Aviation Data and Analysis Seminar
20-23 February 2017

Economics of Airports and Air Navigation Services Providers
Growth of air transport

Source: ICAO Annual Report of the Council

6.6 trillion RPK +7.1% growth rate vs. 2014

198 billion FTK +1.7% growth rate vs. 2014
- 3.5 billion passengers
- 34 million departures
- 51 million tonnes of freight
- Over 1 400 scheduled airlines
- More than 27 000 aircraft
- More than 4 130 airports
- 173 air navigation centres

Traffic is for scheduled services
Airports financial results in 2014
- Strong overall health of the airport industry in 2014
- Airport revenues rose by 8.2% to reach US$ 142 billion
- Airport industry would approximate the GDP of the 60th –ranked State in terms of economic output
- Airport receive revenue from 2 primary sources: aeronautical (55.5%) and non-aeronautical (40.4%). Non-operating activities accounts for around 4% of the revenues.

<table>
<thead>
<tr>
<th>Region</th>
<th>Total revenue</th>
<th>2014/2013 % change</th>
<th>Aeronautical revenue*</th>
<th>2014/2013 % change</th>
<th>Non-aeronautical ** and non-operating revenue</th>
<th>2014/2013 % change</th>
<th>Total cost (operating + capital costs)</th>
<th>2014/2013 % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>3,000</td>
<td>17.0%</td>
<td>2,100</td>
<td>18.8%</td>
<td>900</td>
<td>12.8%</td>
<td>2,000</td>
<td>2.2%</td>
</tr>
<tr>
<td>Asia and Pacific</td>
<td>41,800</td>
<td>8.3%</td>
<td>20,600</td>
<td>10.2%</td>
<td>21,200</td>
<td>6.3%</td>
<td>27,200</td>
<td>9.4%</td>
</tr>
<tr>
<td>Europe</td>
<td>50,800</td>
<td>7.0%</td>
<td>30,100</td>
<td>7.8%</td>
<td>20,700</td>
<td>5.8%</td>
<td>41,300</td>
<td>4.3%</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>8,100</td>
<td>25.9%</td>
<td>4,800</td>
<td>17.1%</td>
<td>3,300</td>
<td>38.7%</td>
<td>6,500</td>
<td>29.4%</td>
</tr>
<tr>
<td>Middle East</td>
<td>10,900</td>
<td>13.0%</td>
<td>5,200</td>
<td>11.8%</td>
<td>5,700</td>
<td>14.2%</td>
<td>9,100</td>
<td>12.3%</td>
</tr>
<tr>
<td>North America</td>
<td>27,900</td>
<td>4.8%</td>
<td>14,500</td>
<td>6.8%</td>
<td>13,400</td>
<td>2.4%</td>
<td>25,100</td>
<td>5.3%</td>
</tr>
<tr>
<td>World</td>
<td>142,500</td>
<td>8.2%</td>
<td>77,300</td>
<td>9.1%</td>
<td>65,200</td>
<td>7.2%</td>
<td>111,200</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

*Aeronautical revenue includes ground handling charges
**Non-aeronautical revenue includes ground handling concessions revenue

Source: ACI Airport Economics Survey (2015)
Aeronautical revenues in 2014

- Levied on users of airport facilities and services
- Aircraft operators typically pay charges for the use of aviation infrastructure (including runways, taxiways, aprons and parking stands) at airports; these charges are usually based on an aircraft weight formula.
- Passenger service charges are collected on a per passenger basis and are normally collected by aircraft operators on behalf of airports in order to avoid delays and bottlenecks in facilitation.

**Distribution of Aeronautical revenues**

**Source:** ACI
Non-aeronautical revenues in 2014

- Revenue sources on the commercial side of the airport business (non-aeronautical) tend to be more diverse than the traditional aeronautical revenue streams.
- Non-aeronautical sources of income not only provide diversification in an airport’s income portfolio, but also serve as an additional cushion during economic downturns.
- Revenue may be derived from rents charged to concessionaires offering a wide range of services to passengers, including car parks within the airport boundary, or retail, banking, advertising or car rental facilities on the airport site.
- Non-aeronautical sources of income may also be rents for office accommodation on airport land, either in the form of rents for offices built by the airport operator or rents for airport land leased to third parties on which offices or other facilities have been built. Other, minor sources of non-aeronautical revenue may include various fees, such as those for third-party employee security passes, pass-through charges for utilities consumption or access charges to public transport operators.

Distribution of non-aeronautical revenue by source (2014)
ICAO Policies and airport governance
ICAO’s documents have been updated with new editions of:

- **Doc 9082, ICAO’s Policies on Charges for Airports and Air Navigation Services** (Ninth Edition in 2012)
- **Doc 9161, Manual on Air Navigation Services Economics** (Fifth Edition in 2013)
Ownership, control and governance

Private ownership and participation/involvement

- Management contract
- Lease or concession
- Transfer of minority ownership
- Private sector ownership and control
- Private sector ownership and/or operation of parts of the activities of an airport / ANSP
Ownership and management options

- Government ownership
- Management contract
- Lease or concession
- Transfer of minority ownership
- Public-private partnerships
- Private sector ownership and control

4 forms of private participation
Ownership and management options

- Government ownership
  - Management contract
  - Lease or concession
  - Transfer of minority ownership
  - Public-private partnerships
  - Private sector ownership and control
Ownership and management options

- Government ownership
- Management contract
- Lease or concession
- Transfer of minority ownership
- Public-private partnerships
- Private sector ownership and control
• Management contract

A system of management by which an entity (usually private) takes over the management of a facility for a fixed period on the basis of predetermined payment terms.
Ownership and management options

- Government ownership
- Management contract
- Lease or concession
- Transfer of minority ownership
- Public-private partnerships
- Private sector ownership and control
• Lease or concession

The right to occupy certain defined premises or possess some equipment for a **fixed period**, which may be used for business purposes.

The premises or equipment are returned to the owner on expiry of the lease, generally without paying any compensation.
Ownership and management options

- Government ownership
- Management contract
- Lease or concession
- Transfer of minority ownership
- Public-private partnerships
- Private sector ownership and control
• Transfer of minority ownership

Private participation through transfer of minority ownership has taken place either through the sale of shares to a strategic partner or through share flotation.
Ownership and management options

- Government ownership
- Management contract
- Lease or concession
- Transfer of minority ownership
- Public-private partnerships
- Private sector ownership and control
• Public-private partnerships (PPP)
  – Private and public sectors both participate.
  – Private sector supplies infrastructure assets and services that traditionally have been provided by the government.
  – This technique provides private financing for infrastructure investment without immediately adding to government borrowing and debt, and can be a source of government revenue.
  – PPPs also present business opportunities for the private sector in areas from which it was in many cases previously excluded.
Ownership and management options

- Government ownership
- Management contract
- Lease or concession
- Transfer of minority ownership
- **Public-private partnerships**
- Private sector ownership and control
• When considering the commercialization or privatization of airports and ANSPs, States should bear in mind that they are ultimately responsible for safety, security and economic oversight of these entities.
Sources of financing

– Domestic sources
– Foreign sources
  • Bilateral institutions
  • Development banks and funds
  • United Nations Development Programme
  • Commercial sources
– Debt financing
  • Credit rating
– Pre-funding of projects through airport or air navigation services charges
– Other sources
• Existing ICAO policies for Infrastructures (airports and Air Navigation Service Providers)

• No policies for airlines nor aircraft manufacturers

• Implementation of the Aviation System Block Upgrade (ASBUs):
  – economic and operational challenges associated with the air navigation services upgrades in particular, and with financing the air transport system in general.
• Twelfth Air Navigation Conference (AN-Conf/12), in November 2012,
• Sixth Worldwide Air Transport Conference (ATConf/6), in March 2013.
• The Council, approved recommendations ATConf/6, at the 9th Meeting of its 199th Session,
• Establishment of a multi-disciplinary working group linked to the implementation of the aviation system block upgrades (MDWG-ASBU).
The meeting

- First meeting of MDWG-ASBU in February 2014

- 2 Co-Secretaries:
  - 1 from the Air Transport Bureau
  - 1 from the Air Navigation Bureau

- Members, advisors and observers of:
  - 13 Member States
  - 12 international and regional organizations

- 51 participants
4 sub-working groups

- **WG1**: Identification of **best practices for incentives** (including operational and financial incentives) supporting the implementation of ASBUS

- **WG2**: Business cases and **Cost-Benefit Analysis (CBA)** for ASBUs implementation

- **WG3**: **Schemes to finance** the ASBUs implementation

- **WG4**: **ICAO Policies**: consider how the findings of MDWG-ASBUs are impacting ICAO policies
Tasks for the MDWG-ASBUs

a) establish an inventory of best practices in existing operational and financial incentives;
b) determine the parameters and definitions of, for example, service priority policies;
c) establish an inventory of existing financing schemes;
d) evaluate to the extent possible the effectiveness of the afore-mentioned;
e) develop guidance material for business cases and CBA;
f) consider how the policies might be applied in practice at a State level or regional level; and

g) consider how the findings could be reflected in existing ICAO policies, guidance material and GANP as well as in coordination mechanisms.

→ Airport Economics Panel (AEP)
→ Air Navigation Services Economics Panel (ANSEP)

determine if and how the existing guidance could be amended to incorporate the findings of the working group

→ Global Air Navigation Plan (GANP)
determine what, if any, information should be included in the next edition of the Global Air Navigation Plan
**Expected decision on the need to:**

- Complement the existing ICAO Documents (Doc 9082, Doc 9161 and Doc 9562) and other operational material
- Develop a new *Manual on Incentives* with the findings of the working groups
- Develop a guidance document for the principles to be used to develop Business cases and CBA
Any **preferential charges, rebates, discounts or other reductions** in the charges normally payable for the use of airport and air navigation facilities and services.

*ICAO’s Policies on Charges for Airport and Air Navigation Services (Doc 9082)*
For safeguarding users against potential negative effects of differential charges can be derived:

– non-discrimination
– transparency
– non-cross subsidization
– time-limitation
Incentives for economic pricing

Incentive:
an instrument that incites a particular course of action

- financial reward (or penalty) or a change in operational efficiency.

- through charging scheme to encourage users to act in ways that will lead to the desired outcome.

- States should ensure that the incentive schemes meet the principles set out in Doc 9082:
  - Non-discrimination, cost-relatedness, transparency, consultation with users

Incentive would affect users’ decisions on fleet renewal or on the selection of types of aircraft used
• ICAO has existing policies on financing / funding for airports and ANSPs

• Incentives for economic pricing are defined in ICAO policies

• In the context of the ASBUs implementation:
  – Enlarge the scope of the analysis to other aviation stakeholders (such as aircraft operators and manufacturers)
  – How operational and financial incentives can encourage the financing of the air transport system
  – Business Cases and Cost-Benefit Analysis to the different stakeholders to assess the investments that aviation stakeholders should finance in order to implement the ASBUs