Asia Pacific Aviation

CHALLENGES & OPPORTUNITIES

Andrew Herdman
Director General
Association of Asia Pacific Airlines
Overview

• Asia Pacific aviation
• Industry trends & outlook
• Evolving business strategies
• Global regulatory challenges
• Future growth
Aviation: delivering global mobility

- Safely connecting people and business
- Wider social and economic benefits
- Outstanding safety record
- Committed to sustainable growth

4.4 billion passengers
12 million daily

35% by value of global trade
Goods worth US$6.8 trillion

Source: IATA WATS 2019, Aviation Benefits 2019
Asia Pacific

- Diverse geographic region
- Home to more than 4 billion people
- Wide range of income levels, rapidly growing middle class
- Dynamic economies generate 35% of global GDP
- Aviation widely recognised as a key contributor to economic and social development
  - Supports 30 million jobs and US$684 billion in GDP

Source: IMF WEO October 2019, Aviation Benefits 2019
Growth of Asian middle class consumers

Rising demand for goods & services including air travel

Source: Airbus GMF 2019, Oxford Economics
Households with yearly income between $20,000 and $150,000 at PPP in constant 2015 prices
Asia Pacific Aviation

US$248 billion revenue
US$8 billion net profit
1,623 million passengers
1,155 million domestic
468 million international
23 million tonnes of cargo
8,448 aircraft

Asia Pacific carriers overall market share:
34% of global passenger traffic
35% of global cargo traffic

Source: Data for 2018 Traffic, Financials: IATA
Global Aviation Route Network

Over 20,000 city pairs
## World’s ten busiest domestic routes

<table>
<thead>
<tr>
<th>Rank</th>
<th>Route</th>
<th>PAX (million)</th>
<th>No. of operating carriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jeju – Seoul</td>
<td>14.5</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Fukuoka - Tokyo</td>
<td>7.6</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Melbourne – Sydney</td>
<td>7.6</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Sapporo – Tokyo</td>
<td>7.3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Beijing – Shanghai</td>
<td>6.4</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Hanoi – Ho Chi Minh City</td>
<td>6.2</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Delhi – Mumbai</td>
<td>5.9</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Tokyo – Okinawa</td>
<td>4.9</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Jeddah – Riyadh</td>
<td>4.8</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Beijing – Chengdu</td>
<td>4.8</td>
<td>6</td>
</tr>
</tbody>
</table>

Almost all in Asia Pacific

Source: IATA WATS 2019 (2018 data), Google Flights, Skyscanner
## World’s ten busiest non-domestic routes

<table>
<thead>
<tr>
<th>Rank</th>
<th>Route</th>
<th>PAX (million)</th>
<th>No. of operating carriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hong Kong - Taipei</td>
<td>5.4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Dublin – London</td>
<td>3.4</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Bangkok – Hong Kong</td>
<td>3.4</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Jakarta - Singapore</td>
<td>3.2</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>Seoul - Osaka</td>
<td>2.9</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Kuala Lumpur - Singapore</td>
<td>2.8</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>Hong Kong - Seoul</td>
<td>2.8</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Tokyo – Taipei</td>
<td>2.7</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>Hong Kong - Shanghai</td>
<td>2.7</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>London- New York</td>
<td>2.7</td>
<td>5</td>
</tr>
</tbody>
</table>

Almost all in Asia Pacific

Source: IATA WATS 2019 (2018 data), Google Flights, Skyscanner
Industry Outlook
Global economic trends

- Trade tensions undermine confidence
- Slowing growth

Source: IMF WEO October 2019
Global passenger traffic

Remarkable period of sustained strong growth

Source: IATA
RPKs seasonally adjusted
Global cargo traffic

<table>
<thead>
<tr>
<th>% change</th>
<th>2017</th>
<th>2018</th>
<th>9M 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTK</td>
<td>+9.7%</td>
<td>+3.7%</td>
<td>-3.5%</td>
</tr>
<tr>
<td>World trade</td>
<td>+4.9%</td>
<td>+3.4%</td>
<td>-0.4%</td>
</tr>
</tbody>
</table>

Air cargo buffeted by trade tensions disrupting global supply chains

Source: IATA
FTKs seasonally adjusted
Oil prices range-bound

Average jet fuel prices (US$ per barrel)

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>10M 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$53</td>
<td>$65</td>
<td>$85</td>
<td>$79</td>
</tr>
</tbody>
</table>

Source: US Energy Information Administration
Airfares tracking changes in oil prices

- Airfares remain highly competitive
- Margins being squeezed

Source: IATA
Global airline profitability trends

- **Period of sustained profitability**
- **Airline profits average US$6 per passenger**
- **Narrow profit margins ~ 3%**

Source: IATA
Profitability trends by region

Wide variations in profitability across regions

Source: IATA
Evolving Business Strategies
Airline business model share by region

Full service network carrier model still prevalent

Source: IATA WATS 2019, 2018 data
Digitalising the passenger experience

- Benefits of streamlining processes
- Biometrics implementation at various stages
- Increasing individual autonomy on travel choices, solutions at fingertips
- High willingness to exchange biometric data for fast, seamless journey
- Robust privacy policies and security protocols needed to safeguard personal data and assure travelling public

*Challenge of harnessing new technologies to deliver a better passenger experience*
Global Regulatory Challenges
Global Regulatory Influences

Asia Pacific

- Wider impact of US and EU regulations
- Asia Pacific needs a unified voice
- Need for harmonised global standards
Global Regulatory Challenges

Aviation is subject to intensive regulation

- Safety
- Security
- Sustainability
- Passenger Facilitation
- Accessibility
- Infrastructure
- Slot Management
- Taxes & Charges
Aviation Safety Performance

Western-built Jet Aircraft Major Accident Rates by Operator Region 2010-2019
3-year moving averages

- 1 major accident in 2 million flights
- 1 major accident in 3 million flights
- 1 major accident in 4 million flights
- 1 major accident in 5 million flights

Flying is extraordinarily safe based on collective commitment and cooperation

Source: AAPA
*Data as of 24 October 2019
Maintaining Public Trust

• Industry-wide commitment to safety, working within long-established international framework of regulatory oversight

• B737 MAX accidents have raised doubts over design and certification procedures, flight operations & training standards

• Comprehensive international efforts to address identified deficiencies

• Major logistics challenge ahead managing B737MAX return to service

• Wider task of rebuilding public trust and confidence in the overall integrity of the global system of regulatory oversight
Aviation Security

- Aviation remains highly secure despite perceived risks
- Evolving threats and challenges: no room for complacency
- Comprehensive threat assessment and balanced risk management key to ensuring good security
- Regulatory measures need to be proportionate, fit for purpose, cost-effective and sustainable
- Shared global concern requires close international cooperation

*Aviation security is built on a network of trusted relationships*
Cybersecurity

- Universal digitalisation increases interdependency and associated vulnerabilities
- Threats include operational disruption as well as theft of information for political, financial or other motivations
  - Cyberwarfare by State actors
  - Cybertheft by criminal elements
- Robust cybersecurity involves technical, policy and regulatory measures
- Absence of global standards and protocols
- Proliferation of national cyber regulations
- Need to focus on wider aviation ecosystem and strengthening resilience

Requires trust and cooperative efforts
Aviation & Sustainable Development

• ICAO 40th Assembly reaffirms CORSIA as the only global market based measure
  - Emissions reporting for all operators: 2019
  - Carbon offsetting obligations: 2021 onwards
  - Some developing countries oppose CORSIA

• ICAO to explore long-term CO₂ global aspirational goal

• Aviation under pressure in Europe
  - Increased activism: ‘Flight Shame’ movement
  - Calls for net zero emissions by 2050
  - Additional taxes & levies

• Need to strengthen industry advocacy and communications

  Aviation continues to pursue an ambitious environmental strategy
Passenger Facilitation

- Challenges of processing 12 million passengers daily
- Rethink service processes using new digital technologies
- Need for harmonised passenger data standards
- Overlapping national rules and contradictory regulations create confusion for travellers
- Mass disruption events call for flexibility & coordinated responses

*Focus on improving the overall passenger experience*
Accessibility

• Estimated 120 million travellers with disabilities worldwide

• Need to ensure services delivered to passengers with genuine need

• Emerging trend of accessibility-specific regulations, disparate requirements and implementation

• Greater industry engagement required to ensure policies match operational realities

*Industry committed to provide safe and accessible travel*
Slots Management

• Growth in demand for air travel drives future infrastructure requirements
• Slot management only optimises use of existing capacity
• Worldwide Airport Slot Guidelines (WASG) reflect best practices
• Proliferation of individual slot allocation regimes is counter-productive

Consistent global approach on slot management key to optimising overall efficiency of the air transport system
Taxes & Charges

- Aviation is integral to the world economy & connects communities
- Opportunistic taxes undermine economic development & hinder job creation
- User charges must be transparent, cost-related, non-discriminatory & for current use
- Difficulties in regulating monopoly service providers

*Aviation is a catalyst for growth, jobs & social development*
Future Growth
Asian markets drive growth

- **Asia Pacific** to account for 40% of future aircraft deliveries
- **Major investments in infrastructure & manpower** required

Source: Boeing Commercial Market Outlook 2019

*Does not include travel within China*
Infrastructure

• Airport capacity
  - Long-term planning & coordination
  - Capital investments along with cost prudence
  - Slot management not permanent solution

• Various forms of public and private sector involvement
  - User consultation critical in shaping future developments

• Economic regulation & oversight
  - Balancing interests of airlines, airports and travelling public

• Aviation Workforce
  - Opportunities for talented individuals

Governments need to coordinate infrastructure planning & regulatory oversight
Closing thoughts

• Aviation is a key driver of global economic and social development
• Infrastructure planning is critical
• Airline strategies evolving in response to changing market dynamics and consumer preferences
• Regulatory oversight should focus on maintaining consistent global standards on safety, security and ensuring a competitive landscape
• Aviation committed to sustainable long term growth

Asia Pacific airlines remain at the forefront of global air transport development