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Economists' Response

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Economist Response: Outline

- Overview: Context for Economic Analysis
- Analysis of Competitive Effects in Markets at Issue
- modelling Issues
- Tourism Benefits
- Balancing
- Summary

Overview

- Context for the economic analysis
  - The proposed Alliance presents the prospect for benefits due to the consolidation and optimization of the two airlines' networks
  - Economic analysis provides framework to address the question before the Commission -- whether, with this change in the competitive landscape, the proposed Alliance is likely to produce substantial net benefits

Key Questions Raised Concerning Competitive Effects Analysis

M G-C

- Are there entry barriers in markets at issue ? (domestic, Tasman and international)
- Are VBAs a substantial constraint on Tasman and domestic NZ ?

Is VBA Entry Sufficient, Effective, Sustainable?

M T

- APG research with US data:
  - 5% VBA capacity drives major FSA yield reductions
- Prof. Winston research on Australia confirms this
  - Results show that presence of Virgin Blue on a route reduces Qantas fares by 11%
- Prof. Hausman critique of Winston is incorrect
  - when (time) effects are introduced, inference must consider whether effects pick up coefficient
  - Prof. Hausman conceded this in response to Prof. Gillen's question

Response to Critique of VBA Constraint

M T

- Infratil (Morrison & Co):
  - *claim VBAs capped at 25% passenger share*
    - no evidence that VBAs face substantial constraints on ability to grow share in competition with FSAs
    - already exceed 25% in US, Canada and Australia
  - *Claim VBAs in Europe are small, won't reach 14% until 2007*
    - but European VBAs grew from 7% (2001) to 12% (2002)
  - *Claim VBAs becoming more like FSAs in services and costs*
    - they inappropriately assume that increased service offerings by VBAs necessarily imply FSA cost levels
    - but VBAs add services as profit centres, and charge separately for certain services (e.g., lounges)

Implication of Response for Competitive Analysis

- VBAs provide an effective constraint on FSA conduct
  - Despite having different business models, they are in direct competition
- Productive and dynamic efficiency for FSAs
  - VBAs are driving major efficiencies and business model redesign in Canada, Europe, US, Anzac
  - NECG TFP study showed:
    - JSA (QF-BA) was productivity enhancing
    - no observable TFP reduction for QF after the Ansett collapse (which increased QF market share)

Competitive Effects: LAX-AKL

- Prof. Hausman asserts substantial price effects in LAX-AKL, but he makes 3 errors in his analysis

- #1 understates continuing competition and competitive constraint, particularly entry
  - 20-25% of passengers on route have reasonable alternative routings (Europe origins) over other gateways and carriers
  - LAX competition remains for 2 years (hence criticism of NECG results is wrong)
  - 5th freedom rights: SQ, AC
  - 6th freedom operation: Air Tahiti Nui
  - no entry barriers and US carriers could re-enter market

Competitive Effects: LAX-AKL

- #2 he overstates price rise
  - Route has substantial leisure component and tourism has elastic demand
  - Alliance partners will have incentive to attract tourists for additional flights and double destination stops from US – less incentive to raise price
  - Even a monopolist would have little power to raise price
- #3 he overstates NZ welfare impacts of price rise
  - 60% of effect falls on foreigners, so if demand is assumed to be inelastic, little or no increase in DWL
  - In NECG model, even with an estimated price rise, over 5 years allocative efficiency (including transfers from foreigners) increases

Opening Remark - modelling

- Models have been developed to assist NZCC in quantifying benefits and detriments
- Have provided NZCC with framework for evaluating models
  - NECG models are the best of those presented
  - Nevertheless, there are criticisms
    - but the issues are not unique to NECG models,
    - some criticisms raised by Prof. Zhang warrant additional clarification

Modelling Issues

Four themes revealed in Commission's questions of experts about NECG model

A. Is the NECG model really a Cournot model, since it takes capacity as exogenous?

B. Is the NECG model flawed since decreased capacity in Factual relative to Counterfactual is observed to result in increased welfare ?

C. How come on some routes there is increased capacity in Factual and higher prices?

D. How should one deal with product differentiation?

A: Is the NECG model really a Cournot model?

- Cournot models have endogenous output
- All three models (NECG, Hazeldine, Gillen) treat capacity exogenously
  - They do not have a capacity super-game
- But capacity is not output
  - NECG model has exogenous capacity but output is determined within the model
  - This is also the case with the other models
- NECG model is Cournot in exactly the same way as the other models

B: Decreased Capacity in Factual Results in Increased Welfare

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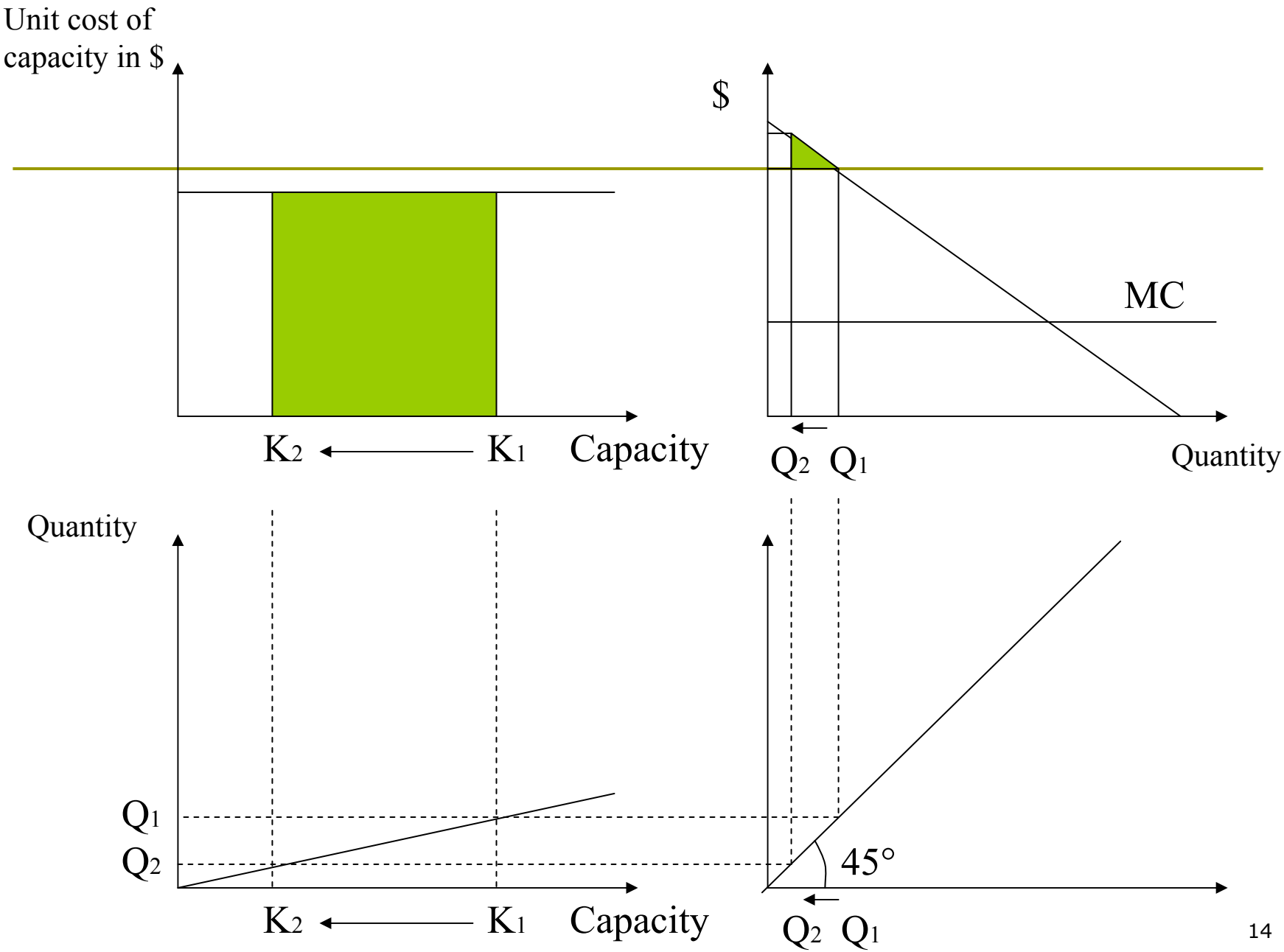
- All 3 models have this effect
  - It is a consequence of exogenous capacity with model determined output
  - When capacity is reduced, there is a big cost savings (a cost rectangle)
  - Reduced capacity may have little or no output reduction (higher load factor)


Unit cost of capacity in $
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B: Decreased Capacity in Factual Results in Increased Welfare

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- Effect is most marked in Hazledine model
  - In that model, there is no link at all between capacity and output
- Effect is also pronounced in Gillen model
  - There capacity and output are only linked through capacity effect on demand
- This effect is least in NECG model

Issue B: Cont.

- However, finding this effect is not a criticism of the models
  - Rather, it highlights importance of carefully specifying the sensitivity tests so that they are sensible in light of the models
  - Reducing capacity without ultimately reducing output makes no sense
  - And it is double counting to treat cost-savings due to output restriction as a welfare gain: an error the NECG model doesn't make

C: Increased Capacity in Factual Results in Increased Prices

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- This only happens on a few routes
  - Excluding the routes ex-LAX, they represent 11% of market revenues
  - These are routes where increased factual capacity means Alliance has lower marginal costs but greater market power
  - So difference in mark-up between Factual and Counterfactual is greater
- All 3 models have this effect
  - although effect in NECG model is most noticeable, due to
    - route disaggregation
    - Calibration of marginal costs off factual capacity

Issue C: cont.

- Keying marginal costs off factual capacity accentuates this effect
- All Cournot models must be calibrated
- NECG calibrates with Factual capacity
  - this is better because it requires fewer assumptions (factual schedule captures parties' information about network effects and expectations of entrant costs)
  - also, keying marginal costs off factual capacity is conservative

C: Increased Capacity in Factual Results in Increased Prices

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- One could calibrate marginal costs off base case
  - requires making additional assumptions
  - results in *lower* estimated detriments:

	DWL	**Transfers**	**Total**
Disaggregated Factual market shares (NECG model)	$41 million	-$18 million	$23 million
Base case market shares	$26 million	-$12 million	$13 million

D: Product Differentiation

- Prof. Hausman criticises the NECG model because it ignores some elements of product differentiation

- The Gillen/Hazledine approach to product differentiation results in a scaling down of the competitive pressure imposed by the VBA
  - They assume that the VBA product has only **half** of the price impact on the FSA price when compared to the FSA product itself

D: Product Differentiation

- Lessening the competitive impact of a VBA contradicts the empirical evidence found internationally and in Australia

- NECG presented some modelling results of product differentiation
  - They showed that, when the arbitrary assumptions are replaced by a more realistic representation of the VBA constraint, the estimated competitive detriments decreases sharply
  - If anything, the VBA impact should be considered as more competitive than Cournot, making NECG's approach conservative

Conclusion on Modelling

- NECG's model is the most appropriate model on the table
  - It takes into account the competitive impact of the VBA as well as the presence of 5th freedom operators
  - The city-pair approach based on the calibration of airlines experts captures the reality of network effects
- Hazledine's model, after some iterations seems to converge towards NECG's results
  - Hazledine model, however, does not treat $550 million as benefit and counts 22.5% as detriment – changing this results in large benefits

Tourism Benefits

- Tourism Benefits were Estimated by NECG, but four questions raised:
  - Weren't the tourism numbers "hard wired"?
  - In valuing these impacts, was it appropriate to use a Computable General Equilibrium (CGE) model?
  - Why doesn't NECG use a CGE model for everything? Why only for Tourism ?
  - Are the CGE multipliers reasonable?

Tourism: Were Numbers Hard Wired?

- The 50k impact was taken as given
  - Seems extremely conservative in view of likely impact of removing current constraints on Air NZ's ability to promote tourism
  - However, in translating this impact into overall change in tourism, the effect of Cournot model increases in prices were fully taken into account
  - These price increases are large, relative to what the airlines themselves expect, and take no account of higher PED of tourists, so tourism gains under-stated

Tourism: Appropriateness of CGE

- Hazledine was critical of our use of CGE
- But it has become a standard tool for benefit analysis when there are intersectoral effects
  - not using CGE can overstate benefits when capacity constraints are potentially important
  - CGE attenuates benefits by recognizing resource/capacity constraints and price effects

Tourism: Not Using CGE for Everything

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- CGE modelling is only necessary where there are significant intersectoral effects
- For the non-tourism areas of impact, there was no reason to expect significant intersectoral constraints on benefits being realized
- Indeed, for these areas, a CGE approach would lead to higher estimated benefits
- As a result, conservative approach adopted of only valuing direct impact for these benefits

Tourism: Are the CGE Multipliers Reasonable?

- Most widely used Anzac CGE model was used (Monash)
  - has withstood many tests and much scrutiny
- Also looked at the main NZ model
  - But Infometrics model would produce even larger benefits
- Hence:
  - widely used and accepted, and conservative

Balancing

	Lower bound	Upper bound
Detriments		
Allocative efficiency	$13	$33
Benefits		
Cost savings	$96	$96
Tourism	$66	$130
Freight	$33	$33
E&M	$35	$35
New Directs	$9	$9
Scheduling	$2	$2
Online benefits	+ve	+ve
Productive efficiency	+ve	+ve
Dynamic efficiency	+ve	+ve
Avoided social cost of public funds	+ve	+ve
Net benefits	**$228+**	**$272+**

Closing Remarks

- The competitive analysis suggests that there will be at least two strong carriers on the affected routes:
  - An FSA and a VBA
  - And a substantial number of other actual and potential competitors on the Tasman and the long haul routes
  - No barriers to entry or expansion
  - Empirical analysis supports conclusion that there are constraints on pricing and pressure to keep costs low

Closing Remarks - cont.

- Is there a value (preserving an "option")
  by taking a wait and see approach to market outcomes
- Potential upsides from "waiting" are low
  - modelling shows that gains from maintaining status quo are lower than from the Alliance
- Potential downsides to waiting are high
  - AirNZ, if unable to earn its WACC,
    will not be able to invest and remain competitive
  - NZ would lose benefits from the Alliance
  - Limited competitive risks
- On balance, authorizing the Alliance
  is the best way of ensuring benefits are realized

Thank You