

Response to Issues Raised by Zhang

NECG

Public Version

Outline

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5. DWL and welfare calculations
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7. Market segmentation

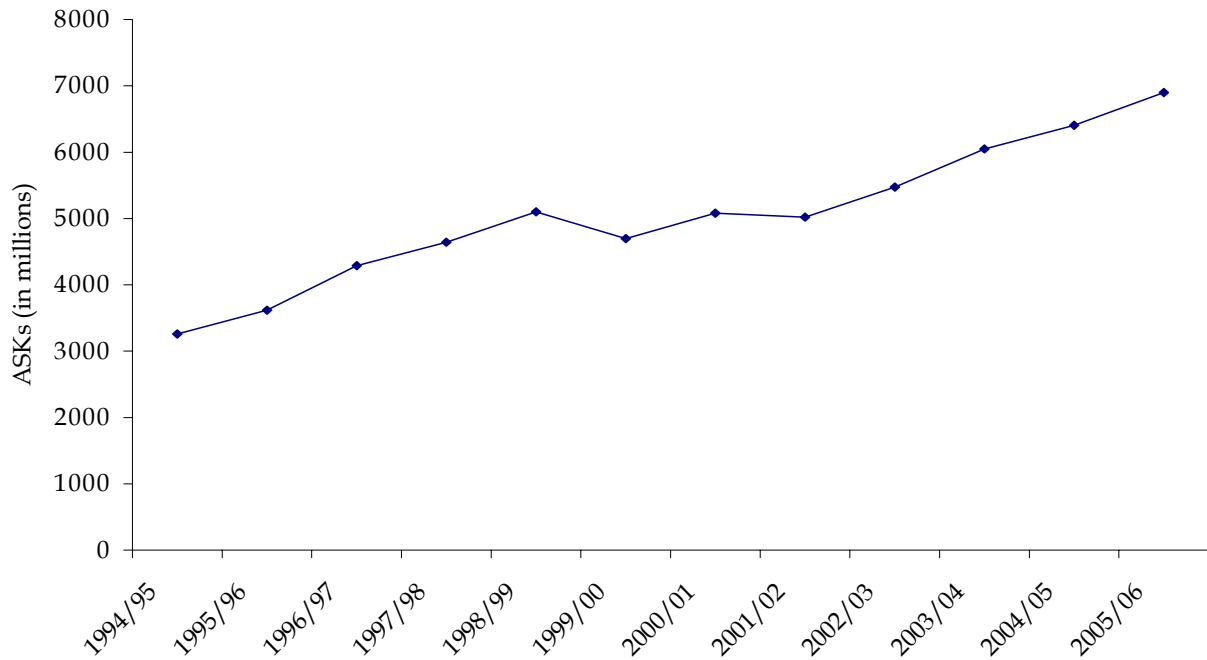
1. Cournot assumption and “war of attrition”

- Zhang argues that there is an inconsistency between NECG’s assumptions regarding the counterfactual
 - the large increase in capacity claimed under the war of attrition is inconsistent with Cournot competition
- As a result, he suggests that the load factors obtained using the NECG approach may be commercially unviable
- Instead, Zhang claims a more reasonable alternative may be to depict the war of attrition with a non-Cournot conduct parameter
 - Negative or even -1 , which implies perfect competition

1. Cournot assumption and “war of attrition”

- Our “war of attrition” is not a cut-throat battle, but rather a prolonged engagement, consistent with experience to date

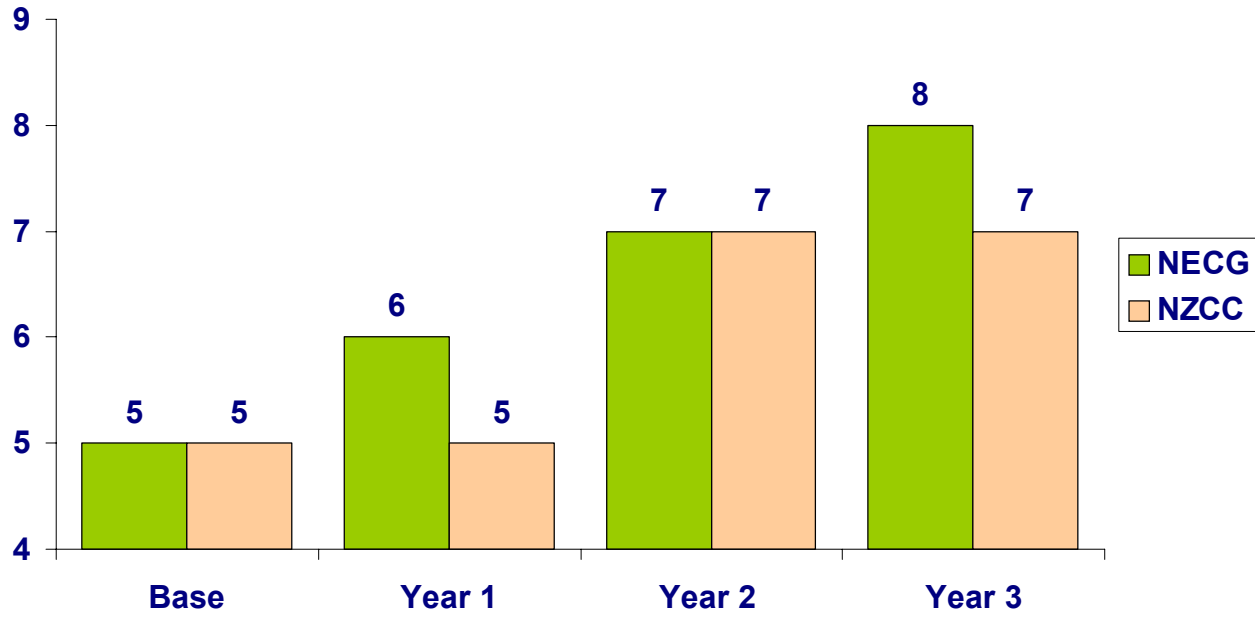
- 8% between 1994/95 and 2001/02
- 9% between Base case and Year 3



1. Cournot assumption and “war of attrition”

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- Moreover, the difference in capacity between our counterfactual and what is needed for the Commission’s “natural growth” counterfactual is small



–This is unlikely to make the difference between Cournot and Bertrand

–Hence, the nature of competition used for our counterfactual should also apply to the Commission’s counterfactual

1. Cournot assumption and “war of attrition”

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- The airlines’ own modelling of the Alliance certainly does not imply an expectation that the nature of competition would change between the factual and counterfactual
- The modelling undertaken to inform the airlines’ decisions about the Alliance are based on the same schedule information used by NECG
 - Both Air NZ’s and Qantas’ modelling estimates an increase in average fares of approximately []% on Tasman and domestic NZ routes between the factual and counterfactual
 - This is inconsistent with a change in the CV parameter

1. Cournot assumption and “war of attrition”

- The load factors obtained in NECG’s model are not as low as Zhang implies
 - For the Tasman, the average load factor under the counterfactual is 74%
 - For domestic New Zealand, the average load factor under the counterfactual is 69%
- If competition is assumed to be more intense than Cournot, load factors would increase substantially
 - With a CV of -0.5, the load factor would be 83% on the Tasman and 81% in domestic NZ
 - With a CV of -0.8, the load factor would be 89% on the Tasman and 92% in domestic NZ

1. Cournot assumption and “war of attrition”

- If one were to assume the counterfactual to be perfectly competitive or close to it then the more rapid failure of Air NZ would also need to be taken into account
- The implications of more intense competition for Air NZ’s profitability can be estimated in NECG’s model:
 - with a CV parameter of -0.5 Air NZ’s operating profit would be \$168 million lower than under Cournot
 - With a CV parameter of -0.7 Air NZ’s operating profit would be \$285 million lower than under Cournot

2. Increasing welfare vs. decreasing output

- The NZCC points at an “inverse relationship between factual capacity and welfare” and Zhang claims that it implies that:
 - There is an error in the formula, or
 - Output bears little or no relationship with capacity at the current capacity level; or
 - The current schedules provided by NECG are not optimal, or
 - Cost savings in NECG calculation is overestimated.

2. Increasing welfare vs. decreasing output

- More capacity in the factual (compared to the counterfactual) does decrease the deadweight loss:
 - The increase in capacity has a positive impact on quantity through the capacity elasticity and hence lowers the deadweight loss
- Less capacity in the factual capacity increases the cost savings
 - The source of cost savings is the rationalisation of capacities and hence an *ad hoc* increase of capacity reduces this efficiency gain

2. Increasing welfare vs. decreasing output

- Overall, the reduction in factual capacity increases welfare
- This is because the benefit associated with capacity rationalisation outweighs the increase in the DWL
- The cost savings may seem large compared with DWL estimate, however, when considered relative to the total costs of the airlines' operations
 - The cost savings claimed are just 4% of the total counterfactual costs

3. Marginal cost calculation

- Marginal costs are estimated using:
 - Base case price; and
 - Disaggregated factual market shares
- Zhang claims that is inconsistent
 - Marginal costs should be estimated using the base case price **and** base case market shares
- This inconsistency is a consequence of the tension between the 3 alternative approaches to analysis:
 - Zhang approach is consistent with the base case market share approach; and
 - The impact of using this approach is a reduction in total detriment of \$10 million compared with NECG's approach

4. Density effects

- Density effects and other cost efficiencies are not included in the analysis of competitive detriments
 - This is because the cost-savings are dealt outside the model of competitive detriments
 - Zhang agrees that it is appropriate when cost-savings are principally driven by change of fixed costs
 - Since the cost savings are mainly related to duplication of fixed capacity, the approach is appropriate
- Zhang argues that ignoring density effects is conservative in that it overestimates the competitive detriments

5. DWL and welfare calculations within the Cournot model

- Zhang notes that NECG uses the MC of the parties under the Factual and Counterfactual to calculate the DWL
- However, the MC of all airlines should be used in this calculation
 - Zhang notes that this reduces the DWL (for all consumers) from A\$83.2m to A\$80.7m
- Zhang also applies the MC for all airlines approach to calculate savings in marginal costs
 - Zhang calculates a negative marginal cost saving of –A\$86.7 million (for all airlines)
- He sums the DWL for all consumers to the negative marginal cost savings for all airlines to arrive at a total DWL of A\$167.4 million

5. DWL and welfare calculations within the Cournot model

- Zhang does not allocate his revised total DWL to NZ
 - Only A\$34.5m of his A\$80.7m is a detriment to NZ
 - Unclear what share of his A\$86.7m negative MC savings is a detriment to NZ
- We agree that the appropriate approach is to use the MC of all airlines but MC should also be the same for the factual and counterfactual
 - There is no reason why the Alliance should increase the MC of other airlines
 - The MC of Qantas and Air NZ under the Alliance are unlikely to increase and according to Zhang may decrease as a result of density effects
- NECG does not claim any savings related to changes in MC, as we assume MC is constant in our Cournot model

5. DWL and welfare calculations within the Cournot model

- Hence, the only adjustments required to NECG's model is to calculate the MC using the weighted average MC for all airlines and to hold this constant between the factual and counterfactual
 - When this is done, the DWL for NZ in year 3 falls from A\$35.5m to A\$32.1m
 - The total allocative efficiency in year 3 loss falls from A\$19.8m to A\$16.3m or from NZ\$22.7m to NZ\$18.8

6. Cost savings calculation outside of the Cournot model

- Zhang argues that the unit costs estimates in NECG's model are independent of the marginal costs estimated in the Cournot framework
- He suggests that this approach may be appropriate for computing changes in fixed costs, but not for changes in marginal cost
- We agree:
 - NECG's estimate of cost savings is limited to costs that are fixed with respect to passengers (departure and blockhour related costs only)
 - NECG does not claim any savings associated with MC and hence does not take account of the fact that MC may be lower under the factual

7. Market segmentation

Confidential information submitted to the Commission shows that the entry of Virgin Blue did not only reduce yields in the economy cabin but also in business class

The logo for Network Economics Consulting Group (onecng) features a stylized 'o' with a blue outer ring and a yellow-green inner ring, followed by the lowercase letters 'necng' in a blue serif font.

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