

# Consumer Benefits From Improved Scheduling and New Online Flight Options

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## Background

- The NZCC has estimated the following benefits from improved scheduling and new flight options:
  - Improved Scheduling: \$360,000 per year
  - New Online Flight Options: None
  - New Non-Stop Flight Options: None
- In total, the NZCC finds that the benefits of the proposed alliance are between \$33.5 million to \$49.6 million per year
- This estimate understates the consumer benefits from improved scheduling and new flight options

# Benefits from Improved Scheduling and New Flight Options



- Improved Scheduling
  - More departures
  - Shorter connections
  - More online flight options
  
- New Online Flight Options
  - Pre-Alliance: Necessary to fly different legs of an itinerary on non-allied carriers
  - Post-Alliance: Ability to fly entire itinerary on allied carriers (so schedules, check-in, etc. are coordinated)
  
- New Non-Stop Flight Options
  - Pre-Alliance: Necessary to connect between city-pair
  - Post-Alliance: Ability to fly on non-stop flight

# Benefits from New Online Flight Options

- The benefits from new online travel include:
  - Improved connections through coordination of flights
  - Lower fares
  - Ability to purchase a single ticket for the entire itinerary
  - Seamless travel experience – to a passenger online travel appears as travel on a single airline

# Lower Fares from Online Flight Options

- Brueckner and Whalen (2000) estimate that code-share alliance online fares are approximately 25 percent lower than the fares charged for comparable interline flights by non-allied airlines.
- Other studies find similar results.
- Comparison of online and interline fares for a sample of 20 trans-Tasman routes indicated an average online fare reduction of approximately 21 percent.

# Comparison Of Online And Interline Fares For 20 Sample Routes



<u>Route</u>	<u>Interline Fare</u>	<u>Online Fare</u>	<u>Fare Difference Between Online and Interline Fares</u>
Auckland-Melbourne-Adelaide	\$3,300.81	\$2,803.20	-15.1%
Auckland-Sydney-Canberra	\$2,840.04	\$2,531.50	-10.9%
Auckland-Sydney-Cairns	\$4,308.89	\$2,947.90	-31.6%
Auckland-Brisbane-Darwin	\$4,847.86	\$3,614.40	-25.4%
Auckland-Sydney-Darwin	\$4,798.89	\$4,069.00	-15.2%
Auckland-Sydney-Gold Coast	\$3,368.15	\$2,322.40	-31.0%
Auckland-Melbourne-Perth	\$4,761.82	\$2,775.30	-41.7%
Auckland-Brisbane-Townsville	\$3,616.71	\$2,978.20	-17.7%
Wellington-Melbourne-Adelaide	\$3,300.81	\$2,803.20	-15.1%
Wellington-Melbourne-Canberra	\$3,164.02	\$2,733.40	-13.6%
Wellington-Sydney-Cairns	\$4,308.89	\$3,493.90	-18.9%
Wellington-Sydney-Darwin	\$4,798.89	\$4,806.00	0.1%
Wellington-Sydney-Gold Coast	\$3,368.15	\$3,566.40	5.9%
Wellington-Melbourne-Perth	\$4,761.82	\$2,775.30	-41.7%
Christchurch-Sydney-Adelaide	\$3,623.80	\$2,950.20	-18.6%
Christchurch-Sydney-Canberra	\$2,840.04	\$2,531.50	-10.9%
Christchurch-Sydney-Cairns	\$4,308.89	\$2,947.90	-31.6%
Christchurch-Sydney-Darwin	\$4,798.89	\$4,069.00	-15.2%
Christchurch-Sydney-Gold Coast	\$3,368.15	\$2,322.40	-31.0%
Christchurch-Sydney-Perth	\$4,956.98	\$2,816.30	-43.2%
<b>Average Fare Difference</b>			<b>-21.1%</b>

## Estimate of New Online Flight Options

- The proposed alliance will be in a position to offer new online service on up to 855 routes between New Zealand and Australia that currently have only interline service.
- Qantas offers no service to 15 cities in New Zealand currently served by Air New Zealand.
- Air New Zealand offers no service to 57 cities in Australia currently served by Qantas.
- The proposed alliance will therefore serve both sets of cities and will be able to offer online connections on up to 855 new city-pair routes. [15 x 57 = 855]

## Additional Online Flight Options

- Proposed alliance would offer online service improvements even for routes with current online service.
- Online service improvements would include
  - Higher flight frequencies
  - Greater capacities
  - Better connections
  - More convenient departure times
  - More online flight options.



# Example Of Online Connectivity Improvement

<b>Cairns - Christchurch Online Flight Options (Saturday Departure)</b>	
<b>Current - Qantas Flights Only</b>	
Departure	Arrival
6:25AM	4:55PM
12:45PM	9:05PM
2:35PM	11:45PM
2:40PM	11:55PM
4:10PM	1:50PM (Next Day)
<b>Additional Flight Options Under the Proposed Alliance</b>	
Departure	Arrival
6:00AM	2:50PM
3:00PM	11:15PM
5:40PM	6:25AM (Next Day)

Source: Innovada August 2003 Schedules

# Combining Air New Zealand And Qantas Flight Schedules

- We combined the schedules of both Air New Zealand and Qantas to simulate all of the new potential online flight options available to consumers. Our findings included:
  - 1,268 new directional online routes for flights originating or terminating in New Zealand
  - Minimum online travel time reductions on 226 directional city-pair routes that originate or terminate in New Zealand
    - Shortest travel time on these routes will be reduced by an average of 10 percent
    - Current minimum online travel time for the Auckland to Hobart trip is 6 hours and 55 minutes and will be just 6 hours under combined flight schedules
  - Numerous new online flight paths and departure time options.

# Combining Air New Zealand And Qantas Flight Schedules

- The simulation demonstrates online connectivity improvements achievable without modifying current schedules.
- Further improvements in online flight options would be obtained through schedule coordination and reallocation of aircraft.

# Estimation Of Online Connectivity Benefits



- Estimation of online connectivity benefits depends on three parameters
  - Consumers' total expenditures on Air New Zealand/Qantas interline flights (denoted by  $\varepsilon_i$ )
    - Our estimate of  $\varepsilon_i$ : \$114 million annually
    - For sensitivity of calculations we consider two additional values of  $\varepsilon_i$ : \$85.5 and \$142.5 million.
  - Consumer benefits of switching from an interline to online itinerary (denoted by  $\beta$ )
    - Combination of two factors:
      - Reduction in fares: Range assumed 21-25 percent (based on our analysis and the literature)
      - Value of improved connectivity: Range assumed 10-20 percent (based on the literature)
      - Therefore, estimates of  $\beta$  range from 31 percent to 45 percent of interline flight expenditures
  - Price elasticity of demand (denote as  $\eta$ )
    - We consider three alternative values of  $\eta$ : -1, -1.3, and -1.7.

# Estimates of Consumer Benefits from New Online Flight Options



<b>Estimated Consumer Benefits of the Proposed Alliance for New Zealand Domestic and trans-Tasman Routes (\$NZ Million)</b>				
<b><math>\beta = 31\%</math></b>		Interline Expenditures ( $\epsilon_i$ )		
		(\$NZ Million)		
		<u>\$85.50</u>	<u>\$114</u>	<u>\$142.50</u>
Demand	-1	\$31	\$41	\$51
Elasticity	-1.3	\$32	\$42	\$53
( $\eta$ )	-1.7	\$33	\$45	\$56
<b><math>\beta = 45\%</math></b>		Interline Expenditures ( $\epsilon_i$ )		
		(\$NZ Million)		
		<u>\$85.50</u>	<u>\$114</u>	<u>\$142.50</u>
Demand	-1	\$47	\$63	\$79
Elasticity	-1.3	\$50	\$66	\$83
( $\eta$ )	-1.7	\$53	\$71	\$89

## Estimated Consumer Benefits Of Online Connectivity Improvements

- We therefore estimate that the value to consumers of new online flight options would range from \$42 million to \$66 million per year.
- The estimated consumers of new online flight options represent 2.2 percent to 3.4 percent of the total domestic New Zealand and trans-Tasman air transport revenues.

*We estimate that the value to New Zealanders of the new online options is between \$21 million and \$33 million per year.*

# Total Benefits Of Online Connectivity Improvements

- Producer benefits of online connectivity
- Consumer benefits of online connectivity improvement represent a lower bound of total online improvement benefits

# Conclusions

- Our analysis suggests that the full implementation of the proposed alliance would produce substantial benefits in terms of improved scheduling and new flight options.
- The NZCC estimate of the benefits of the proposed alliance assumes that improved scheduling produces only small benefits (in the range of \$360,000 per year), while new direct flights produce no benefits whatsoever.
- Given all of the potential improvements in scheduling and the new flight options (both non-stop and online), our analysis suggests that the NZCC has significantly understated the gross consumer benefits of the proposed alliance.