On the supply side, we are concerned with the scope for supply side substitution without requirements for significant investments as noted above. It is therefore useful to outline what we consider to be significant investments in the context of delineating geographic markets.

An airline's entry onto a new route is not a costless exercise. As an example, consider a hypothetical situation in which a sole supplier of air services on (say) Wellington–Christchurch attempted to impose a SSNIP. Then, regardless of whether an airline attempting to defeat the SSNIP had an existing presence domestically within New Zealand, or whether it only had a presence domestically within Australia (or anywhere else), airlines would incur some costs associated with supply side substitution. These costs would include the costs associated with establishing a terminal presence, selling costs, as well as a range of other organisation and administration costs.

These costs are not so significant as to constitute the significant investments necessary to prevent effective supply side substitution in response to an attempted SSNIP. If they were, then, assuming no demand side substitution, a strict analysis of demand and supply side substitution would suggest that every city-pair would constitute a separate market.

Instead, we consider the types of hurdles that could possibly be considered to prevent an airline from providing effective supply side substitution in response to an attempted exercise of market power by an airline on any given city-pair to include legal and regulatory constraints, the ability to move aircraft (with the appropriate capabilities) onto a new route, and other route specific investments, such as those associated with establishing a brand presence on a route.

It is important to note that even if there are significant investments that prevent effective supply side substitution onto a particular route, this does not necessarily connote high entry barriers. This is because supply side substitution, to be sufficient to warrant inclusion of a source within a single market, must be so easy that the capacity that would be transferred over already weighs on incumbents' pricing decisions. As a result, even relatively modest investments, and short lags in the time to entry, may exclude services from being supply side substitutes. However, these would not constitute substantial entry barriers when viewed in a longer term perspective.[206]

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206 Additionally, assessment of supply side substitution requires consideration of the opportunity cost of shifting capacity from the source activity to the target. If pricing at the target is close to being competitive (as is implied in a SSNIP test, at least for small candidate price increases), then it may

Our view is that the scope for supply side substitution by international carriers into domestic and Tasman routes (as opposed to substitution in the opposite direction) is limited given that eighth and ninth freedoms are a strong constraint, as are scheduling issues.

Specifically, effective supply side substitution from international carriers into either domestic Australian or New Zealand routes is limited due to the nature of bilateral agreements. In particular, almost all airlines lack the full cabotage rights (eighth and ninth freedoms) that are required in order to provide domestic services in New Zealand on an effective basis. The exceptions to this rule are Australian airlines, which are granted these freedoms in New Zealand, and similarly for New Zealand airlines with respect to Australia, in accordance with the Open Skies agreement between Australia and New Zealand discussed in section 2.1.1.

Hence, we believe that at present, with the exception of services provided along Tasman routes, air passenger services provided along international routes should be considered as being provided in separate markets from domestic air passenger services provided within Australia and New Zealand.

That said, as the industry evolves, it is conceivable that the distinction between international and domestic markets may become blurred. As a matter of commercial reality, airlines increasingly view themselves as competing in a global environment, in which their long-run competitiveness depends on presence and reach across all major geographies. This is one factor, and likely an important one, undergirding the trends, such as ever wider use of code sharing by international airlines on domestic flights, that the ACCC pointed to in its RJSA determination.[207]

As matters now stand, regulatory hurdles are still too high to prevent full market integration. There is some uncertainty as to when these hurdles will be materially eliminated. There is little doubt, however, that the process of integration is well underway – if nothing else because customers increasingly seek and demand some degree of global presence from the carrier on which they most heavily rely – and will continue to gather momentum. Reflecting this, airlines themselves view the market in terms significantly wider than those that a conventional SSNIP analysis would suggest. As this is a major influence on corporate strategy, it needs to be taken into

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not be profitable to divert capacity from the source activity for short periods of time. However, this would be less of a deterrent to entry decisions taken in a medium-term perspective.

207 RJSA determination, p. 46.

account in the analysis, even if the approach to market definition does not fully capture its practical significance.

This is particularly the case in the context of an application for authorisation, where effects on global competition between alliances are part of the claimed public benefits. This approach is consistent with that adopted by the Australian Trade Practices Tribunal in *Re Queensland Independent Wholesalers Ltd* (1995), where a broad geographic market was defined in order to highlight the location and focus of corporate and strategic decision making and the claimed public benefits.[208]

Is there a single market that includes domestic New Zealand, domestic Australia and Tasman routes?

We believe there is a single market for air passenger services provided domestically in New Zealand, Australia and on the Tasman.

On the demand side, there is limited scope for substitution, to the extent that the number of consumers likely to consider services between different city-pairs to be substitutes would not be sufficient to deter a SSNIP.

On the supply side, however, there are no legal or regulatory barriers that prevent Australian airlines providing services along Tasman and domestic New Zealand routes, as noted above in section 2.1.1. Similarly, there are no restrictions that prevent New Zealand airlines providing services along Tasman and domestic Australian routes.

It could be argued that there are significant investments that would prevent effective supply-side substitution. These investments would include route-specific sunk costs. The matter is open to debate and may also be slightly redundant, since our competitive effects analysis is performed at the city-pair level – the most conservative approach to analysing competitive effects – as well as at broader levels of aggregation.

Nevertheless, we do believe that there is some justification for suggesting that domestic New Zealand, domestic Australian and Tasman routes are provided in a single market from the perspective of commercial reality. It is clear that both Australian and New Zealand carriers have

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208 *Re Queensland Independent Wholesalers Ltd* (1995) 132 ALR, p. 225; (1995) ATPR , pp. 41–438.

placed considerable stress on the importance of providing service throughout the area, despite the substantial costs (and in the case of Air New Zealand's investment in Ansett, large losses) this involves. Interlining benefits may have been a factor in the short term, but long term considerations – perhaps best described as a view that the relevant segments of the market are merging – have undoubtedly dominated. We consequently believe that commercial reality is best captured by considering that these markets are integrated, though this does not directly affect our quantitative assessment of costs and benefits.

Alternatively, there are separate markets for domestic Australian and New Zealand services and Tasman services. If so, for the Tasman and Australia domestic markets, delineating markets at a level narrower than a market for all Tasman services would not materially assist in analysing competitive effects. It would also be inconsistent with considerations of supply side substitution. Once an airline has incurred the costs associated with establishing a presence on the Tasman, any further costs incurred in expanding to new Tasman routes are likely to be marginal in comparison. That is, these additional expenditures would not be so significant as to prevent effective supply side substitution in response to an attempted SSNIP on any given Tasman route.

With respect to the domestic Australia market, this is relevant largely for the purpose of analysing inter market issues, in particular, the importance of feeder traffic. Hence, for the purpose of this analysis, it seems sufficient to define a national market. However, as discussed below, it may be helpful to further delineate the New Zealand domestic market for the purpose of evaluating the effects of the Alliance.

In stating these views, we emphasise that our analysis of competitive effects is performed at the city-pair level in order to ensure our results are conservative. In this sense, the precise delineation of the relevant markets in which services are provided in Australia, New Zealand and on the Tasman is not crucial to our overall conclusions as to the net benefits of the Alliance.

Are there separate markets for main trunk services and other services in New Zealand?

In its Bodas determination, the NZCC defined separate geographic markets for main trunk services, those being services between the three major airports, and other services, which were deemed to be provided either in a provincial services market or in a tourist services market. The NZCC based this on the unique characteristics associated with services on these routes, including the volume of traffic on these routes and the size and types of aircraft used to maintain sufficient service frequency.

Considerations of demand and supply side substitution, as well as commercial reality, lead us to form a similar view to that formed by the NZCC. We believe that there is a distinct market for domestic main trunk services, though we believe that it is not necessary for the purpose of this analysis to distinguish between tourist services and other provincial services provided domestically in New Zealand.

There is likely to be only limited scope for demand side substitution between provincial and main trunk route services. On the supply side, it is clear that on some routes only jet aircraft or large turbo prop aircraft are capable of handling traffic volumes, at least at peak times. For instance, this is the case for services between the three major airports, AKL, WLG and CHC.

We note Air New Zealand tends to mainly use jet aircraft for services between AKL, WLG and CHC. It also uses AT2 aircraft, which are large turbo prop aircraft, and in limited instances, smaller DH8 aircraft. Origin Pacific uses a range of turbo prop aircraft to provide direct services between WLG and CHC, though it does operate a 64 seater ATR-72 on this route.

For services between AKL and CHC, it is also unlikely that a turbo prop – at least a smaller turbo prop – would be capable of providing a direct service with the degree of timeliness that would make consumers perceive a turbo prop service to be an adequate substitute for a jet service.

The efficiencies associated with using jet aircraft for services between AKL, WLG and CHC is reflected in Table 31, which shows the aircraft used by Air New Zealand to provide services between these three major airports and services provided on smaller provincial routes.

Table 31: Aircraft used by Air New Zealand: main trunk versus provincial

NZ main trunk	NZ provincial
737	Saab 340A
767	Beech 1900D
AT7	AT7
DH8	DH8
	Metroliner III
	Embraer Bandeirante

Source: www.airnz.co.nz; Air New Zealand Limited, Data Handbook 2001, p. 24.

In summary, we see it as unlikely that suppliers of services along provincial routes, which typically use smaller turbo-prop aircraft, would constrain a supplier of services between AKL, WLG and CHC, which tend to operate much larger turbo prop or jet aircraft. These supply side considerations suggest that services between AKL, WLG and CHC ought to be considered as being provided in a separate main trunk services market to most other services provided within New Zealand.

It could be argued that services between these three major airports and DUD and ZQN should also be included as part of a main trunk service market. For instance, although volumes on these routes are unquestionably lower than those on services between the three major airports, a combination of volume and aircraft capability still means that services provided along these routes tend to use larger turbo prop or jet aircraft. In addition, when reporting profitability results, Air New Zealand treats these services as part of its national trunk operations, as distinct from its Link operations.

In a sense, it seems unnecessary to form a firm view as to whether these services are part of the main trunk service market. In particular, our modelling of competitive detriments is presented at the city pair level, making the precise definition of the broader main trunk market somewhat irrelevant.

What are the relevant markets in which services on other international routes are provided?

The task of defining the relevant international markets can be simplified in this instance by the fact that the only routes directly affected by the Alliance are Tasman and Pacific Island routes, as well as routes to Los Angeles from Auckland, Sydney, Nadi and Papeete. The manner in which we undertake our analysis of competitive effects also simplifies the task of market definition.

As noted above, Tasman services are provided in a single market with Australian and New Zealand trunk services. However, if not, then our view is that Tasman services should be considered jointly as part of a single market. For Pacific Island services, the relevant market is likely to include *all* Pacific Island services due to demand side substitution. For a sizeable share of leisure travellers, different Island destinations are likely to be reasonably close substitutes in demand. Additionally, there may well be some scope for supply substitution, though rights defined under the ASAs are not common to all destinations. Again, however, the precise delineation of the geographic scope of the market in which air services to the Pacific Islands are provided does not ultimately impact on our overall analysis of competitive effects, since we analyse competitive effects at both the narrower city-pair level as well as at a more aggregated level.

Aside from the trans-Tasman and Pacific Island markets, the only other markets directly affected by the Alliance are services to Los Angeles from Auckland. The relevant question then becomes whether to define geographic markets narrowly on a city-pair basis (e.g. an Auckland–LA market), or at a broader level, for instance, on a country to region basis (e.g. a New Zealand–North America market), which is the view the ACCC currently holds.

As noted above, we do not believe it is necessary to form a firm view as to the relevant international markets for the purpose of this analysis. However, it is useful to consider the issue of the extent to which Australia and New Zealand end points should be considered to be in the same competitive sphere. In short, we do not believe this to be the case. For instance, we do not believe that the New Zealand-North America routes are necessarily in the same market as those linking Australia and North America. More particularly, the greater transit time involved in travelling to or from Auckland to Los Angeles via Sydney or Melbourne would limit the competitive discipline the indirect route would impose on the direct route from Auckland to Los Angeles. While there are some dual destination passengers, these will view the indirect route as superior to the direct route, and hence will not exercise a constraining influence on increases in the direct route fare. This is illustrated in QSI data provided by Air New Zealand for this route. For instance, the QSI for a direct AKL–LAX flight on a 747 is 2.0, while the QSI for a one-stop flight is 0.5. The QSI for a AKL–SYD–LAX or SYD–AKL–LAX differs depending on the type of connection: for online single connections, interline single connections and online double connections, the QSIs are, respectively, 0.051, 0.0065, and 0.004.

As a result, we treat the routes from New Zealand to North America as falling in a distinct market as compared with routes from Australia to North America.

The geographic scope of freight markets

It is sufficient for the purposes of this analysis, to delineate the geographic markets for freight services as the same as those for air passenger services.

Having said this, we agree with the principles adopted in previous ACCC and NZCC decisions that, generally speaking, freight markets are likely to be broader than passenger markets. As the ACCC has previously observed, the transportation of freight is likely to be more conducive to indirect routing than the transportation of air passengers. The ACCC recognises that provided cargo arrives on time and in good condition, the precise means by which the cargo is transported to its destination is irrelevant.[209] Hence, defining the geographic scope of freight markets to be the same as that for air passenger service markets is likely to be a conservative.

A.4 Other relevant markets

It is relevant to consider the market in which travel agency services are provided. In many instances, air tickets form part of the overall package that consumers purchase from travel agents, however, travel agents play, and will likely continue to play, a quite distinct role from airlines. They bring together a number of disparate elements required by consumers as part of a total travel package, including accommodation, car hire and other ground transportation, tours, as well as airline transport. As such they provide a similar role to other retailers in providing consumers with a wide range and variety of products to choose from and combine, as well as advice on what products might best suit their needs. While this function is in some sense downstream from the provision of airline passenger services, it is probably more useful to think of travel agency services as a separate "value added" product market from simple airline passenger services. Indeed, as the

209 RJSA determination, p. 43.

role of travel agents in the provision of simple ticket sales declines, these value added services will become an increasingly important part of a travel agent's business, as discussed in section 2.1.4.

For the purposes of this report, we define the market for travel agency services to be a value-added market in which travel agents supply an assortment of travel related products, including airline tickets, package these products and provide advice to consumers. Defining this market enables us to consider the extent to which competition in the provision of travel agency services might be directly affected through an increase in market concentration. It also enables to consider the extent to which increased concentration in air passenger service markets might facilitate the exercise of market power against travel agents.

In addition, it may be relevant to consider the markets in which inputs into air service markets are provided, particularly computerised information and reservation services, engineering and maintenance services, and ground handling services are provided. These are markets that both the ACCC and NZCC have previously considered in analysing airline alliances and mergers.

Each of these markets is relevant in considering the potential for foreclosure to air passenger service markets. Specifically, air passenger service markets may be foreclosed if airlines are unable to access inputs from upstream and downstream service providers on terms that would allow an efficient rival to effectively compete with the Alliance, with the effect of thereby deterring or hindering airline entry or expansion in the air passenger services market. In evaluating the possibility for foreclosure, it is relevant to consider the extent to which vertical relationships exist between incumbent providers of air passenger services and service providers in upstream and downstream input markets.

Attachment A: Critical Loss Analysis

The purpose of this attachment is to demonstrate that business class passengers on Tasman and New Zealand domestic routes are not in a separate market from passengers on these routes who travel in the economy fare classes.

If these business class passengers did constitute a separate market, then a hypothetical monopolist over flights containing business class seats for these routes would be able to profitably impose a SSNIP on the business class passengers. This attachment will use the Critical Loss Analysis method developed by Harris and Simons, together with quantitative data confidentially provided by Qantas and Air New Zealand to demonstrate the likelihood that a SSNIP over business class airfares would be unprofitable for this hypothetical monopolist as a result of substitution to economy fare classes on the same aircraft and to rival carriers operating economy class-only flights on the same routes.

We proceed by outlining first the conceptual framework, followed by the mathematical formulation, quantification of the key variables, assessment of the likelihood of critical loss threshold being exceeded, then the conclusion.

Conceptual framework

The striking feature of this problem is the joint supply of business class and economy class journeys on the same aircraft. The joint supply of two products is not sufficient in itself to place them in the same market. Oil and natural gas are jointly supplied by many oil wells, but they sit within distinct product markets owing to the difficulty of demand-side substitution, and the limitations to supply-side substitution arising from the generally fixed proportions of oil and gas production at a particular well.

If business class journeys are in a separate market from the economy class journeys on the same routes, then a hypothetical firm which monopolised the flights which contain business class seats would be able to impose a SSNIP on the business class passengers profitably. Note that this hypothetical monopolist would offer economy class seats on these flights as well as the business class seats. There would be competition from economy class-only flights.

The critical loss framework requires an estimate of the average variable cost for the service in question. We believe that the average variable cost estimate should assume that the schedule of flights does not change before and after the SSNIP. This assumption appears valid given the fact that business class accounts for no more than 6% of tickets sold on the routes in question, as seen in the final table in this attachment. Thus, even if the business class SSNIP resulted in 100%

defection of business class customers to other carriers (the most extreme case possible), it would be unlikely the hypothetical monopolist would cancel any flights.

If the flight schedule is fixed then the major costs of running an airline, namely aircraft leasing and depreciation, fuel, flight crew, cabin crew, ground handling, administration, and MTOW-based airport charges would all be fixed. The only cost elements included in the average variable (per passenger) costs would be cost of ticket sales, passenger meals and beverages, and PAX-based airport charges.

These considerations make it likely that the contribution margins calculated below will be reasonably constant over the range of business class load factors considered here. Even in the extreme case that every business class passenger defected as a result of a SSNIP, the cost savings to the carrier would amount to little more than the variable costs already identified, namely cost of ticket sales, cost of passenger meals, and PAX-based airport charges. Any savings in the number of cabin crew required to serve business class would be offset by additional cabin crew needed to serve the additional economy class passengers. None of the major costs which are fixed per flight would be avoided.

Mathematical formulation

Following Harris and Simons, it is necessary first to establish the Contribution Margin for the product in question. This is defined as:

$$CM = (P0 - AVC) / P0$$

where CM is the Contribution Margin, AVC the average variable cost, and P0 is the initial price level (before the SSNIP is imposed). P0 is required to be the competitive price level, which can be assumed equal to the average cost (not the marginal cost as in simple models of perfect competition) for firms which have fixed costs.

The critical loss is the quantity of lost sales which would just make a price increase unprofitable. It represents a point of balance between the lost contribution margin on the sales lost because of the price increase, and the increased contribution from the higher post-SSNIP price on the remaining sales. The critical loss, X, expressed as a fraction of the initial sales is given by:

$$X = Y / (Y + CM)$$

where Y is the level of SSNIP, defined as $Y = (P1 - P0) / P0$.

Once the critical loss has been determined, it remains to establish whether substitution away from the SSNIPed product is likely to exceed the critical loss.

In this particular case we have the complication that, as a result of the business class SSNIP, some business class passengers may become economy class passengers on the same aircraft. When this happens, the hypothetical monopolist does not entirely lose the contribution margin from that business class defector. Instead the business class contribution margin is translated into an economy class contribution margin, which is likely to be lower but non-zero. This complication necessitates a further development of Harris and Simons logic.

Let B0 be the number of business class passengers prior to the SSNIP, and B1 be the number afterwards. At the critical loss, the gross contribution from business class passengers pre-SSNIP will just equal the gross contribution from business class passengers plus business class defectors remaining on the plane post-SSNIP:

$$B0 (P0 - AVC) = B1 (P1 - AVC) + (B0 - B1) (P0e - AVCe)$$

The last term represents the economy class contribution made by the business class defectors who, it is presumed conservatively, remained on the plane in economy class. This assumption is conservative because it leads to higher critical loss estimates – more business class sales must be lost to make the SSNIP unprofitable if the defectors remain on the plane. It is also conservative because it assumes the business class defectors are not displacing other economy class passengers who may be making a positive contribution. If such displacement takes place, then a smaller loss of business class sales will be unprofitable. This expression can be simplified as follows:

$$B0 * CM = B1 * (Y + CM) + (B0 - B1) * Z$$

$$\text{where } Z = CMe * P0e / P0$$

The subscripts 'e' refer to economy class. When these are omitted business class should be assumed. Manipulating this expression algebraically, and noting that

$$X = (B0 - B1) / B0,$$

this expression leads to the following modified critical loss formula:

$$X = Y / (Y + CM - Z)$$

To estimate Z it is necessary to know the economy class contribution margin and the initial economy class ticket price.

Quantification of key variables

Qantas provided per passenger variable costs and per passenger average revenues by aircraft type for the Tasman, New Zealand domestic, Pacific Island, and Los Angeles routes. This data is sufficient to calculate approximate contribution margins for Qantas for these routes. Table 32 below summarises this calculation.

Table 32: Qantas contribution margins by route

Routes	P0 (revenue per pax)	AVC (PAX variable costs)	CM = (P0-AVC)/P0
Tasman	$297	$65	78%
Domestic	$172	$53	69%
Pacific SH	$345	$58	83%
Pacific LH	$1,057	$137	87%

The average variable costs used in the table above were derived from a cost allocation model used by Qantas. If anything, this cost allocation model is likely to overstate the per passenger variability of costs. All of the directly per passenger activity costs would be captured in the model. However it is common in activity-based cost models to make somewhat arbitrary assignments to one of the chosen cost drivers of costs which may be fundamentally fixed. Thus if this method of estimating average variable costs is biased, that bias is likely to be towards overestimation, leading to an underestimate of the contribution margin.

As a further reality check on the average variable cost and contribution margin estimates, we also consider profit and loss data for Air New Zealand's Tasman routes for FY01, the average gross revenue per passenger across all these routes was $367. The cost of ticket sales plus the cost of 'raw food/beverages' per passenger was $90. Arguably these are the primary cost elements which vary directly with the number of passengers. Using these figures for P0 and AVC, the contribution margin would be 75%.

The range of critical loss values for various SSNIP levels and a Contribution Margins within the range estimated above is given in Table 33 below.

Table 33: Critical loss (%) at different SSNIP and Contribution Margin levels

SSNIP (%)	Contribution Margin		
	70%	80%	90%
1%	1.4%	1.2%	1.1%
5%	6.7%	5.9%	5.3%
10%	12.5%	11.1%	10.0%
20%	22.2%	20.0%	18.2%

Critical loss values in the table above assume that business class passengers ('bcp') defecting because of the SSNIP will defect to another airline. In reality that may not occur, given the importance of loyalty programs and other factors impeding switching. If the business class defectors remain on the same flight but in economy class, then the modified critical loss formula developed at the end of the previous section should be applied instead.

If the business class defector was on a full flight, then by moving to economy class, she will displace another passenger, presumably one in the lowest fare class. In this case, a further modification to the critical loss formula is needed. Following the same logic developed in the previous section, the further modified critical loss formula would be:

$$X = Y / (Y + CM - Z + W)$$

$$\text{where } W = CMv * P0v / P0$$

We have evaluated the parameters necessary to estimate these various critical loss formulae based on confidential information from Qantas and Air New Zealand on the Auckland–Sydney route. We have used fare class J for business class, fare class Y for economy class, and fare class V for the lowest fare category. We have assumed that the average variable costs for classes Y and V are the average cost of sales per passenger plus the average raw food/beverages cost per passenger. For class J (business class) we have assumed that the average variable cost is the average cost of sales per passenger plus twice the average raw food/beverage cost per passenger, to account for the higher quality of meals and availability of alcohol at no charge. These results are summarised in Table 34 below.

Table 34: Parameters for critical loss analysis for SYD–AKL return trip

Fare J return	$2001
Fare Y return	$1,379
Cost of sales one way	$62
Meal one way	$36
Business meal one way	$71
AVCe	$194
AVCb	$266
CMb	87%
CMe	86%
Z	59%
Fare V return	$509
CMv	62%
W = CMv * Pv / Pb	16%

Using these values, the following critical loss table is derived:

Table 35: SYD–AKL return trip: Critical losses at different SSNIP levels

	bcp goes to other carrier	bcp stays and flight not full	bcp stays but bumps low-yield passenger
@Y=	Y/(Y+CM)	Y/(Y+CM-Z)	Y/(Y+CM-Z+W)

1%	1.1%	3.5%	2.3%
5%	5.5%	15.4%	10.4%
10%	10.3%	26.7%	18.8%
20%	18.7%	42.1%	31.6%

Likelihood critical loss will be exceeded

Given the high contribution margins estimated above, relatively small losses of business class sales would be sufficient to make a SSNIP unprofitable for the hypothetical monopolist. To understand whether such losses are plausible, we consider the factors which might prevent this degree of substitution from taking place. There might be supply side constraints in the form of unavailability of alternative seats. There might also be demand side constraints in the form of poor acceptance by business travellers of economy cabin seating.

To examine the supply-side issue, we turn to some data shown in Table 36, which was provided by Qantas on the relative numbers of tickets sold in the various fare classes.

Table 36: Distribution of fare types for a sample of Qantas flights[210]

210 The data relates to April 2002 and includes traffic in both directions. The traffic for Tasman routes is solely based on Tasman Services (ie, it does not include through services to EZE/LAX).

		Tasman operations		NZ domestic operations	
Cabin	Res Class	SYD/AKL (vv)	MEL/AKL (vv)	AKL/CHC (vv)	AKL/WLG (vv)
Business Class	D	3.7%	3.5%	0.6%	0.8%
	I	0.2%	0.1%	0.0%	0.0%
	J	2.2%	2.0%	0.3%	0.7%
Economy Class	B	9.2%	11.8%	1.2%	1.6%
	E	2.3%	1.9%	0.6%	0.7%
	G	14.0%	12.5%	12.3%	1.3%
	H	7.3%	7.8%	1.3%	1.0%
	K	4.3%	5.6%	10.9%	20.4%
	L	6.8%	4.4%	5.3%	6.4%
	M	16.5%	18.3%	2.9%	1.9%
	N	0.1%	0.0%	10.6%	5.0%
	O	2.0%	1.1%	33.2%	41.7%
	Q	7.9%	6.7%	1.1%	0.5%
	S	1.6%	2.2%	6.4%	10.7%
	T	0.6%	1.1%	0.2%	0.1%
	U	3.4%	2.8%	0.7%	0.4%
	V	6.5%	7.7%	6.1%	2.6%
	X	9.9%	9.5%	4.6%	2.7%
	Y	1.6%	1.1%	1.7%	1.6%
Total	Total	100.0%	100.0%	100.0%	100.0%

On the Tasman routes business class accounted for only 6% of tickets sold. On the New Zealand domestic routes, it accounted for less than 2%. We saw above that even a relatively large 10% SSNIP would only require a 26.7% loss of sales to make it unprofitable assuming the business class defectors all remained on the aircraft and no lower-yield passengers were bumped. A 26.7% loss of business class sales represents only 1.6% (= 26.7% of 6%) of ticket sales on the Tasman routes. On a flight with 200 passengers, just over three passengers would have to switch from business class to economy class to defeat the SSNIP. If the defectors from business class all switched to another carrier, then only three would be needed to defeat a 20% SSNIP. Such a small number of defectors could easily be accommodated, so there appears to be no supply-side impediment to these critical loss thresholds being achieved.

Regarding the demand-side issues, it is helpful to review what factors distinguish business class travel from full economy class fare categories. Most attributes of the business class journey could be replicated by a firm selling economy cabin seats: ticket conditions, meal, beverage, and service options could all be readily replicated at an increase in variable cost which could be recouped from a relatively small adjustment to the airfare. Such an adjustment would still make the competitor's upgraded economy class ticket less costly than the hypothetical monopolist's post-SSNIP business class ticket.

The only aspect of business class travel which might require some modifications to the economy class cabin is the need for more spacious seating. It is unclear whether this is sufficiently important to prevent 26.7% of business class travellers from switching in response to a 10% SSNIP in business class.

If the space is sufficiently important to customer preferences, reconfiguration of the seating on an economy class-only aircraft need not pose an insurmountable obstacle for the competitors of the hypothetical monopolist. The practice of configuring rows of three economy class seats so they can be changed to two business class seats is relatively common. Even in the most extreme case, the investment required to reconfigure a section of the aircraft for larger business class seating is likely to be small compared to airline capital costs overall. Certainly this investment would not be sufficiently large-scale or long term to preclude its consideration within the timeframe normally considered for market definition.

Thus there is unlikely to be any strong demand-side impediment to business cabin passengers switching to a cabin which was previously economy class only, in order to defeat a business class SSNIP.

Conclusion

This analysis has examined the question of whether business class passengers constitute a separate market from economy class passengers. The empirical data relates to the trans-Tasman and New Zealand domestic markets, although the conclusions are likely to be robust for other passenger air transport markets as the cost structures of airlines are likely to be fairly similar worldwide.

The critical loss framework has been used to demonstrate that, as airline contribution margins are generally high, relatively small losses of sales would be sufficient to make a SSNIP unprofitable. This analytical tool has been applied to the hypothetical construct of a monopolist over business cabin ticket sales in the Tasman and NZ domestic markets. The examination of both supply-side and demand-side constraints to substitution from business cabin to economy cabin has led to the conclusion that the small critical loss thresholds are likely to be exceeded. Therefore, business class journeys are not in a separate market from economy class journeys.

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Appendix B: Alliance market share, 3CR and 4CR, June 2002 to June 2003

		ANZ/SJ/QF/FJ	3CR	4CR
Tasman	AKL-SYD	80%	95%	98%
Tasman	AKL-MEL	100%	100%	100%
Tasman	AKL-BNE	57%	79%	90%
Tasman	WLG-SYD	100%	100%	100%
Tasman	WLG-MEL	100%	100%	100%
Tasman	WLG-BNE	100%	100%	100%
Tasman	CHC-SYD	100%	100%	100%
Tasman	CHC-MEL	100%	100%	100%
Tasman	CHC-BNE	100%	100%	100%
Tasman	AKL-PER	100%	100%	100%
Tasman	AKL-CNS	100%	100%	100%
Tasman	SYD-ZQN	100%	100%	100%
Tasman	AKL-NLK	100%	100%	100%
Tasman	AKL-NOU	40%	100%	100%
SH Pac	AKL-NAN	79%	100%	100%
SH Pac	AKL-APW	68%	100%	100%
SH Pac	AKL-TBU	39%	100%	100%
SH Pac	AKL-RAR	100%	100%	100%
SH Pac	AKL-PPT	55%	100%	100%
LH Pac	NAN-LAX	100%	100%	100%
SH Pac	TBU-APW	43%	100%	100%
LH Pac	APW-LAX	100%	100%	100%
LH Pac	RAR-LAX	100%	100%	100%
LH Pac	PPT-LAX	22%	100%	100%
SH Pac	NAN-RAR	100%	100%	100%
SH Pac	RAR-PPT	100%	100%	100%
LH Pac	AKL-HNL	100%	100%	100%
LH Pac	AKL-LAX	100%	100%	100%

Atlantic	LAX-LHR	17%	78%	90%
Asia	AKL-SIN	37%	100%	100%
Asia	AKL-HKG	48%	100%	100%
Asia	AKL-TPE	50%	100%	100%
Japan	AKL-NRT	100%	100%	100%
Japan	AKL-KIX	100%	100%	100%
Japan	AKL-NGO	100%	100%	100%
Domestic	AKL-WLG	100%	100%	100%
Domestic	AKL-CHC	100%	100%	100%
Domestic	AKL-DUD	100%	100%	100%
Domestic	CHC-WLG	79%	100%	100%
Domestic	CHC-ZQN	60%	100%	100%
Domestic	AKL-ZQN	100%	100%	100%
LH Pac	SYD-LAX	73%	100%	100%
Domestic	WLG-DUD	100%	100%	100%

Notes: Market shares based on forecast capacity for the June 2002 to June 2003 period. Note that Air New Zealand data includes Freedom Air and Qantas includes Pacific Air. United is included as part of Air New Zealand for the Auckland–LA route.

Appendix C: Air New Zealand and Qantas Factual Schedules

Year 1: weekly departures

	Airline	AirNZ						QF & FJ						
	Craft	B733A	B733D	B744	B763	B762	B738/A320	B744Q	B743	B742	B763Q	B738	A333	B733Q
	Seats	122	136	392	230	200	146	432	420	433	236	154	340	116
Tasman	AKL-SYD	0	0	14	0	0	42	12	14	0	28	0	0	8
Tasman	AKL-MEL	0	0	0	0	0	42	0	0	0	32	0	0	0
Tasman	AKL-BNE	0	0	0	0	0	14	14	0	0	0	0	0	0
Tasman	WLG-SYD	0	0	0	0	0	20	0	0	0	0	0	0	28
Tasman	WLG-MEL	14	0	0	0	0	0	0	0	0	0	0	0	10
Tasman	WLG-BNE	0	0	0	0	0	0	0	0	0	0	0	0	6
Tasman	CHC-SYD	0	0	0	20	0	0	0	0	0	36	0	0	10
Tasman	CHC-MEL	14	0	0	0	0	0	0	0	0	8	0	0	4
Tasman	CHC-BNE	6	0	0	0	0	0	0	0	0	4	0	0	2
Tasman	AKL-PER	0	0	0	8	0	0	0	0	0	0	0	0	0
Tasman	AKL-CNS	0	0	0	6	0	0	0	0	0	0	0	0	0
Tasman	SYD-ZQN	0	4	0	0	0	0	0	0	0	0	0	0	2
Tasman	AKL-NLK	0	4	0	0	0	0	0	0	0	0	0	0	0
Tasman	AL-KNOU	0	4	0	0	0	0	0	0	0	0	0	0	0
SH Pac	AKL-NAN	0	0	0	8	0	10	0	0	0	0	18	0	0
SH Pac	AKL-APW	0	0	0	6	0	0	0	0	0	0	0	0	0
SH Pac	AKL-TBU	0	6	0	4	0	0	0	0	0	0	0	0	0

SH Pac	AKL-RAR	0	0	0	8	0	4	0	0	0	0	0	0	0
SH Pac	AKL-PPT	0	0	0	8	0	0	0	0	0	0	0	0	0
LH Pac	NAN-LAX	0	0	0	4	0	0	0	0	8	0	0	0	0
SH Pac	TBU-APW	0	0	0	2	0	0	0	0	0	0	0	0	0
LH Pac	APW-LAX	0	0	0	2	0	0	0	0	0	0	0	0	0
LH Pac	RAR-LAX	0	0	0	4	0	0	0	0	0	0	0	0	0
LH Pac	PPT-LAX	0	0	0	6	0	0	0	0	0	0	0	0	0
SH Pac	NAN-RAR	0	0	0	2	0	0	0	0	0	0	0	0	0
SH Pac	RAR-PPT	0	0	0	2	0	0	0	0	0	0	0	0	0
LH Pac	AKL-HNL	0	0	0	6	0	0	0	0	0	0	0	0	0
LH Pac	AKL-LAX	0	0	28	0	0	0	20	0	0	0	0	0	0
Atlantic	LAX-LHR	0	0	14	0	0	0	0	0	0	0	0	0	0
Asia	AKL-SIN	0	0	8	6	0	0	0	0	0	0	0	0	0
Asia	AKL-HKG	0	0	0	14	0	0	0	0	0	0	0	0	0
Asia	AKL-TPE	0	0	0	4	0	0	0	0	0	0	0	0	0
Japan	AKL-NRT	0	0	14	0	0	0	0	0	0	0	0	0	0
Japan	AKL-KIX	0	0	0	14	0	0							

Japan	AKL-NGO	0	0	0	8	0	0							
Domestic	AKL-WLG	0	210	0	0	0	0	0	0	0	0	0	0	152
Domestic	AKL-CHC	0	178	0	0	0	0	0	0	0	0	0	0	140
Domestic	AKL-DUD	0	14	0	0	0	0	0	0	0	0	0	0	0
Domestic	CHC-WLG	0	118	0	0	0	0	0	0	0	0	0	0	0
Domestic	CHC-ZQN	0	28	0	0	0	0	0	0	0	0	0	0	0

Domestic	AKL-ZQN	0	26	0	0	0	0	0	0	0	0	0	0	4
LH Pac	SYD-LAX	0	0	10	0	0	0	56	0	0	0	0	0	0
Domestic	WLG-DUD	0	26	0	0	0	0	0	0	0	0	0	0	0
Tasman	ALL	34	12	14	32	0	118	26	14	0	108	0	0	70
Domestic	ALL	0	600	0	0	0	0	0	0	0	0	0	0	296
SH Pac	ALL	0	6	0	40	0	14	0	0	0	0	18	0	0
Asia	ALL	0	0	22	46	0	0	0	0	0	0	0	0	0
LH Pac	ALL	0	0	38	22	0	0	76	0	8	0	0	0	0
Atlantic	ALL	0	0	14	0	0	0	0	0	0	0	0	0	0
		34	618	88	140	0	144	92	14	8	102	18	0	428

Year 2: weekly departures

	Airline	AirNZ						QF & FJ						
	Craft	B733A	B733D	B744	B763	B762	B738/A320	B744Q	B743	B742	B763Q	B738	A333	B733Q
	Seats	122	136	392	230	200	146	432	420	433	236	154	340	116
Tasman	AKL-SYD	0	0	14	0	0	42	14	14	0	28	0	0	8
Tasman	AKL-MEL	0	0	0	0	0	42	0	0	0	32	0	0	0
Tasman	AKL-BNE	0	0	0	0	0	14	14	0	0	0	0	0	0
Tasman	WLG-SYD	0	0	0	0	0	20	0	0	0	14	0	0	0
Tasman	WLG-MEL	0	0	0	0	0	14	0	0	0	0	0	0	10
Tasman	WLG-BNE	0	0	0	0	0	0	0	0	0	6	0	0	2
Tasman	CHC-SYD	0	0	0	0	0	28	0	0	0	36	0	0	6
Tasman	CHC-MEL	0	0	0	0	0	14	0	0	0	8	0	0	4

Tasman	CHC-BNE	0	0	0	0	0	6	0	0	0	4	0	0	2
Tasman	AKL-PER	0	0	0	10	0	0	0	0	0	0	0	0	0
Tasman	AKL-CNS	0	0	0	4	0	0	0	0	0	0	0	0	0
Tasman	SYDZ-QN	0	0	0	0	0	4	0	0	0	0	0	0	2
Tasman	AKL-NLK	0	4	0	0	0	0	0	0	0	0	0	0	0
Tasman	AKL-NOU	0	4	0	0	0	0	0	0	0	0	0	0	0
SH Pac	AKL-NAN	0	0	0	8	0	10	0	0	0	0	18	0	0
SH Pac	AKL-APW	0	0	0	6	0	0	0	0	0	0	0	0	0
SH Pac	AKL-TBU	0	6	0	4	0	0	0	0	0	0	0	0	0
SH Pac	AKL-RAR	0	0	0	6	0	8	0	0	0	0	0	0	0
SH Pac	AKL-PPT	0	0	0	8	0	0	0	0	0	0	0	0	0
LH Pac	NAN-LAX	0	0	0	4	0	0	0	0	8	0	0	0	0
SH Pac	TBU-APW	0	0	0	2	0	0	0	0	0	0	0	0	0
LH Pac	APW-LAX	0	0	0	2	0	0	0	0	0	0	0	0	0
LH Pac	RAR-LAX	0	0	0	4	0	0	0	0	0	0	0	0	0
LH Pac	PPT-LAX	0	0	0	6	0	0	0	0	0	0	0	0	0
SH Pac	NAN-RAR	0	0	0	2	0	0	0	0	0	0	0	0	0
SH Pac	RAR-PPT	0	0	0	2	0	0	0	0	0	0	0	0	0
LH Pac	AKL-HNL	0	0	0	6	0	0	0	0	0	0	0	0	0
LH Pac	AKL-LAX	0	0	32	0	0	0	14	0	0	0	0	0	0
Atlantic	LAX-LHR	0	0	14	0	0	0	0	0	0	0	0	0	0
Asia	AKL-SIN	0	0	8	6	0	0	0	0	0	0	0	0	0
Asia	AKL-HKG	0	0	0	14	0	0	0	0	0	0	0	0	0
Asia	AKL-TPE	0	0	0	6	0	0	0	0	0	0	0	0	0
Japan	AKL-NRT	0	0	14	0	0	0	0	0	0	0	0	0	0