since it will necessarily lead to prices for aviation services that exceed the real cost of producing them." (*op. cit.* page 102)

The "real cost" here is zero since the "intrinsic value" of such rights is taken to be zero. This reasoning however is clearly flawed. When a country has monopoly power over the disbursement of such rights then they do have intrinsic value and charging an optimal tariff for such rights will maximise national advantage.

The demand for tourism

A major point in the IAC argument is its view that the demand for travel to Australia is highly "own" price-elastic. Since the IAC is non-specific let us be so and define "highly elastic" as a price-elasticity that implies an optimal tariff less than 5% of price (in this case a government by operating a service as a competitive industry would forego rents equal to 5% of net revenues). If elasticities are high in this sense then the claims (attributed by the IAC to Qantas and the CIE (1988)) that prices of tourism goods and services can be raised to access a significant level of rents to Australia from foreign tourists to the net advantage of the Australian people, are probably indefensible. This is indeed a basic IAC argument.

Thus the IAC rejects the view that Australia is a "niche market" with unique characteristics that can be best marketed to a "high-yielding" group of foreign visitors.

What are the reasons the IAC believes tourism demands are highly elastic?

- 1) The Report first notes that the various industry submissions to its enquiry stress the importance of price as an influence on demand.
- 2) It also remarks that the upsurge of international tourism to Australia has coincided with a substantial reduction in the real value of the Australian dollar which *prima facie* supports the hypothesis of price sensitivity.
- 3) Finally it claims that technical studies of tourism demand typically understate the extent of price-sensitivity. The reason for this is that the influence of other-destination pricing is typically not considered and the relevant cross-price variables omitted. (In fact, without further information, the omission of relevant price variables in a least-squares regression relation will not lead to "own" price elasticity estimates that are biased downwards. Omitting variables leaves remaining parameter estimates inefficient but unbiased). Moreover, the same studies typically overstate the effects of income in determining demand. In fact it is claimed that some studies, by ignoring budget constraints, have the implication that in the long-run consumers will spend more than they earn. These issues are explored in Appendix E of the Report.

Our criticisms of these arguments are crucial to our view that the IAC's policy recommendations are not soundly-based on theory or evidence. We consider the IAC arguments in turn. First, the claim that individual producer groups see price as a

significant variable influencing demands must be interpreted with caution. Individual producers may experience considerable price competition without invalidating the idea that, at the industry level, rents can be extracted. Recall that the traditional argument for an "optimum tariff" in international economics is based on the **presumption** of competition - a monopolist would gather rents automatically and "optimal tariffs" would be redundant.

Second, the claim that falling values of the Australian dollar have coincided with substantial growth in international tourism is, at best, casual empiricism. If there is a valid inference that such an association implies price-sensitivity then this should show up in the so-called "technical" demand studies.

In fact the technical literature surveyed in Appendix E of the IAC report (and elsewhere) generally provides little or no evidence to support the claim of price-sensitivity. The Report argues that elasticities are crucial to **determining** whether tourism strategies should be oriented towards maximising numbers of visitors or to selling tourist goods and services at rent-maximising prices (this is the issue at stake rather than an IAC conclusion) but, on the elasticity issue itself, the Report does "not reach any definite conclusions" (*op.cit.* page E1). It notes that the relevant dependent variable in a demand study should be total spending on Australian goods and services but remarks that data issues preclude this specification of the dependent variable so conventional (and inappropriate) demand measures, namely, the number of visitors from a particular country, are used in the IAC's own work. As is well-known, this misspecification of the dependent variable in least squares **will** bias price-elasticity estimates upwards i.e. it will wrongly favour the hypothesis of inelasticity. (See Crouch and Shaw (1991)). Basically price-elasticities might be expected to increase in absolute magnitude when expenditure data is used instead of number of trips since tourists are likely to alter the length of their stay or average daily expenditure before they alter their decision to visit a country). Also, although omitting "other" price variables (airfares, relative prices) is recognised to bias upwards "own" price elasticity estimates, this is not reflected in the range of prices used in the IAC studies - again, for data reasons, cross-price information is not introduced. In effect the IAC estimate standard log-linear demands with single income and "own" price variables.

Most significantly, many actual price elasticity estimates computed by the IAC suggest either inelastic demands or demands which are only moderately elastic. The lowest was -2.6 which suggests an optimal tariff on the supply of such services of 62.5%. This is hardly evidence of low capacity to yield rent! (for the methodology in computing such estimates see Clarke and Ng (1991a)). Of course we are not suggesting that such a tax makes much sense. We merely point out that it is large, by any account, and does not support a claim of price-sensitive, tourism demands.

Admittedly the IAC places low weight on its own empirical studies. It does however state it is "aware of no superior analysis which relies solely on econometric and statistical techniques" (*op. cit.* page E9). This remark is puzzling in view of the Australian Tourism Research Institute submission to the IAC inquiry which **does** resolve many of the statistical problems discussed by the IAC and which does yield more plausibly elastic "own" price elasticity estimates. As Clarke and Ng (*op. cit.*) point out, the "optimal tariffs" implied by this study for New Zealand tourists to Australia are 24% of their total holiday spending while the corresponding figure for Japanese tourists is 43%. These estimates are lower than the optimal tariffs implied by the IAC study but are still not nearly low enough to reject the hypothesis that potentially huge rents can be extracted from foreign tourists (To be accurate here it is worth

emphasising that the Australian Tourist Industry Association, who commissioned the CIE study referred to, likewise believes "... that the estimated results understate the "real" figures," (*op.cit.* page 10))

About the best that can be said about the IAC conclusions is that they have not been demonstrated. More research is called for.

(Preliminary work by Clarke and Divisekera (1992) suggests Japanese price elasticities of demand for Australian tourism of around -7. Such figures imply optimal tariffs of around 17% which are significant enough to still provide a possible case for "rent extraction" policies.)

In arguing (without evidence) that price sensitivities are substantial, the IAC is effectively rejecting the idea of a tourism policy based on extracting rents from a "high yielding" class of tourists. Instead it advocates the risk-averse strategy of attempting to cater for a broad range of tourists. This latter strategy is not necessarily inconsistent with the policy of attempting to extract rents from tourism but could suggest proportional taxes on hotel room rates (or other tourism goods and services) rather than relying on monopoly power in international air transportation to extract rents. Proportional hotel taxes discriminate between alternative income classes of tourist by being greatest in absolute magnitude for high income travellers. The scope for implementing this type of discrimination exists for air travel (first class versus charter flights) but is more constrained.

While the IAC recognises the possibility of targeting particular segments of the tourism market it claims that any attempt to do this is restricted by:

- 1) The difficulty of extracting rents without affecting tourist spending.
- 2) The issue of identifying who the high-yielding tourists are and the questionable supposition that "high-yielding" means price-unresponsive.
- 3) The difficulty of restricting the higher prices to foreigners - Australian tourists, whose spending constitutes 75% of the market, may also be forced to pay. The IAC recognises that arrival and/or departure visa charges are a possibility as well as taxes on hospitality, transport and shopping.
- 4) That differential pricing between tourist groups would tend to be competed away.
- 5) That while there is scope for rent extraction from (for example) the airline industry, this still leaves open the issue of whether these rents would accrue to the "general" community. Moreover, such rent extraction will only be advantageous if the industry is operating "efficiently" enough and not imposing substantial dead-weight losses on the resident community. Of course, any restrictions of volume so induced may affect the returns to other industries.
- 6) The "rent extraction" strategy it is claimed does not get much support from empirical evidence or from other (non-airline) segments of the industry.

These arguments are a mixed bag. Point 1) recognises that the amount of output sold with an optimal-rent-extraction price is less than the amount sold with a corresponding competitive price: this is true but hardly the point - the value of output sold with the higher price will be considerably greater if significant monopoly power (i.e. price inelasticity) arises because increased revenues will more than compensate loss of "volume". Point 2) forces analysts to think about the effects of pricing on "budget travellers" and whether the loss of such travellers would have serious economic consequences for Australia. Ultimately this assessment depends on the "technical" examination of the demand for tourism in aggregate (as discussed above). Provided this is "own" price inelastic enough, there will still be advantages for Australia in monopoly pricing even though this involves excluding (on the basis of cost) some tourists.

Point 3) is crucial. If residents consume the good subject to the effects of an "optimal tariff", then net economic gains are reduced. Clarke and Ng (*op. cit.*) compute the optimal tariff formula in this case and show it **remains** optimal to impose such a charge even if price discrimination is infeasible. The optimal charge decreases as domestic purchases become substantial.

Point 4) requires the designer of such charges to be aware of substitution possibilities and that is really all.

Point 5) is at first sight a cheap shot: the gains from "free trade" always accrue to a particular group and the issue of how they are distributed is always problematic from the viewpoint of social welfare. Thus the "gains from trade" are almost always assessed as potential Pareto gains with distributional consequences therefore being suppressed. There are however other issues associated with rents accruing to Qantas. Certainly these rents may not accrue to this carrier's owner i.e. the Commonwealth Government. Some may accrue to suppliers or be absorbed by a lack of production efficiency. If labour (pilots, cabin crews, ground staff) enjoy salaries that are beyond the level needed to just keep them in the industry, there are likewise efficiency costs. Also, managers of a publicly-owned carrier may opt for the "quiet life" or excessive enterprise size rather than a maximised bottom line.

There seems some empirical justification that the latter views may be correct. Qantas has not earned significant profits for most of the last fifteen years. The data is set out in Table 1. Qantas does not seem to have even earned normal rates of profit over most of the period with rents apparently having been absorbed by factors of production or expansion costs. This evidence is one reason why we believe it is essential to uncouple the desire to exploit foreigner rents from the notion of giving a dominant role to Qantas. The two issues are not linked: rents can be extracted by auctioning off capacity rights as we have suggested but the possibility of x-inefficiency within Qantas can be dealt with by exposing this carrier to competition at the margin.

Finally, point 6) is subject to the above-mentioned critique of the presumption of elastic demands - while this is certainly true for a competitive industry it is the basis for optimal tariff arguments - not for the rejection of arguments for rent-seeking by governments.

To sum up: the IAC's rejection of the possibility of targeting particular segments of the tourism industry thus far seems misplaced. The strongest point it makes is that price-discrimination between residents and foreigners is rather impractical so residents will almost certainly incur the effects of rent-seeking taxes. In the absence of price-discrimination possibilities this does cause real difficulties and suggests the reorientation of rent-seeking endeavour away from aviation towards other tourism sectors such as accommodation. This is examined further below.

Air transport

The key feature of Australian air transport services is the regulation of competition. Qantas is the single Australian carrier of international passengers. Regulation of international aviation stems from the Chicago Convention of 1944 which recognises a country's sovereign right to control its own air space.

ASAs, as discussed above, guarantee a country's national flag carrier participation in international aviation. At the time of the Report, Australia had negotiated such agreements with twenty-eight countries involving thirty-six airlines as

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well as less formal arrangements with several others. Collectively these agreements are authorised by the Executive Council and tabled in parliament although in a form which

Table 1 Qantas' Profitability 1976-1990.

Year	After-Tax Profit	Profit as Fraction of Revenue
1976/77	\$6m	1.1%
1977/78	6	1.0
1978/79	1	0.1
1979/80	-21	-2.3
1980/81	-20	-1.9
1981/82	61	5.5
1982/83	-34	-2.7
1983/84	58	4.2
1984/85	148	9.4
1985/86	4	0.2
1986/87	64	2.8
1987/88	131	4.7
1988/89	211	6.0
1989/90	177	5.4

Source: Qantas, Annual Reports. The figure for 1988/89 is for fifteen months.

does not reveal details regarding capacity entitlements, traffic restrictions and pooling arrangements which are contained in a Memorandum of Understanding not subject to public or even parliamentary scrutiny.

ASAs permit each country to designate the airlines that shall fly on a particular international route and thus act as barriers to entry of other airlines which might otherwise service the route. They also specify ports of entry, the number of flights and the type of passenger carried by the different airlines, for example, the proportions of origin/destination passengers, fifth and sixth freedom passengers and so on. (Definitions of the various "freedoms of the air" are given in Appendix F of the IAC Report. The "fifth freedom" is the right to take passengers (and mail and freight) from one State to another by an airline on route to or from its own State. The "sixth freedom" is the right to effect these transfers from one State to another via the airline's home State. Of the "six freedoms" only the first two (the right to fly across another country without landing, the right to make landings for non-traffic reasons (e.g. fuel)) were agreed on a multilateral basis in terms of the Chicago Convention. The remaining "freedoms" have to be negotiated bilaterally). These specifications have the effect of limiting the total capacity (flights and/or seats) as well as providing a split up of capacity among airlines party to the agreement. Domestic passengers normally cannot be carried and there is provision for governments to control prices although this seems now to have been abandoned with free price competition permitted. Capacity is intended to bear a "close relation to demand" with negotiations to initiate changes in capacity being possible at any time.

Countries normally only grant access when reciprocal rights or rights of equal

value are obtained from the country of the incoming carrier.

These restrictions on competition raise the price of air travel and reduce the range of services available. Moreover, they provide an incentive for less efficient

carriers to restrict total negotiated capacity below market demand because, when capacity rights have been allocated to each carrier, a restriction on total negotiated capacity can still leave inefficient high-cost producers with a significant market share. To some extent, the more restrictive the total negotiated capacity level the more valuable the landing rights may be for relatively high-cost companies. It may even pay airlines to provide a lower level of total capacity than specified by the ASA - this increases scarcity and prices will rise even further than they would under a fixed sharing arrangement.

There is evidence that ASAs have restricted the right of foreign airlines to fly to and from Australia while securing for Qantas more rights than it can currently use. In September 1988 the Centre for Transport Economics Report (1988, *op. cit.* page 14) stated that virtually no foreign airlines had unused capacity to fly to Australia whereas Qantas had unused entitlements for twelve countries.

Thus, restrictions on landing rights induced by ASAs have provided the incentives for the creation of a market in landing rights and, in an Australian context, to the resale of unused landing rights by Qantas to other carriers. Provided overall capacity levels are negotiated at their rent-maximising levels, this type of outcome might seem close to the auction system that we have suggested. A crucial difference is that, with the auction proposal, Qantas itself is exposed to competition at the margin by being forced itself to bid for capacity beyond any minimum level required for "flag carrier", external-benefit reasons. With the present system, Qantas can be construed as ASAs' being the "high cost" influence on bilateral negotiations for ASAs and effectively determining the ASAs' outcome by being the active partner able to enforce binding capacity restrictions which suit it but not its competitors.

Costs and benefits of restrictions on airline competition

Capacity restrictions allow higher-cost airlines to remain in markets and inefficient operators to achieve higher rates of return than they would in their absence. One effect of this is on airfares charged. Qantas was judged by the IAC as charging the highest fares on comparable routes with prices exceeding the cheapest alternative by between 5-68%. Qantas disputed these figures but the IAC stood firm on the accuracy of its estimates. Findlay (1985), using 1980 data, estimates lower-cost carriers could provide the same services as Qantas at around 60% of the cost. These estimates were qualified by the argument that Qantas' cost disadvantages stemmed from lack of economies of scale although recent work cited by the IAC (*op. cit.* page 62) disputes the role of such economies acknowledging a possible role instead for economies of scope (i.e. networking benefits). The IAC's estimate is that other airlines could provide Qantas' services for about 70% of its costs. Thus current regulatory barriers prevent low cost carriers from providing additional capacity and new routes to and from Australia thereby exerting substantial downward pressure on prices. Evidence on the value of unused landing rights by Qantas to other carriers confirms this impression.

To sum up, the IAC believes prices could be 20% lower without the current restrictions

What would be the impact of such a 20% fall in prices on the Australian economy? The IAC examine this in Appendix G under "conservative" assumptions using the ORANI model. They claim, even ignoring the benefits to other industries of an increased flow of tourists and assuming Qantas loses all its business with prices falling by only 5%, that Australians would realise a net GDP gain - presumably because of the reduced fares they would have to pay on outbound flights as well as income effects accruing to non-transportation tourism sectors.

How can such conclusions be derived in the absence of detailed information on travel demand elasticities? The short answer is that they cannot: the ORANI conclusions (and thus the IAC conclusions) seem to be nothing more than a guess.

Analytically, a partial equilibrium model shows that the welfare effects (for Australians) of lower airfares are indeterminate - they depend crucially on the "own" price elasticity of demand for travel on Qantas as well as the ratio of total demands for Qantas' services to the "net" demands by foreigners for these services. Thus, assume outward tourist demands by Australians $q(a)$ on any carrier depend on fares p by means of the (inverse) demand $p=Da(q(a))$ and that total (resident plus foreigner) demands for travel by Qantas $q(t)$ are related to the same price via $p=Dt(q(t))$ with Qantas' total costs being $c(q(t))$.

Assume now that Australian welfare W depends on the consumer surplus enjoyed by its outbound travellers and the seller's surplus (profits) of Qantas. Then:

$$W = \int_0^{q(a)} p \cdot dq - pq(a) + pq(t) - C(q(t)) \quad (1)$$

so that

$$-dw/dp = q(a) - q(t) - (p - c'(t))Eq(t)/P \quad (2)$$

where E is the "own" price elasticity of demand for Qantas' services.

Equation (2) splits the effects of a fare-fall into three sub-effects: (i) residents pay less for their outbound tourism and hence enjoy increased welfare ($q(a) > 0$), (ii) existing foreign travellers pay less to Qantas for their travel so less profits accrue to Australia on this account ($-q(t) < 0$) and (iii) more foreigners travel to Australia because of the lower fares so, on this basis, Qantas' net receipts rise. This analysis really only restates the analysis of "optimum export taxes" when local consumers purchase a good which is exported. Thus, let m be Qantas' markup over marginal cost so $p = (1+m)c'(q(t))$. Then the profit-maximising markup for Qantas corresponds to the "optimum tariff" or "optimum export tax" a government would levy on a corresponding competitive industry which prices at marginal cost. The value of this optimum markup m^* is easily shown to be:

$$m^* = 1/[1 + Eq(t)/(q(a)-q(t))] \quad (3)$$

Thus the effects of a fare-fall depend on whether the markup so induced lies above or below the optimum tariff m^* . If current markups are above the optimum tariff a fare-fall would increase welfare. If current markups are less than the optimal tariff a welfare loss will occur. From (3) m^* will be "small" if either elasticities of demand for Qantas' service are large or $q(a)$ is close to $q(t)$ (i.e. if total demand for Qantas' services approach the total outward demand for travel by residents): in these cases fare-

falls are likely to increase Australian welfare. On the other hand if, as empirical evidence suggests, E is relatively inelastic (e.g. approximately -1) and $q(a) = q(t)/2$ (there are twice as many foreigners using Qantas on a route as there are resident Australians in total on that route), then $m^* = 0.3333$. It can certainly then be inferred that if, as discussed above, the IAC believes Qantas prices only about 20% above competitive levels, fare-falls in the neighbourhood of this magnitude would reduce Australian welfare.

The restrictions also impose an unquantified cost on Australians by diminishing the range of air services provided. Thus, the less frequently-used gateways (Perth, Adelaide, Brisbane, Melbourne) seem to have been disadvantaged and, for example, interlining that would increase competition for domestic services has been hindered. Moreover, compared to international trends, the availability of charter services catering for budget travellers is very low in Australia because of excessively stringent restrictions that protect the interests of Qantas which targets an alternative market niche.

In fact, there have been repeated complaints both to the IAC enquiry and via the Australian Tourism Industry Association relating to the role of Qantas in negotiating new routes, changing capacity on existing routes and in determining the extent of access to Australian airports by other national carriers. There is seen to be a potential for conflict of interest between Qantas, other sections of the tourism industry and perhaps the nation as a whole (see the Report, Appendix F1 and ATIA *op.cit.*).

As discussed above, the IAC see the best basis for comprehensive reform as being an attempt by the Australian government to progressively relax restrictions on competition within the bilateral system.

Strategy for reform

The IAC reforms comprise four phases to increase competition.

Phase 1 addresses immediate problems. Its main objective is to relax restrictions on competition and seat capacity on international routes via bilateral bargaining to expand capacity faster than increases in market demand so as to increase competition. This should lead to lower fares and an improved range of services. Countries reluctant to enter into such agreements with Australia would lose market share to those which do. The logical basis for this phase, as mentioned above, must be the argument that rents from tourists cannot be extracted.

Furthermore, the separation between domestic and international aviation markets should be reduced. This would have benefits for the travelling public and for airlines who would be able to realise networking and cost efficiencies. Qantas should be allowed to operate on domestic routes and other Australian carriers could operate as international carriers by utilising landing rights presently available to Australia but unused by Qantas. Multiple designation of carriers would help reduce the extent to which bilateral negotiations for ASAs meet only the commercial objectives of a single carrier. Even without privatisation this program would result in two government-owned carriers competing on both domestic and international routes. This part of the IAC policy conclusions is consistent with the current auction proposal.

Phase 2 is intended to commence two years after the commencement of Phase 1. It would extend interlining rights to all foreign carriers operating in Australia. This would provide increased competition in the domestic market and an improved range of services for travellers. Again the idea behind this is consistent with the auction

proposal.

Phase 3 should be completed within five years of completing Phase 1. It presupposes that the reforms of the first two phases have been substantially completed so capacity constraints have been substantially removed and the right to multiple designation on all routes established. Beyond this there should then be an attempt to remove all other anti-competitive restrictions without diminishing air sovereignty. Restrictions on charter operations should be removed. Again this goes well beyond what we would advocate as desirable without confirmation that rent extraction is impossible.

Phase 4 involves the relaxation of foreign investment rules on ownership of domestic airlines. This would allow foreign carriers to set up operation in Australia in direct competition with Australian carriers. The number of entrants might not be unrestricted but might be limited in the same way that the entry of foreign banks was. This phase should be completed within five years of Phase 1 being initiated. This is consistent with the auction proposal.

Critique of the IAC reform program

The strategy is based on the view that significant positive rents cannot be extracted from tourists via their air fares so that what matters from the viewpoint of tourism policy is numbers not value. This seems - on the basis of the evidence at hand - a questionable overall strategy.

The strategy is certainly correct if the supply of foreign tourists is highly elastic for the same reason that socially optimal immigration and/or optimal population policies call for *laissez-faire* in the absence of distortions when the supply of newcomers is highly elastic: see e.g. Clarke and Ng (1991b).

The strategy in these cases does not work if the supply of "new" people is highly inelastic, if retaliation is a minor consideration or if Australia is merely responding to rent-seeking tariffs in place elsewhere. We do not make a final judgement about whether this is a plausible argument for the case of tourism. All we stress is that it does not seem possible to confidently answer this question "no" on the basis of *a priori* arguments concerning the relative elasticity of tourism demands. A primary basis for tourism is the uniqueness of a destination's scenic, cultural or other attractions. People might visit Australia primarily because it does offer scenic attractions and visitation possibilities that do not arise in North America, Europe or Japan. In this event Australia might plausibly be seen as having significant monopoly powers in the provision of such tourism services and might wish to exploit such powers by appropriating some of the rents that would otherwise leave Australia when tourists leave. There might well be dispute over the plausible size of these rents and the way they might best be collected but it would seem unwise to discard major possibilities for collecting such rents without good empirical evidence that such a strategy is sound. Deregulating the Australian international airline industry might simply amount to foregoing rent-collection possibilities.

A better general approach is to formally acknowledge the "externality" role of Qantas as the nation's "flag carrier" and to thus assign Qantas a minimum capacity on key routes to service this. Quite separate from this the rent-seeking objective could be met by then auctioning off additional capacity to any carriers interested in operating a particular route. This would yield the required level of rents and would, by providing Qantas with competition at the margin, ensure greater efficiency within the flag carrier

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itself.

This solution could be used to improve the diversity of services to Australians by simply auctioning access rights on less popular routes that Qantas is uninterested in servicing.

Another possibility that we have really not considered seriously here is to forego the rents derivable from Qantas by eliminating restrictive ASAs and expanding capacity on highly-restricted routes and instead taxing these rents via the accommodation sector when foreign tourists are in Australia. This is an alternative reform option that has the advantage of being potentially price-discriminating between alternative income classes of tourist. It also raises difficult regulatory problems stemming from the need to define the "accommodation sector".

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