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2014 ACI Airport Economics Report

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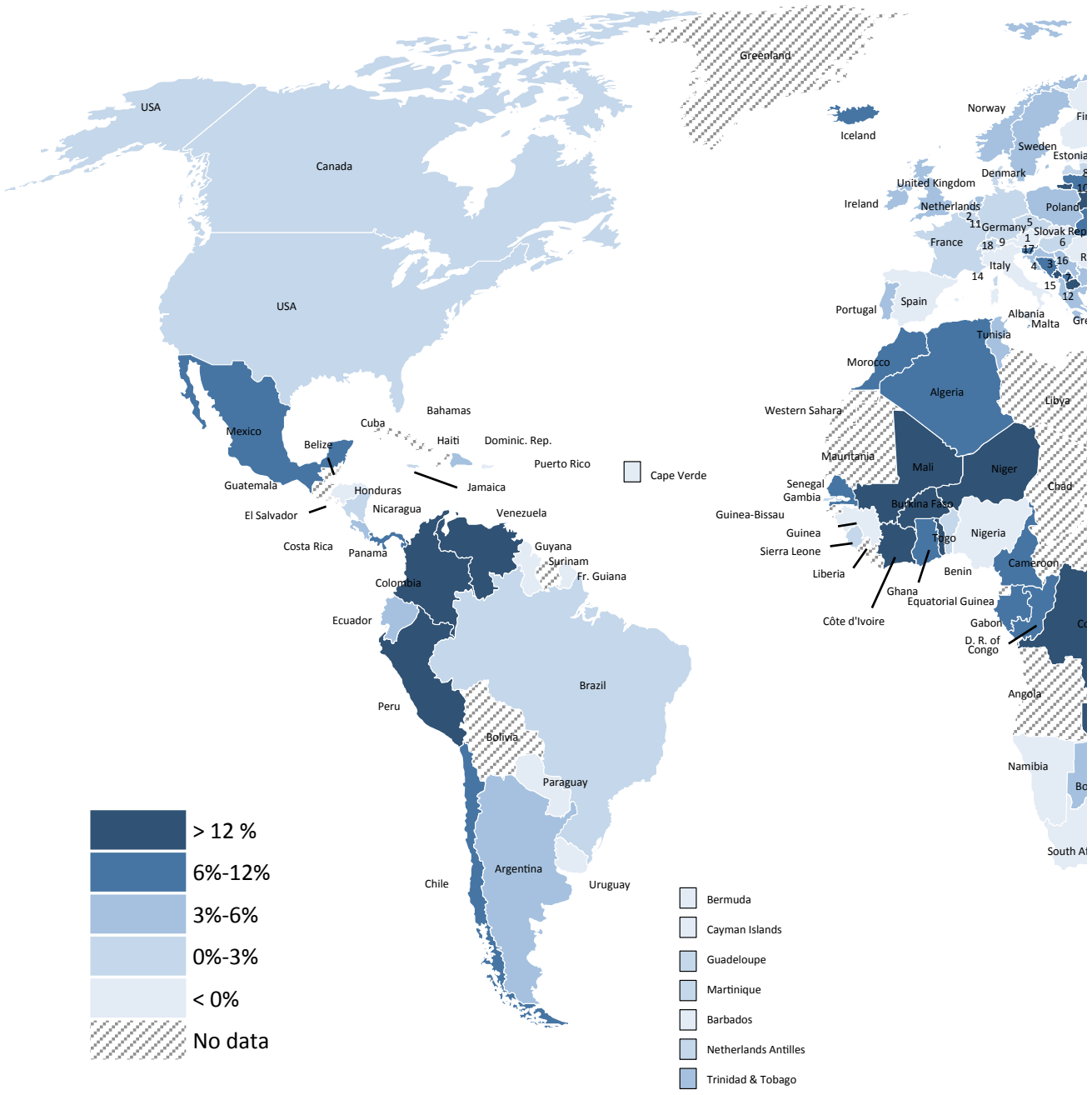
A COMPREHENSIVE VIEW OF THE INDUSTRY'S 2013/2014 FINANCIAL PERFORMANCE

Worldwide passenger traffic growth (2013/2012 %)



1 Austria
2 Belgium
3 Bosnia & Herzegovina
4 Croatia
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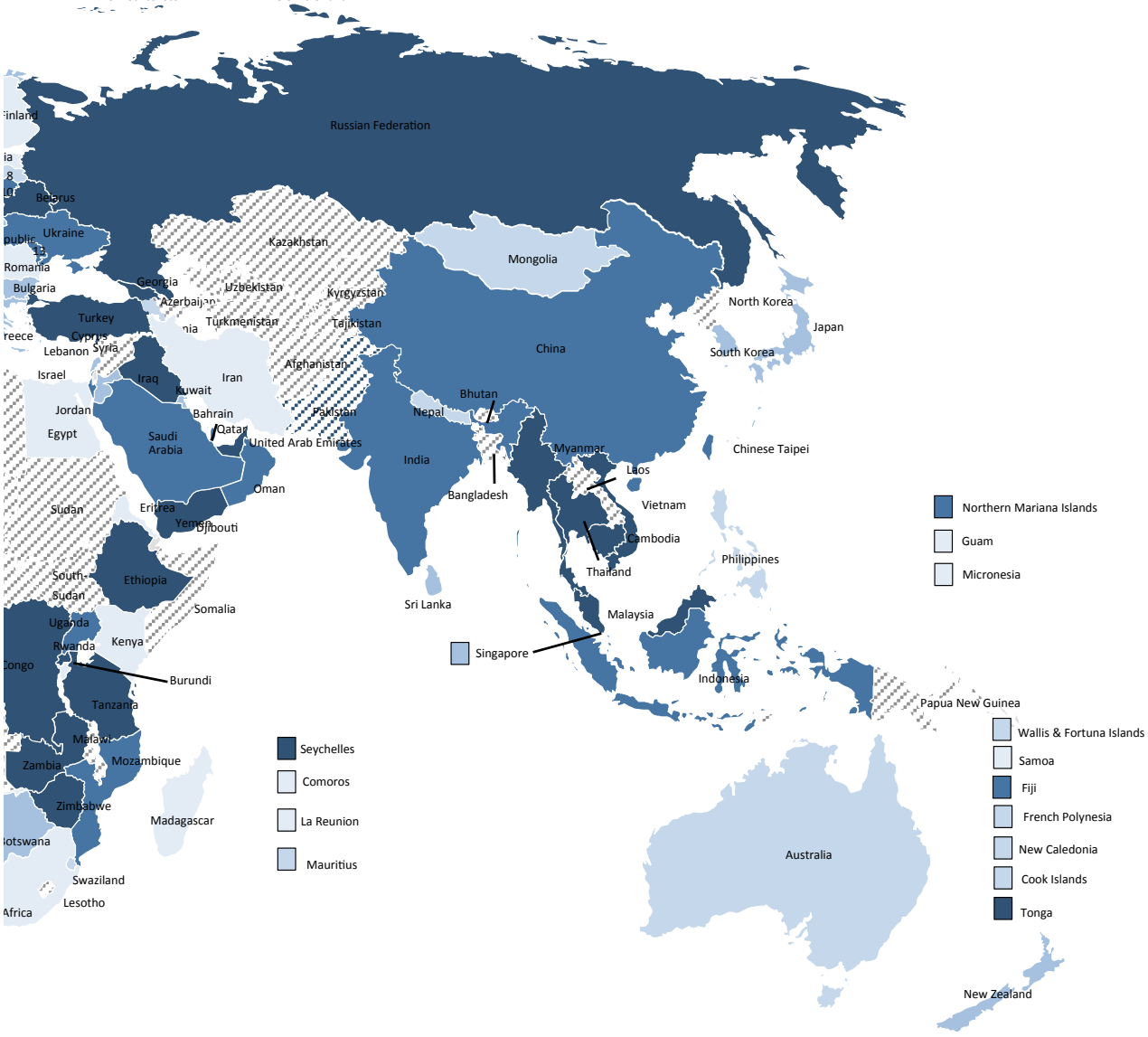

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Under the overall direction and strategic vision of Dr. Rafael Echevarne, Director, Economics and Programme Development, ACI World, Patrick Lucas, Senior Manager, Economics and Statistics, ACI World, led the overall content, production and authorship of ACI's Airport Economics Report. Ilia Lioutov, Senior Data Analyst, ACI World, implemented the data collection based on the Airport Economics Survey and contributed to various case studies. Ilia also standardized and computed the vast battery of ACI's Key Performance Indicators, which formed the basis for the analyses in the report. Aram Karagueuzian, Manager, Airport Traffic Statistics and Forecasts, ACI World, and Sara Balar, Data Analyst, Airport Traffic, ACI World, contributed airport traffic data and time series analysis in Section 1: State of the industry. Zaheer Aleem, ACI's Young Aviation Professional, authored Section 2: Airport infrastructure and personnel.

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- Peter Mackenzie-Williams: Section 3: Airport revenues and Section 4: Airport costs
  Peter is an aviation economist with 36 years' specialist experience in the sector. He formed PMW Aviation Economics in 2015, having begun his career in 1978 with the UK Civil Aviation Authority, followed by 25 years as a consultant. He is recognized as a world-leading expert in the comparative analysis of airports' aeronautical charges and their operational and financial performance, and he has worked extensively in this field with airports, governments and regulators.

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- Attilio Costaguta: Section 7: Airport capital expenditure and Section 8: Airport debt
  Attilio retired in 2007 as Chief of the Economic Analyses and Databases Section at International Civil Aviation Organization (ICAO) after 25 years of service with the organization. Since his retirement he has been working on a part-time basis as a consultant to ICAO and the European Union and as an external Instructor for the International Air Transport Association (IATA).

- David Bentley: Section 9: 2014 review – Airport finance and privatization
  David is an independent air transport research analyst, consultant and writer based in Manchester, UK and is also Chief Airports Analyst for CAPA – Centre for Aviation (Sydney, Australia).

- Martin Lamprecht: Annex: Major new and recent airport projects; Who owns and manages privatized airports?
  Martin has over three decades of work experience in the aviation industry and a graduate degree with an air transport specialization. He owns Air Trans Source Inc., an airport business development consultancy, and Momberger Airport Information, an international news service established in 1973.

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- ACI Latin America-Caribbean: Javier Martinez Botacio, Director General

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- Catherine Moore: Editor

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Preface: ACI Airport Economics Report

The 19th edition of the ACI Airport Economics Report presents data and analysis relative to airport activity for the financial year 2013. The data in this edition cover an array of different themes that include airport infrastructure, capacity, employment, airport efficiency, ownership, regulatory models, capital expenditure and financial performance. An in-depth analysis of industry income (aeronautical and non-aeronautical), costs (operating and capital) and their evolution continues to be the bedrock of the report.

I. Report content

Section 1 – State of the airport industry provides a detailed synopsis of air transport demand and analysis of the baseline financial indicators for the industry.

Section 2 – Airport infrastructure and personnel draws on new employment and infrastructure data to provide insights into airport bottlenecks and excess capacity.

Section 3 – Airport revenues highlights the main sources and drivers of airport revenues using various dimensions and benchmarks. A special emphasis is placed on the evolution of these sources of income.

Section 4 – Airport costs offers a detailed analysis of the economics of airport operating expenses and capital costs, with reference to selected performance indicators and their evolution.

Section 5 – Airport profitability examines the link between airport size and financial performance.

Section 6 – Airport regulation and ownership provides a unique viewpoint on airport performance through the lens of privatization and the regulatory context.

Section 7 – Airport capital expenditure analyzes the latest capital expenditures on airport expansion and revitalization.

Section 8 – Airport debt investigates the relationship between an airport's balance sheet and income statement.

Section 9 – Airport finance and privatization provides a review and outlook—an expert's viewpoint on the latest developments in airport financing and investments.

More than 100 financial and economic performance indicators—presented by region, size category, economic grouping, regulatory model and ownership—are presented in the report's annex. The annex also contains an exhaustive list of airports which have private-sector participation, as well as airport projects based on planned investments.

II. Key performance indicators

ACI continues to provide Key Performance Indicators (KPIs) through an exhaustive statistical annex based on the data collected. Given that airports are complex businesses which operate in unique and evolving physical, financial and regulatory environments, the use of international indicators and averages provides quantifiable barometers of industry activity. The aggregate indicator values presented in the annexes are averages based on various groupings:

- Airport size (i.e., <1 million passengers – >40 million passengers);
- Economic grouping (i.e., advanced economies, emerging and developing economies, BRICS, etc.);
- Geographical region;
- Regulatory model; and
- Ownership (i.e., public, private, public-private partnership).

The indicators cover many areas, ranging from financial and employee performance to fixed-asset productivity and airport operations. A small sample from the vast battery of indicators contained in the ACI Economics Report is listed below:

- Total revenue per passenger;
- Aeronautical revenue per passenger;
- Non-aeronautical revenue per passenger;
- Retail concessions revenue per square meter of retail space;
- Retail concessions revenue per passenger;
- Total cost per passenger;
- Operating cost per passenger;
- Capital cost per passenger;
- Car parking revenue per car parking space;
- Movements/passengers/work load units (WLU) per employee;
- Personnel expenses per employee;
- Airport airside area per movement;
- Terminal landside area per passenger;
- Movements per gate and movements per runway;
- Passengers per gate and passengers per check-in desk;
- Return on invested capital (ROIC) and return on assets (ROA); and
- Capital expenditure per passenger.

III. Report methodology

Sample and coverage

The survey generated responses from 653 airports for the 2013 financial year. Together, these airports handled 4.36 billion passengers or about 70% of worldwide passenger traffic in 2013. Objectives of the sampling were three-fold. The primary objective was to maximize participation and coverage of the world's top airports in terms of passenger and cargo traffic. In order to introduce analytical variation and rigour to the dataset, the participation of airports with lower traffic levels was considered an important factor in developing the sample. Finally, regional representation was regarded as a vital component in presenting a global picture of the industry.

In order to provide regional indicators, the combined airports contained in the sample were required to cover at least 50% of passenger traffic, including coverage of major commercial airports in each region.

In terms of the actual number of participating airports, Europe represents the largest portion of the sample (208), followed by Latin America-Caribbean (185) and Asia-Pacific (104). Table I below provides a breakdown of the report's coverage.

In collecting the data, each individual airport's submission was analyzed for consistency and coherence across each indicator in the Airport Economics Survey. Various quality indicators were used to detect any outliers or anomalies in the dataset. If required, statistical quality control was performed in consultation with airport data providers.

Table I: Data coverage (2013)

Region	Number of participating airports	% Passenger traffic covered
Africa	41	52%
Asia-Pacific	104	50%
Europe	208	75%
Latin America-Caribbean	185	87%
Middle East	14	52%
North America	101	89%
World	653	70%

Estimation and simulation

In certain instances where data was not readily available for the reference period, various techniques were used to estimate missing data. Depending on the variable being analyzed and the availability of past time series data, econometric techniques or other simulation methods were used to estimate missing data.

Airport revenues and costs presented in Table 3 represent an extrapolation for the airport industry as a whole. The simulated figures are generated from the above-mentioned sample.

International comparability

Individual airport financial data was submitted in 64 different currency denominations and converted into US dollars (US$) using official exchange rates determined by the foreign exchange market and/or by national authorities. The exchange rate was calculated as an annual average based on monthly averages and expressed as local currency units relative to the US$. However, in the sections on airport revenues and costs, special drawing rights (SDRs) were used for specific analyses.

The financial figures for the previous year (2012) were adjusted by the inflation rate, defined as the change in average consumer prices. This mitigates currency fluctuations through 2012 and 2013 and allows for comparability and accuracy of US$ amounts across the two years.

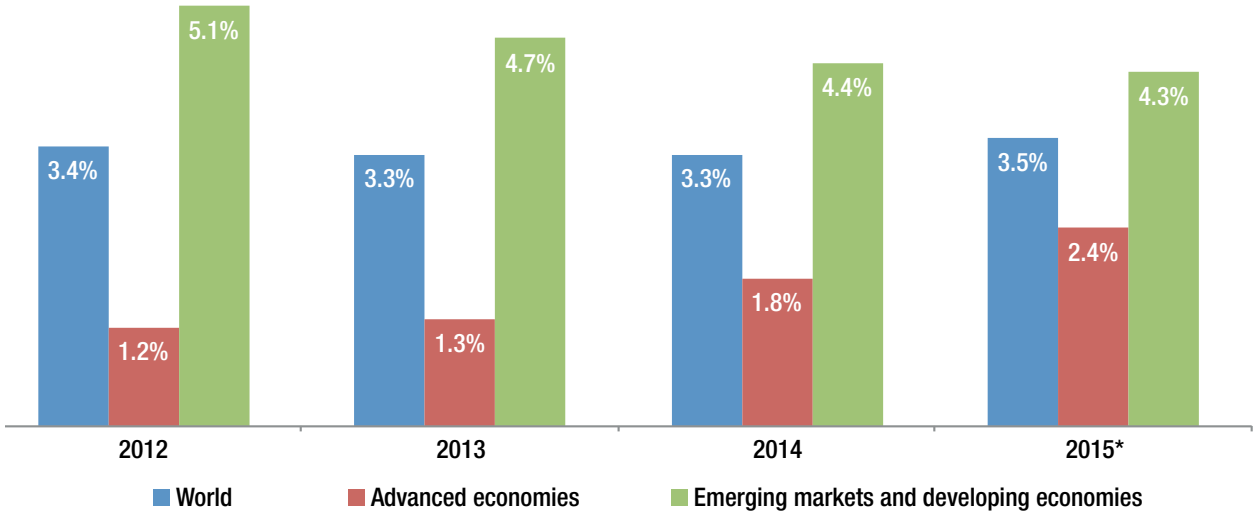
Adjusting for inflation is especially important for airports located in fast-growing economies, which are characterized by higher inflation levels than developed economies usually display. Inflation rates and exchange rates were obtained from the International Monetary Fund (IMF)`s World Economic Outlook Databases and International Financial Statistics.

1. State of the industry

1.1 The global economy

With many major economies remaining in a fragile state, 2013 and 2014 can best be characterized as a period of unstable recovery for the global economy. While most of the improvements in global activity came in the latter half of 2013, as world trade volumes gained steam, economic uncertainty across the world's economies lingered throughout 2014. Emerging markets felt the burden of the slowdown in 2013 and 2014, while many advanced economies continued along the tenuous path to recovery in the face of persisting downside risks. Although 2014 saw some improvement in the United States' economy coupled with greater momentum in international trade volumes in Asia-Pacific, downside risks continued to persist in other regions, particularly in the Euro area. Germany has experienced weak industrial production and export growth, which has translated into stagnation across its economy. As India resurfaced from its slump of years past, China continued to maintain relatively strong growth levels in GDP. Nevertheless, growth has slowed across emerging markets as a whole. Both Russia and Brazil have stagnated, creating significant uncertainty regarding future direct-investment prospects. Accordingly, the global economic revival is imbalanced: the world's economies are not completely in sync with regard to their respective recoveries from the downturn.

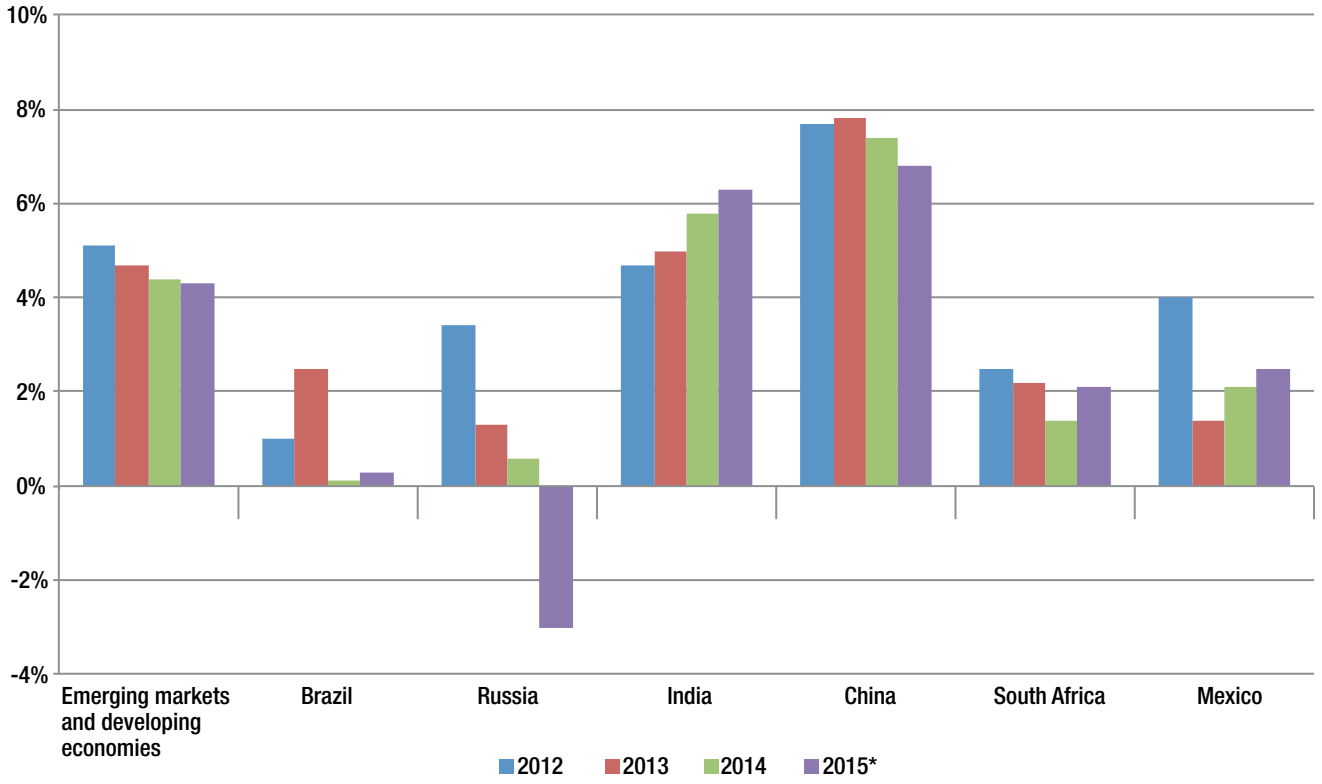
Chart 1: Global economic growth (year-over-year % change in GDP)



*Projected
Source: International Monetary Fund (IMF) (2015)

Chart 1 provides year-over-year economic growth rates and projected growth rates for 2015. While a large share of the world's economic growth may be attributed to emerging markets, many of these economies saw a cyclical slowdown. Output in emerging markets grew by 4.7% in 2013, down from 5.1% in 2012 (see Chart 2). Slowing growth rates are expected in the medium term and are primarily driven by reduced levels of fixed capital investment.

Chart 2: Economic growth in selected emerging markets (year-over-year % change in GDP)



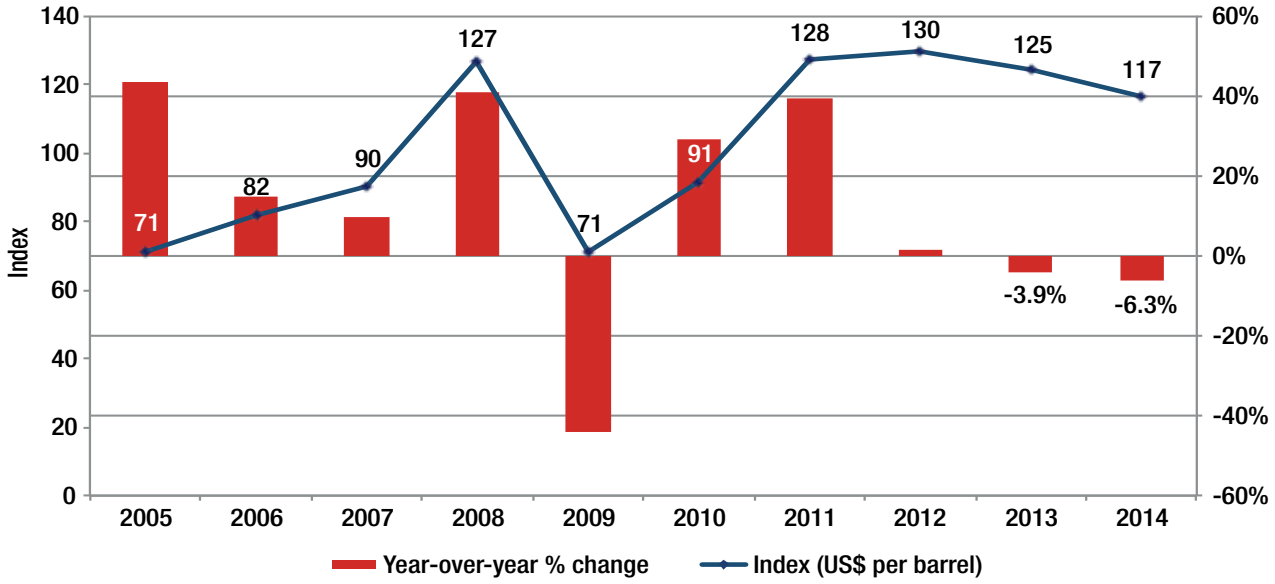
*Projected
Source: IMF (2015)

1.2 Passenger traffic, jet fuel and tourism

On the whole, passenger traffic remained resilient in the face of the global uncertainties that beleaguered many economies in 2013 and 2014. International tourism, in particular, was irrepressible considering the geopolitical risks that have persisted in certain parts of the world, such as Eastern Europe and the Middle East. The Ebola outbreak also presented significant challenges to the aviation sector. Notwithstanding, by and large, the international traveller in 2013 and for most of 2014 appears to have been immune to these potential dangers.

As fuel costs, on average, make up over 30% of airline operating expenses, according to the International Air Transport Association (IATA), the recent decline in the world price of jet fuel will have a positive impact on airlines' bottom lines. Moreover, if lower jet fuel prices are long lived, this downward trend could potentially reduce the burden on passengers in the form of lower ticket prices and surcharges. However, this is not guaranteed in the immediate future. Chart 3 shows the IATA Jet Fuel Price Index. In 2013, average prices decreased by 3.9% compared to 2012. By 2014, prices dropped even further by 6.3% to US$117 per barrel and continued to drop to significantly below US$100 per barrel into 2015. In the first two months of 2015, oil prices fluctuated in the narrow range of US$50–60 per barrel.

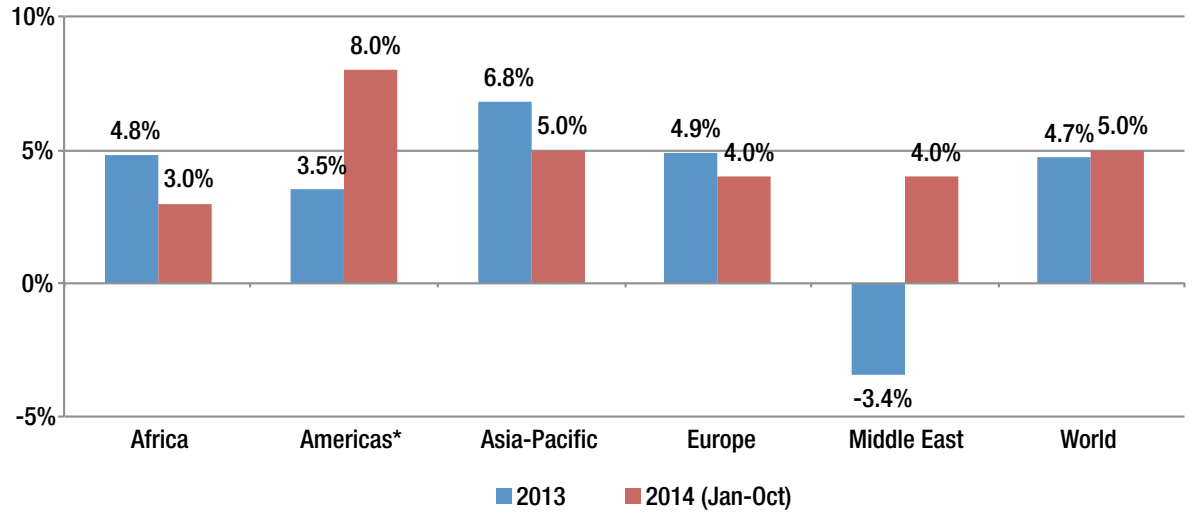
Chart 3: Annual jet fuel price index



Source: adapted from IATA (2014)

According to the United Nations World Tourism Organization (UNWTO)'s World Tourism Barometer, international tourist arrivals rose by 4.7% in 2013. By the end of 2014, it is expected that the tourism industry will reach a new record of 1.1 billion tourist arrivals (overnight visitors). For the period from January–October 2014, the number of international tourists grew by 5%, according to the latest barometer (see Chart 4). The strongest growth was registered in the Americas (8%), followed by Asia-Pacific (5%) and Europe (4%).

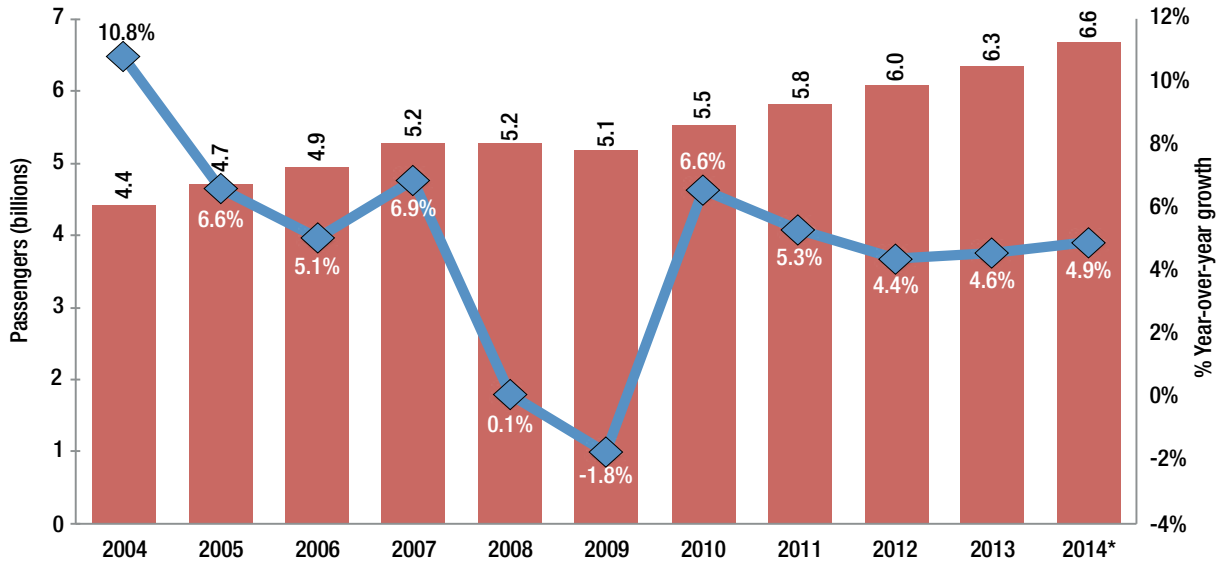
Chart 4: Growth in international tourist arrivals (year–over–year % change)



*Refers to Latin America-Caribbean and North America.
Source: adapted from UNWTO's World Tourism Barometer (2014)

UNWTO's results are consistent with trends in airport traffic. Overall, global passenger traffic grew at a rate of 4.6% in 2013, with preliminary figures pointing to growth of 5.1% in 2014. The latest yearly growth rates are above the 4.2% compounded average annual growth rate in passenger traffic for the period from 2004–2014 (see Chart 5).

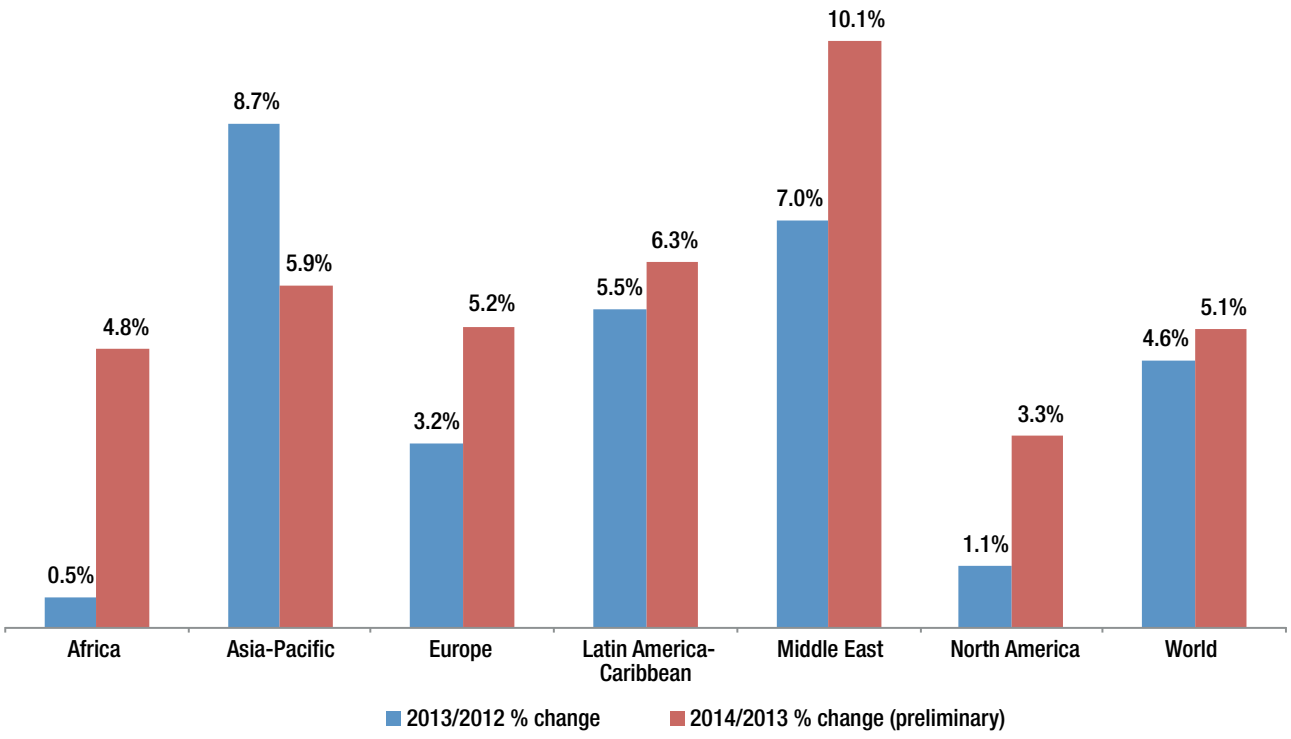
Chart 5: Total worldwide passengers (2004–2014)



*Preliminary estimate
Source: ACI World Airport Traffic Database (2015)

While airports in Europe and North America experienced modest gains in passenger traffic in 2013, estimates for year-over-year growth in 2014 are slightly higher at 5.2% and 3.3%, respectively. Many air transport markets in emerging economies remained buoyant, although Asia-Pacific's preliminary passenger traffic growth in 2014 has slowed compared to 2013. The Middle East and Latin America-Caribbean posted strong year-over-year growth in passenger traffic in 2014 at 10.1% and 6.3%, respectively (see Chart 6).

Chart 6: Growth in passenger traffic

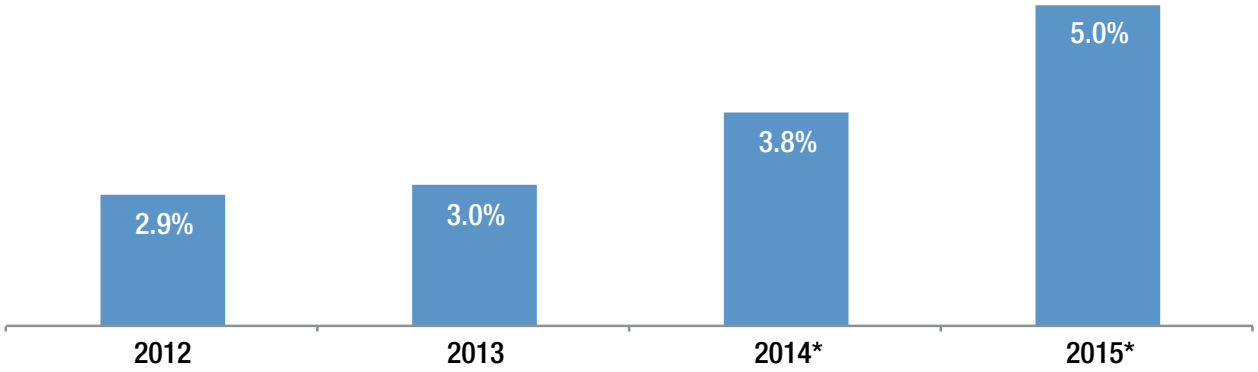


Source: ACI World Airport Traffic Database (2015)

1.3 Air cargo traffic, competition and global trade

Despite the uneven recovery in the global economy, there is a net increase in global demand for foreign goods and commodities. This helped awaken the air cargo market in the last quarter of 2013 and into 2014 after several years of flat growth. The overall flow of exports and imports by sea, land and air, measured by world trade volumes in goods (and services), has experienced a rising growth trend (see Chart 7). That said, the weakness in the air cargo market over the past decade can largely be attributed to losing market share to competing modes of shipment, such as ocean freight. Paradigm shifts toward cheaper modes of delivery mean suppliers of airfreight capacity need to rethink their business models to remain competitive.

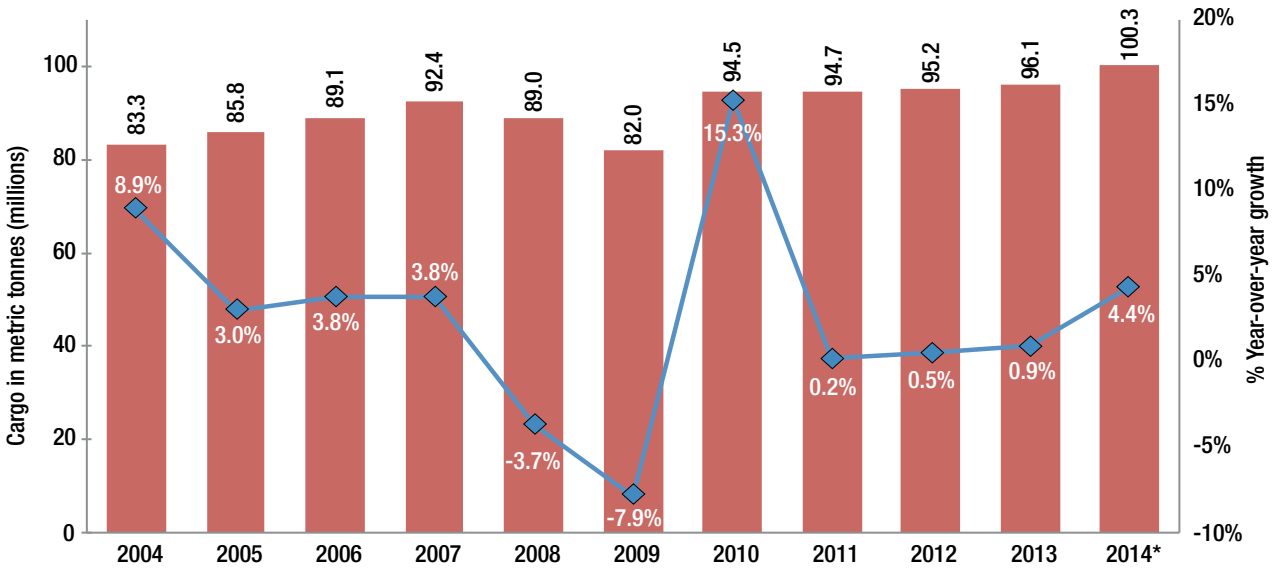
Chart 7: Growth in world trade volumes (goods and services)



*Projected
Source: IMF (2015)

While most regions showed signs of weakness in relation to year-over-year growth rates in air cargo volumes in 2013, the inverse was true in 2014. Air cargo traffic increased by almost 1% in 2013, and volumes are estimated to have increased by over 4% in 2014 (see Chart 8).

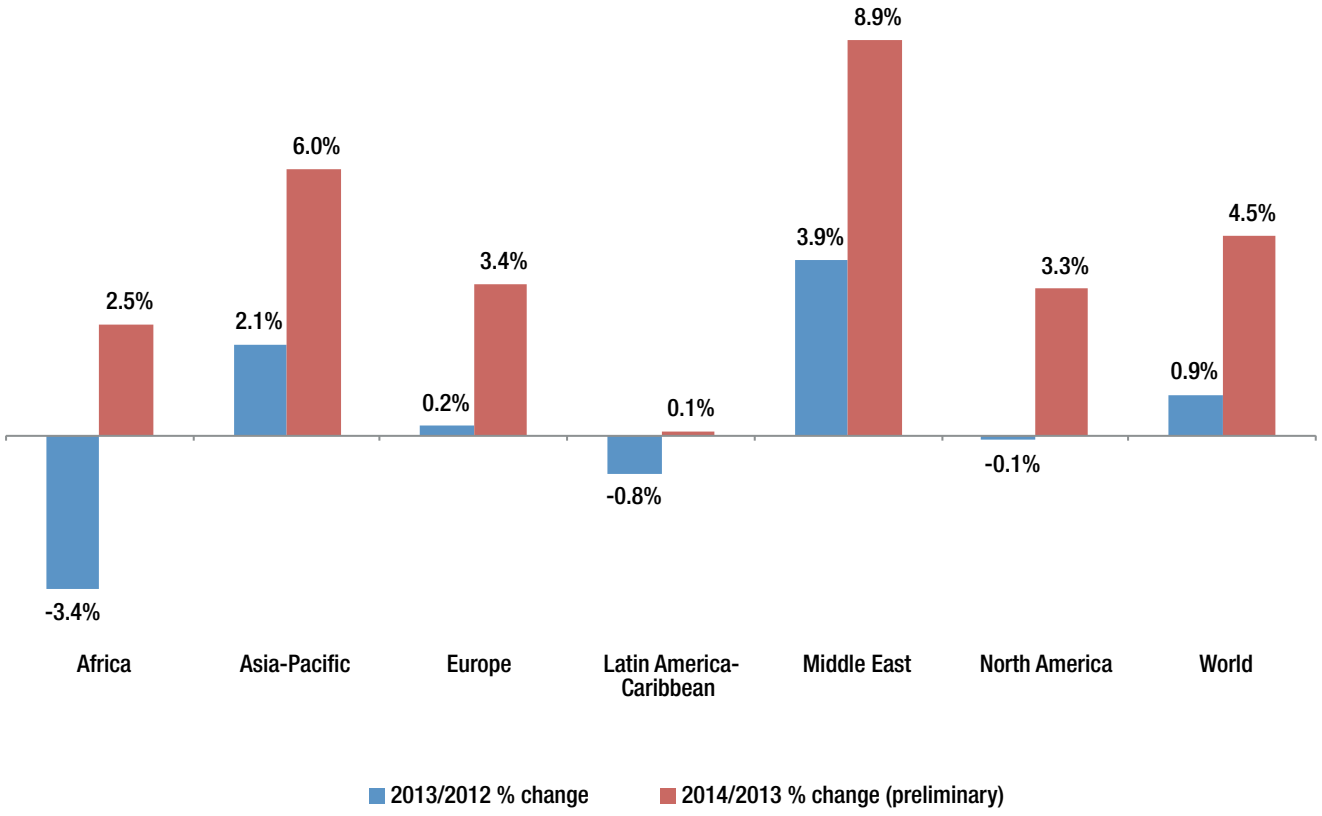
Chart 8: Total worldwide air cargo (2004–2014)



*Preliminary estimate
Source: ACI World Airport Traffic Database (2015)

With the exception of Latin America-Caribbean, which experienced a slight decline in 2013 and flat growth in 2014, all regions posted solid gains in air cargo traffic in 2014 (see Chart 9). A rise in American consumer spending fueled China's exports of high-tech goods, such as tablets, laptops and mobile phones. Overall, estimates indicate that Asia-Pacific's air cargo volumes increased by 6% in 2014. With growth of almost 9%, the Middle East is likely to post the greatest gains for 2014 compared to other regions. Dubai World Central (DWC), a Middle Eastern airport that has experienced significant growth following its commencement of operations, is now a major contributor to overall increases in cargo volumes for the region. DWC's cargo volumes continue to allow it to move up the ranks of the world's air cargo hubs.

Chart 9: Growth in air cargo traffic

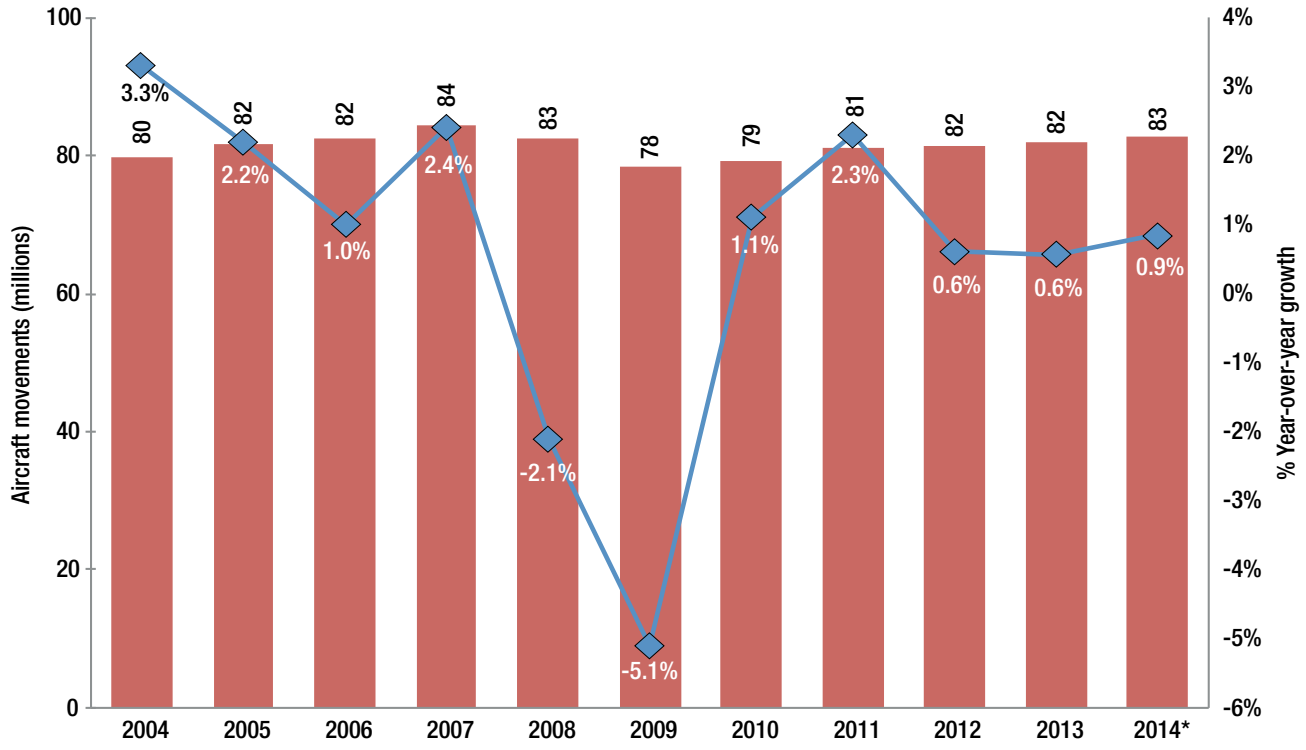


Source: ACI World Airport Traffic Database (2015)

1.4 Aircraft movements, aircraft size and geography

While aircraft movements in 2013 were almost flat compared to the previous year, an increase of 1% was observed in 2014 (see Chart 10).

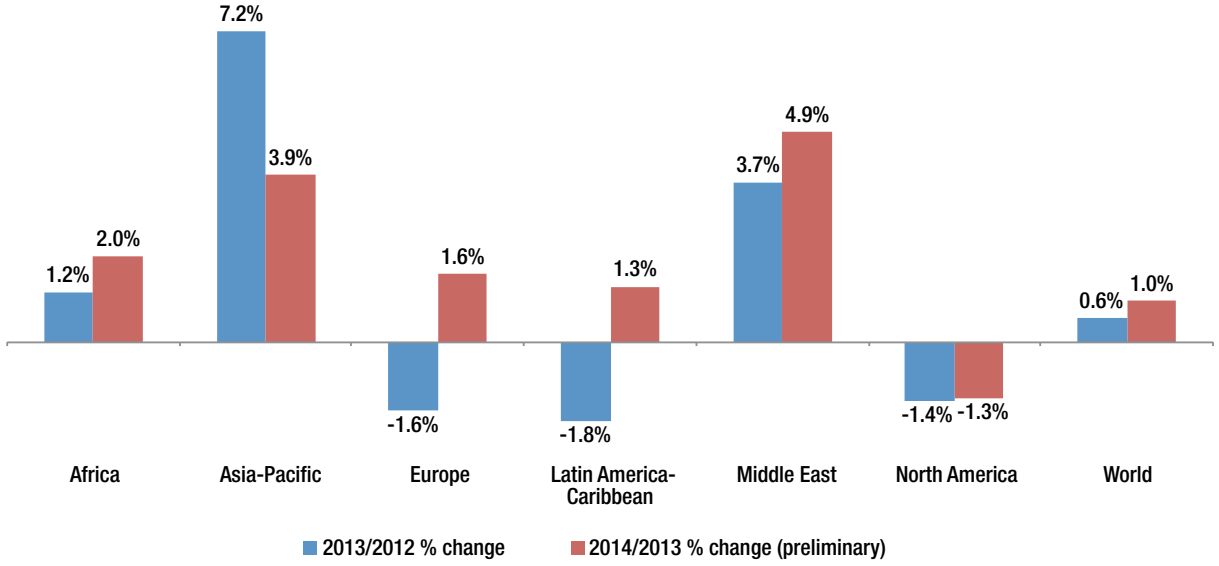
Chart 10: Total worldwide aircraft movements (2004–2014)



*Preliminary estimate
Source: ACI World Airport Traffic Database (2015)

Increases in aircraft movements stem mainly from the growth markets in Asia-Pacific and the Middle East, which have maintained the highest growth rates across all regions in 2013 and 2014 (see Chart 11). Weaker global growth in movements, as well as declining numbers of movements in North America and Europe in 2013, is consistent with the move towards consolidated operations and a curbing of capacity by aircraft operators in order to increase aircraft load factors and to improve yields.

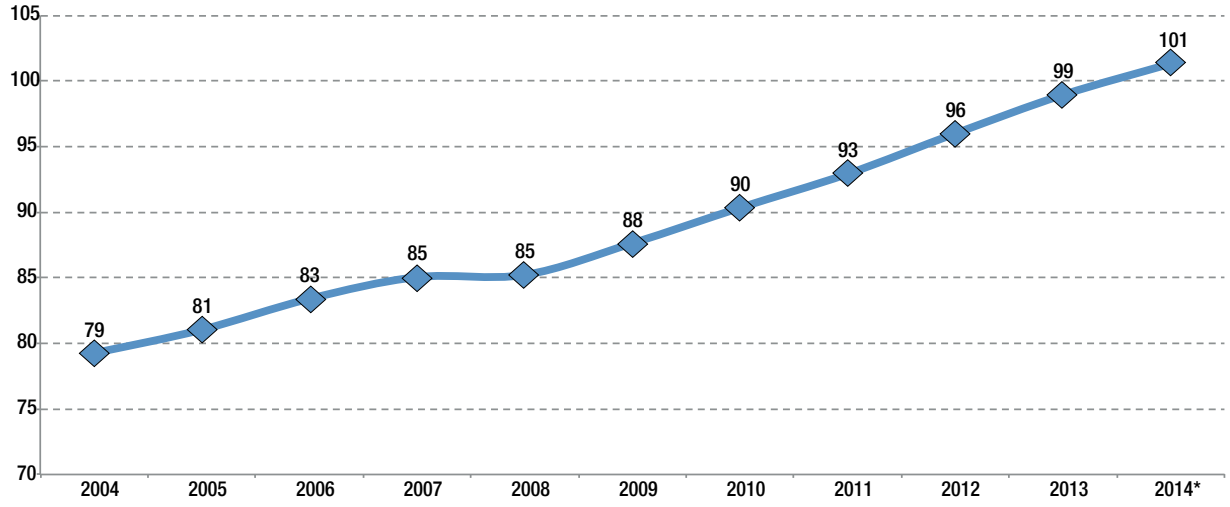
Chart 11: Growth in aircraft movements



Source: ACI World Airport Traffic Database (2015)

As passenger volumes are increasing at a greater rate than aircraft movements, the average number of passengers per movement continues to increase worldwide. Global estimates show in Chart 12 that there are more than 100 passengers per movement, which represents a year-over-year increase of 2.4% in 2014. This is perfectly in line with the estimated 10-year compounded annual growth rate (CAGR), which is also 2.4% on an annualized basis.

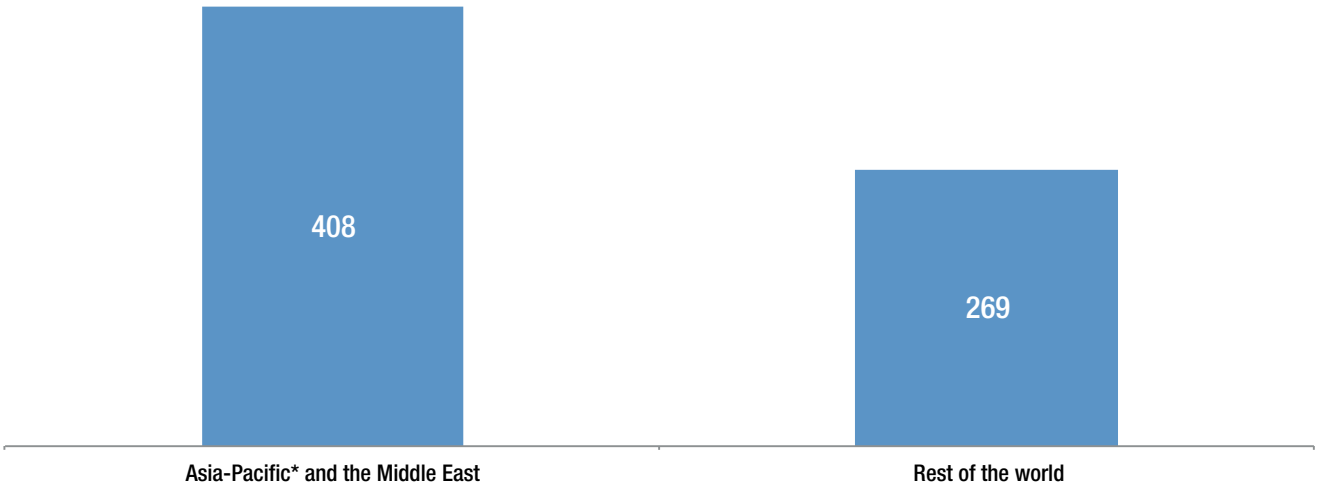
Chart 12: Passengers per movement (2004–2014)



*Preliminary estimate
Source: ACI World Airport Traffic Database (2015)

The differences in passengers per movement across regions are defined by a combination of geography, airline strategies and demographics. In essence, these factors combined help to determine the aircraft size chosen by airlines. Airports in the Middle East and Asia-Pacific regions tend to have the most passengers per movement as a result of the systematic adoption of larger aircraft for long-haul flights by Gulf carriers such as Emirates. Chart 13 shows the combined number of orders for Boeing's wide-body aircraft in 2013 and 2014. As much as 60% of the orders are from carriers that are based in the Middle East or the Asia-Pacific region. This amounts to a combined order of 408 wide-body aircraft for expected delivery in the future.

Chart 13: Combined 2013–2014 orders of Boeing's wide-body aircraft



*Includes Central Asia, East Asia, South Asia and Southeast Asia
Source: Boeing (2015)

North America, a market that heavily relies on smaller regional aircraft for short-haul, hub-and-spoke operations, is characterized by a lower load in terms of passengers per movement. Passengers per movement are relatively higher in Europe as compared to North America due to the rise in the low-cost carrier market, which makes wide use of narrow-body aircraft such as the Airbus 320 and the Boeing 737 in tight configuration.

Table 1 summarizes global and regional movements, passengers and cargo traffic, as well as year-over-year growth for 2013 and preliminary year-over-year growth for 2014.

Table 1: Airport traffic summary – 2013/2012 and 2014/2013 (preliminary)

Region	2013 Passengers (millions)	2013/2012 % change	2014/2013 % change (preliminary)
Africa	164	0.5%	4.8%
Asia-Pacific	2,058	8.7%	5.9%
Europe	1,730	3.2%	5.2%
Latin America-Caribbean	501	5.5%	6.3%
Middle East	279	7.0%	10.1%
North America	1,570	1.1%	3.3%
World	6,303	4.6%	5.1%

Region	2013 Cargo (metric tonnes - millions)	2013/2012 % change	2014/2013 % change (preliminary)
Africa	1.8	-3.4%	2.5%
Asia-Pacific	37.1	2.1%	6.0%
Europe	17.8	0.2%	3.4%
Latin America-Caribbean	5.1	-0.8%	0.1%
Middle East	6.5	3.9%	8.9%
North America	27.9	-0.1%	3.3%
World	96.1	0.9%	4.5%

Region	2013 Movements (millions)	2013/2012 % change	2014/2013 % change (preliminary)
Africa	2.7	1.2%	2.0%
Asia-Pacific	18.3	7.2%	3.9%
Europe	20.8	-1.6%	1.6%
Latin America-Caribbean	8.3	-1.8%	1.3%
Middle East	2.5	3.7%	4.9%
North America	29.4	-1.4%	-1.3%
World	82.0	0.6%	1.0%

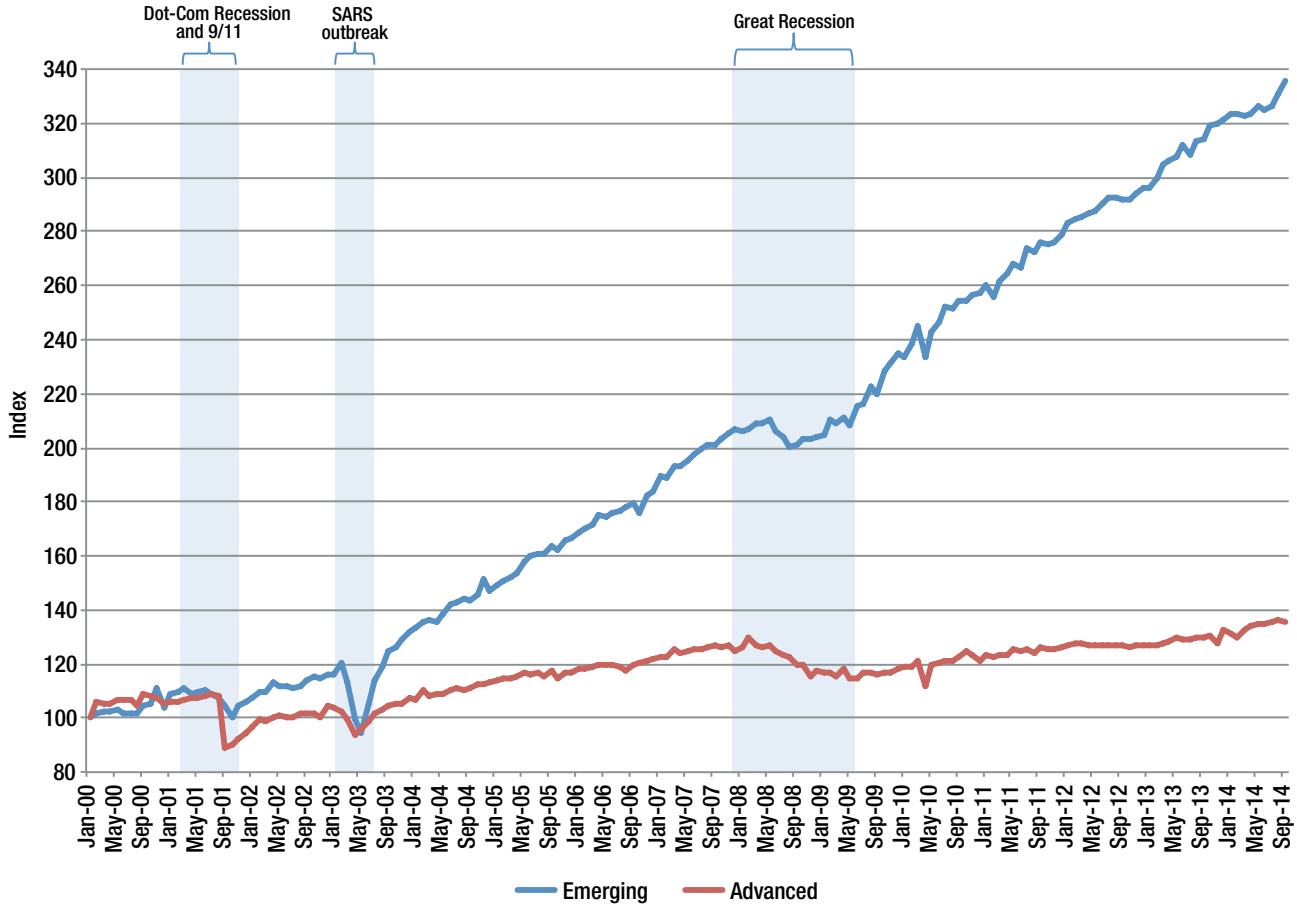
1.5 Aviation markets

1.5.1 Emerging markets and advanced economies

Future growth in air transport demand will come from emerging markets. This is largely because most of the world's population resides in emerging markets and developing economies. In fact, these countries account for over 85% of the world's population, although half of the world's output (measured by GDP) comes from advanced economies.

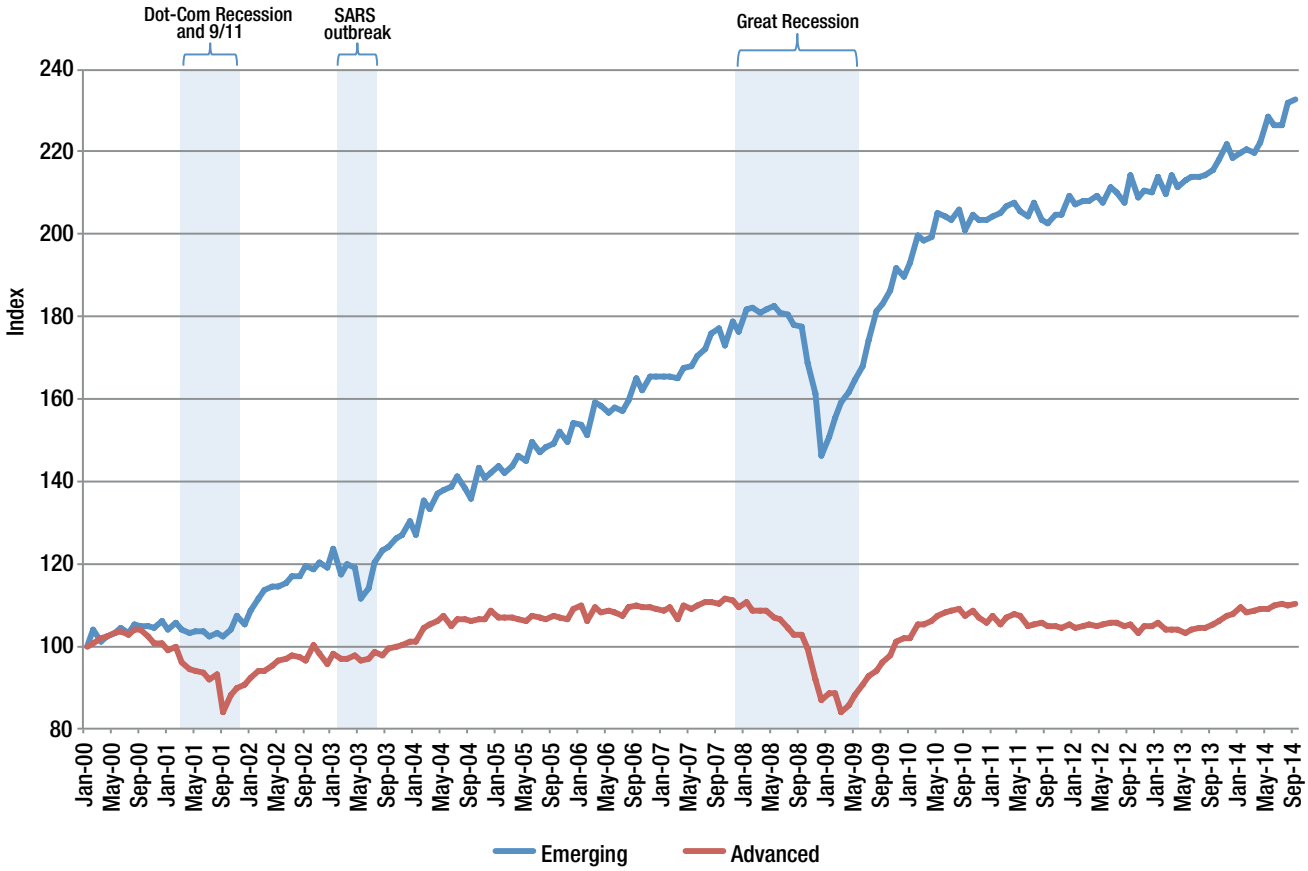
Charts 14 and 15 provide comparisons between the broader group of emerging and developing economies and the advanced economies for monthly indices of passenger traffic and air cargo volume.

Chart 14: Total passengers – emerging versus advanced economies (2000–2014)



Source: ACI World Airport Traffic Database (2015)

Chart 15: Total cargo – emerging versus advanced economies (2000–2014)



Source: ACI World Airport Traffic Database (2015)

Over the period from 2000–2013, the CAGR for passenger traffic was 9.1% for emerging markets and 1.5% for advanced economies. Emerging markets achieved a CAGR of 6.3% in air cargo volume, whereas air cargo volume in advanced economies grew by just 0.2% over the same period. Rising incomes in the emerging markets will continue to help propel global traffic to new heights in the coming decades as the more mature markets of Western Europe and North America cede rank to new airport hubs in other regions. Sizeable population bases and rapid rises in per capita incomes in these markets are the main economic engines driving this tendency.

The marked divergence in growth rates illustrated above means that the proportion of global traffic accounted for by emerging markets continues to increase. In 2000, countries that were classified as emerging markets handled 22% of the world's passenger traffic. By 2013, the proportion of global passenger traffic handled by emerging markets had almost doubled, to 42% (see Chart 16). Similarly, air cargo handled by emerging market airports jumped from 21% of world volume in 2000 to over one-third of global cargo volume in 2013 (see Chart 17).

Chart 16: Proportion of global passenger traffic – advanced versus emerging economies (2000–2013)

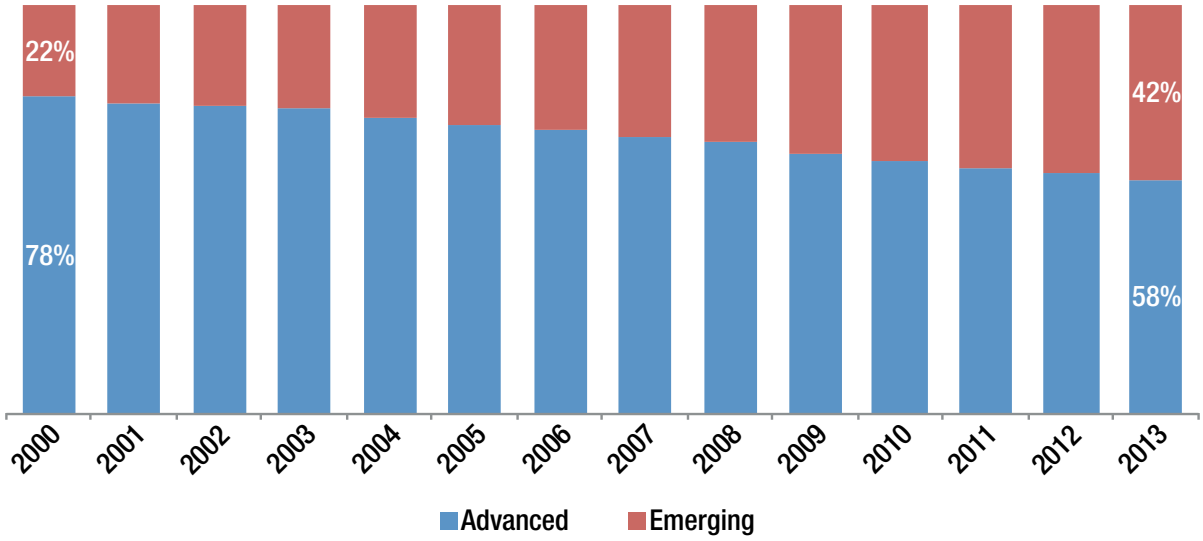
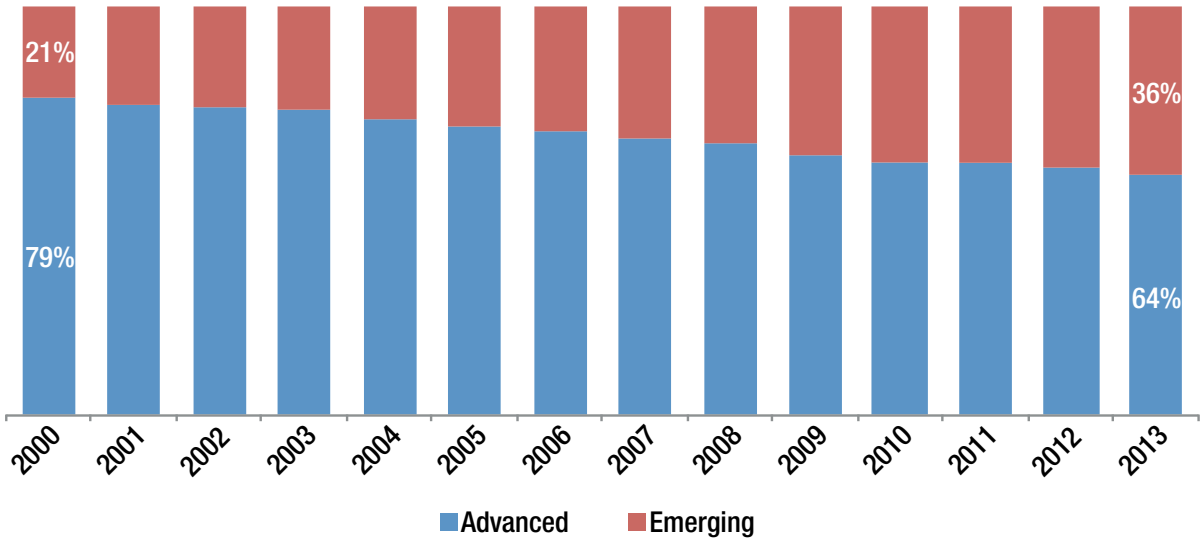


Chart 17: Proportion of global air cargo traffic – advanced versus emerging economies (2000–2013)



Source: ACI World Airport Traffic Database (2015)

1.5.2 Emerging aviation markets

The economic groupings mentioned above are useful for understanding the progress of emerging markets in terms of specific economic measures. However, a deeper understanding of global growth in air transport demand requires a cross-cutting approach that focuses specifically on

aviation. ACI's Emerging Aviation Market Index provides a concise measure of progress in air transport demand for airports in emerging markets that have a critical mass of passenger and cargo traffic. These airports are also among the fastest-growing airports in the world over the past decade.

The index draws on airports in the BRICS nations, as well as airports located in other emerging markets. Selection for inclusion in the index is based on countries having at least one high-growth airport with over 15 million passengers per annum or handling more than 250,000 metric tonnes of air cargo in a year. In short, the index is made up of 18 markets. A majority of the world's population (54%) resides in the emerging aviation markets and almost one-third of global output is attributed to these economies.

Table 2 lists the countries which are included in the index, along with their airport traffic. China has the highest critical mass of traffic, with compounded annual growth of 13% in airport output. The WLU combines both passenger traffic and the flow of cargo volume into a single measure. Most emerging nations experienced annual WLU growth rates of double-digit percentages from 2003–2013.

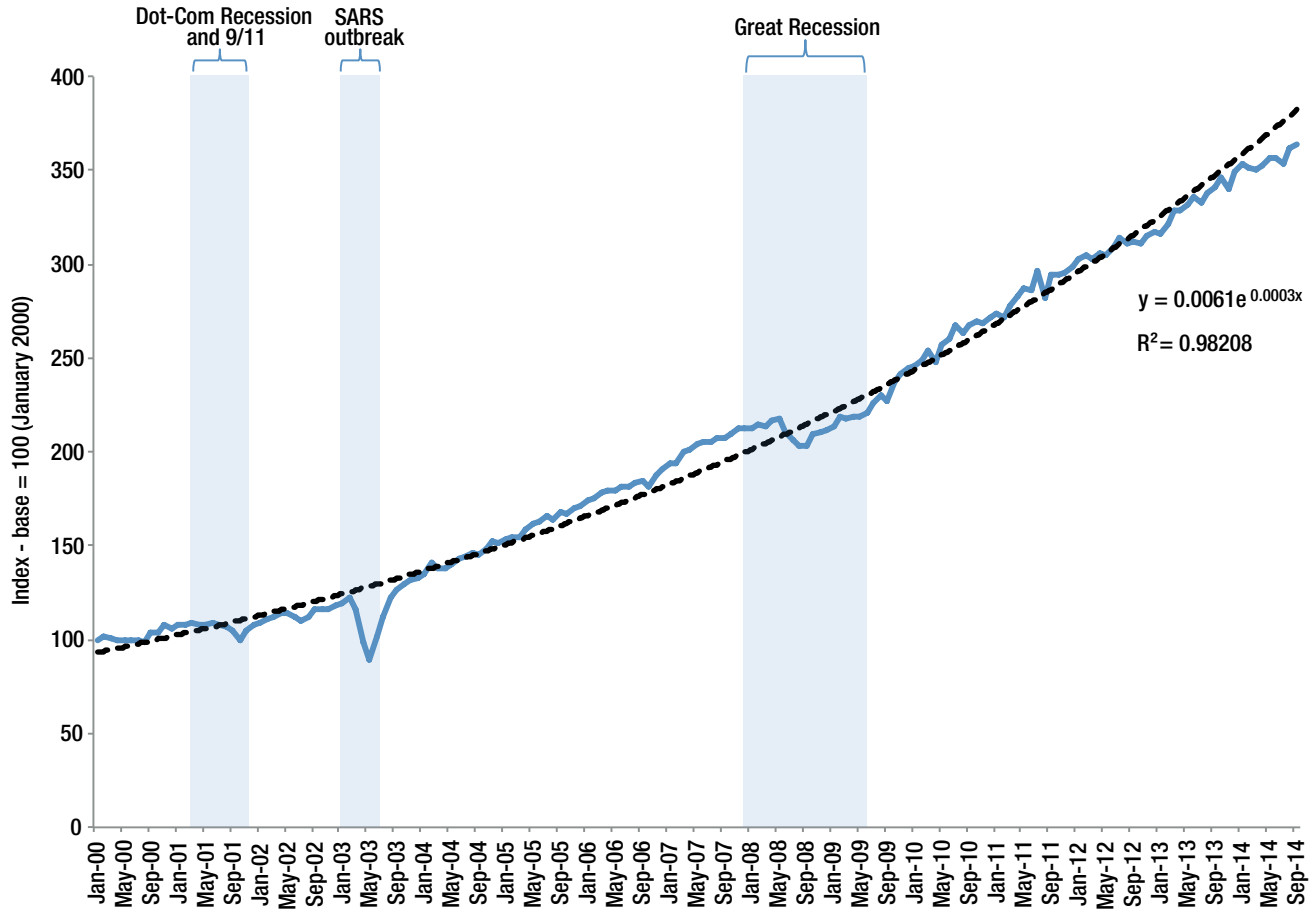
Table 2: Emerging aviation markets (EMA)

EAM countries	Passengers	% change	CAGR % 2003–2013
China*	759 874 191	11.0%	14%
Brazil	203 345 640	1.7%	11%
India	148 094 443	6.2%	13%
Indonesia	151 699 337	6.2%	14%
Turkey	150 228 232	14.7%	14%
Russian Federation	135 710 335	12.1%	12%
United Arab Emirates	92 036 380	14.5%	14%
Mexico	91 649 982	7.8%	4%
Malaysia	81 415 359	19.0%	9%
Saudi Arabia	63 353 050	7.7%	8%
Philippines	59 594 761	1.8%	10%
Colombia	53 031 815	17.1%	13%
Vietnam	44 160 332	17.1%	16%
Chinese Taipei	35 113 243	9.4%	5%
South Africa	35 113 243	(1.1)%	4%
Qatar	23 389 104	9.8%	16%
Peru	21 409 656	12.6%	13%
Chile	21 120 933	8.8%	10%

*Includes Macau; Hong Kong (SAR) is not included because it is classified as an advanced economy by the IMF.
Source: ACI World Airport Traffic Database (2015)

While the emerging aviation markets accounted for 34% of global passenger traffic in 2013, these 18 markets will represent as much as 50% of global passenger traffic by 2031, according to ACI forecasts. Chart 18 shows how passenger traffic has risen exponentially since 2000 in the emerging aviation markets, in which, as a group, passenger traffic has grown by 9.6% annually from 2000–2013. Rising incomes, liberalization and competition in the emerging aviation markets will continue to help stimulate global traffic in the coming decades, as the more mature markets of Western Europe and North America decrease in prominence compared to new hubs in other regions. Emerging aviation markets' sizeable population bases and rapid increases in their per-capita incomes are the main drivers of their growing air transport clout.

Chart 18: Evolution of passenger traffic – emerging aviation markets (2000–2014)



Source: ACI World Airport Traffic Database (2015)

1.6 The airport industry

Global airport revenues remained largely unperturbed based on results for the 2013 financial year in the face of the economic uncertainties and downside risks that have persisted across the world's markets. Aeronautical income, non-aeronautical income and non-operating income, which are the three components of a typical airport's income streams, all experienced sound growth rates in 2013 compared to the previous year. In essence, growth in key emerging market airports has circumvented the slowdown in the Euro area and other more mature markets.

Industry income as a whole grew by 5.5% over 2012, reaching US$131 billion in 2013 (see Table 3). On a regional basis, European airports hold the greatest proportion of global airport income (38%). This is followed by Asia-Pacific (28%) and North America (22%). Although Europe holds a significant proportion of the world's airport revenues, it has experienced the weakest growth in overall revenues at 2.2% year over year. In particular, with the Euro-area downturn, non-aeronautical revenues grew only by 1.8%. Notwithstanding, the region also experienced a decrease in total costs by 2.5%.

As expected, the regions with the highest growth in revenues also have the highest growth in passenger traffic. Asia-Pacific and the Middle East saw overall revenues increase by 11.8% and 11.6% respectively. However, the growth in costs varies markedly from one region to the next. The Latin America-Caribbean region recorded the greatest gains in total costs from 2012–2013.

Table 3: Estimated industry revenues and costs (millions US$)

Region	Total revenue*	2013/2012 % change	Aeronautical renenue**	2013/2012 % change	Non-aeronautical renenue***	2013/2012 % change	Total cost (operating + capital costs)	2013/2012 % change
Africa	2,900	6.7%	2,100	12.5%	800	1.0%	2,100	-3.7%
Asia-Pacific	37,000	11.8%	18,800	13.1%	17,200	9.2%	25,800	6.2%
Europe	49,800	2.2%	30,100	6.2%	18,800	1.8%	42,100	-2.5%
LAC****	7,000	6.5%	4,400	5.4%	2,500	9.6%	5,100	12.1%
Middle East	8,700	11.6%	4,400	5.8%	4,200	16.9%	7,400	6.4%
North America	25,500	4.4%	13,900	0.6%	9,100	4.7%	22,700	4.5%
World	**130,900**	**5.5%**	**73,700**	**6.0%**	**50,800**	**5.5%**	**106,500**	**2.1%**

*Total revenue includes non-operating revenue

**Aeronautical revenue includes ground-handling charges

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

****Refers to Latin America-Caribbean

2. Airport infrastructure and personnel

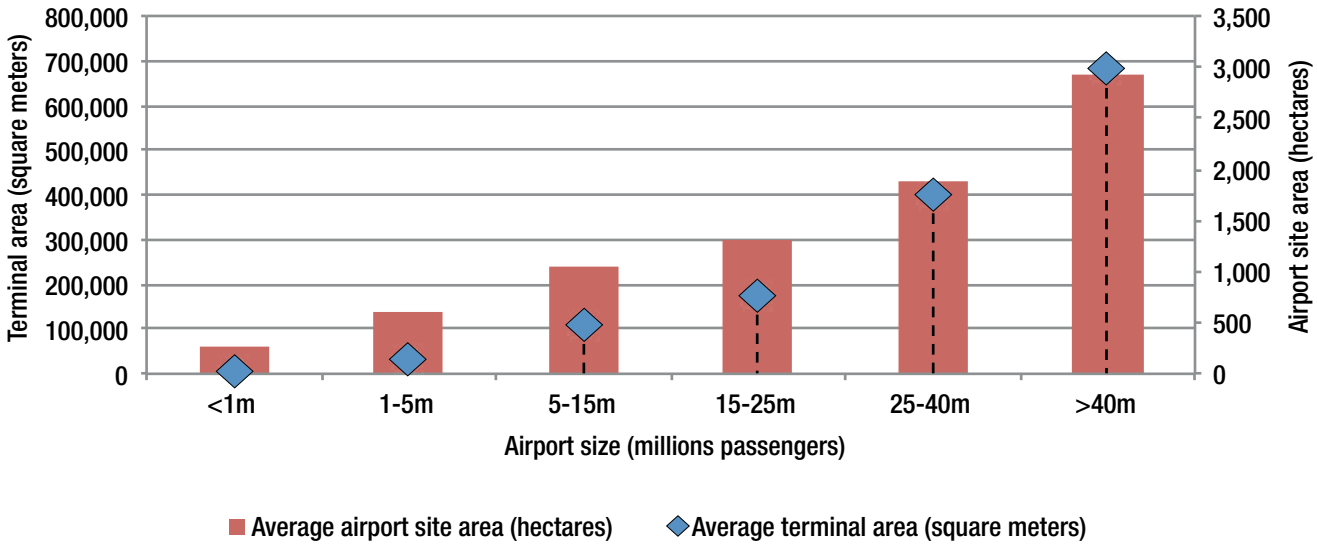
This section of the report aims to review and analyze various aspects of airport infrastructure and personnel. It is important to understand the current picture and the regional differences. However, with the global forecasts pointing towards increases in passenger numbers and aircraft movements, it is equally important to begin to understand the requirements for future airport infrastructure and the necessary workforce. In light of the increasing industry demands to better understand the current state of various components of airport infrastructure, the 2014 ACI Airport Economics Survey seeks to broaden the data collected and provide a more detailed analysis of airport infrastructure.

2.1 Infrastructure

2.1.1 Airport size and spatial aspects

When assessing physical size, it is important to distinguish between total airport area, airside area and passenger terminal area. For passengers, terminals are one of the first experiences in the travel process. As illustrated in Chart 19 and in line with previous ACI Airport Economics Reports, there is a strong positive correlation between an airport's physical size and its traffic (both passenger and cargo).

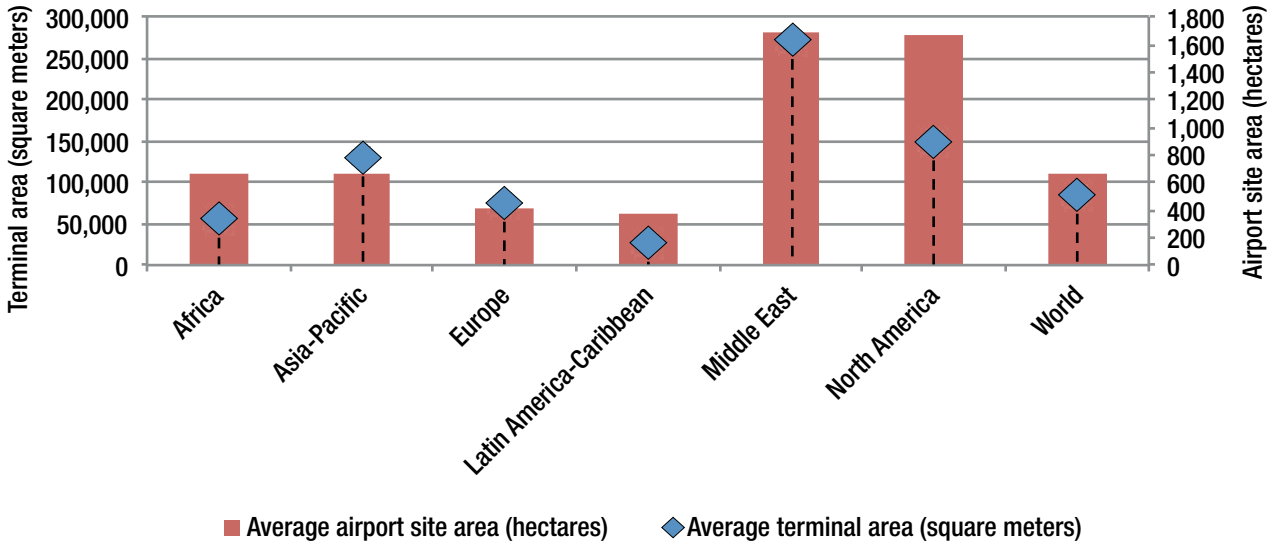
Chart 19: Airport site and passenger terminal area by size (2013)



Source: ACI Airport Economics Survey (2014)

Regional disparities exist with respect to airport size. This year's data continues to support previous analysis showing Latin American and European airports are smaller in total airport site size and terminal area and North American airports are larger in average total airport site size and terminal area. Middle Eastern airports are interesting to highlight (see Box 1), and while it is acknowledged that there is a smaller sample from this region and high variance due to some outliers, the data points to a significantly larger average airport site size and passenger terminal area compared with all other regions (see Chart 20).

Chart 20: Airport site and passenger terminal area by region (2013)



Source: ACI Airport Economics Survey (2014)

Box 1: Airport capacity expansion in Dubai, United Arab Emirates

The airport environment in Dubai has evolved rapidly over the last 10 years. Dubai International Airport (DXB) has developed into a significant hub on the back of the significant growth of Emirates airline—the world's largest airline in terms of international scheduled passengers-kilometres and freight tonne-kilometres flown and in terms of its wide-body passenger fleet. The passenger traffic witnessed at DXB has now eclipsed that of London Heathrow (LHR) to make it the busiest airport in the world in terms of international passenger traffic. Furthermore, and in light of the forecasted growth in the region, Dubai Airports (as an operating company) has fast tracked construction of a second airport in Dubai to service the expected demand and eventually replace DXB as the primary airport facility for both passenger and cargo traffic. Al Maktoum International Airport is part of the DWC complex and sits on a 140-square kilometer site 40 km south of Dubai. When completed in 2027, DWC is projected to have a capacity on the order of 160 million passengers and 12 million tonnes of cargo, clearly making it the largest airport in the world.

Similar airport expansion or replacement projects have been commissioned in other states within the Middle East region, such as Qatar, Saudi Arabia and Oman. Abu Dhabi is also in the midst of a large airport development project. These projects further illustrate the forecasted growth of aviation in the region.

The above figures and analysis begin to paint a picture of airport size and the characteristics of the facilities with respect to variations in market size, regions and spatial characteristics. The global economy continues to recover at varying rates, with some regions performing better than others. Additionally, the recent fluctuations in and associated uncertainties surrounding oil prices are further complicating economic outlooks. The impact on aviation as a result of the global economic situation remains very interesting. Undoubtedly, there is a general increase in demand for air transport, with variances between passenger and cargo growth. However, the economic situation of many countries means that there is not always an appetite for investment in and development of airport infrastructure to meet the forecasted demand.

2.1.2 Passenger terminals

A closer analysis of passenger terminals also provides better insight into the spatial capacity of airports, particularly in terms of airside and landside. In this analysis, a generalist approach of defining the landside area of the passenger terminal as being the areas accessible to the general public is taken, while all areas beyond security checkpoints are considered airside. Airports, as is commonly understood, require a sizeable amount of land to operate, irrespective of how many passengers are being transported and/or how much cargo is being transported. Based on a sample of 336 airports, the proportion of landside area to airside area is 25% and 75%, respectively, for the median airport. Inside the passenger terminal, we also see a separation between landside and airside area with a split of 45% and 55%, respectively, based on the sample data (see Charts 21 and 22).

Chart 21: Median ratio of landside to airside area on airport site (sample: 336 airports)

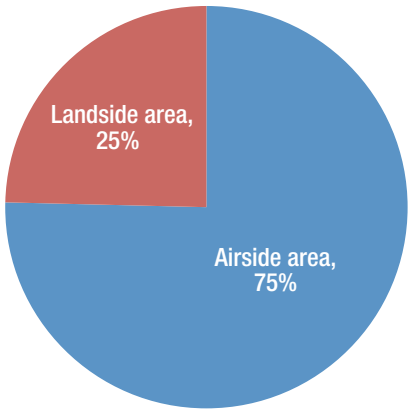
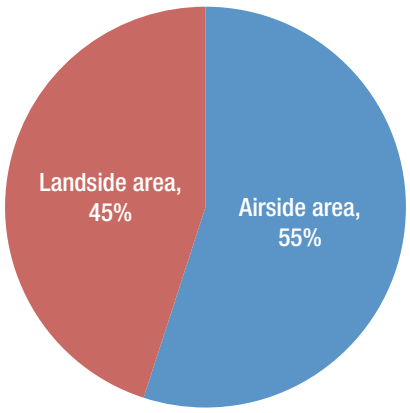


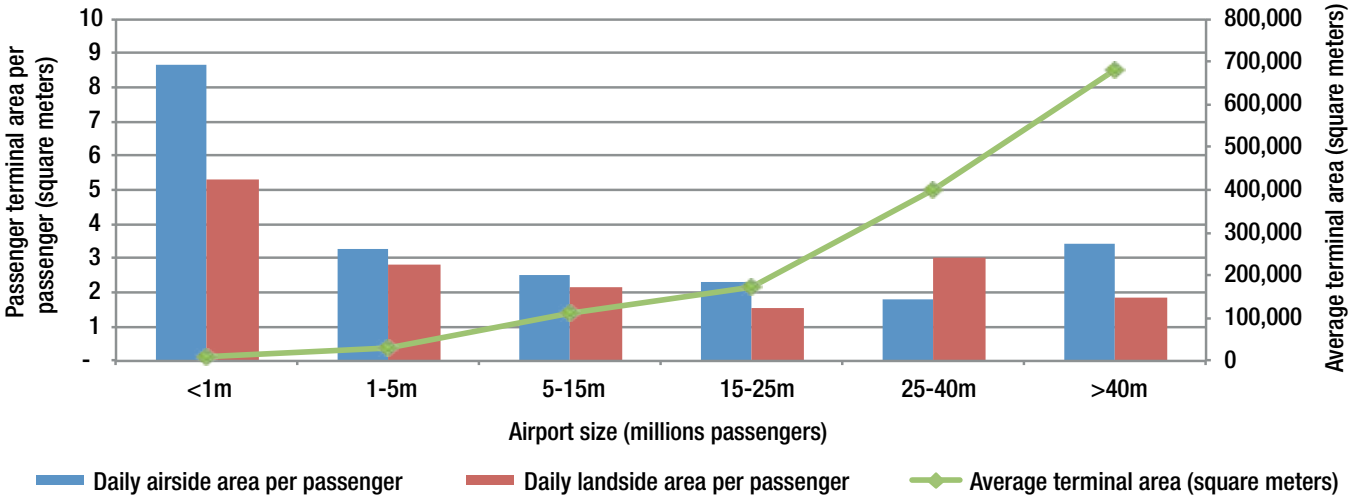
Chart 22: Median ratio of landside area to airside area in passenger terminal (sample: 258 airports)



Source: ACI Airport Economics Survey (2014)

Another way of looking at the terminal is from a passenger's spatial perspective. Based on the sample data, if all passengers for a given airport on a given day were to be placed in a terminal, on average there would be 2.82 square meters of terminal area or space available per passenger on the airside and 2.25 square meters per passenger on the landside (4.6 square meters per passenger for the whole passenger terminal on a daily basis). Chart 23 indicates the passenger terminal space utilization by airport size. This shows that while smaller airports have a lower average passenger terminal area, there is more space per passenger inside the facility (on a daily basis). This is a reflection of the intrinsic challenge faced by the infrastructure industry, that is, providing the right size at the outset to accommodate growth during the initial stages of development but also achieving the breakeven critical mass.

Chart 23: Passenger terminal area by airport size (2013)



Source: ACI Airport Economics Survey (2014)

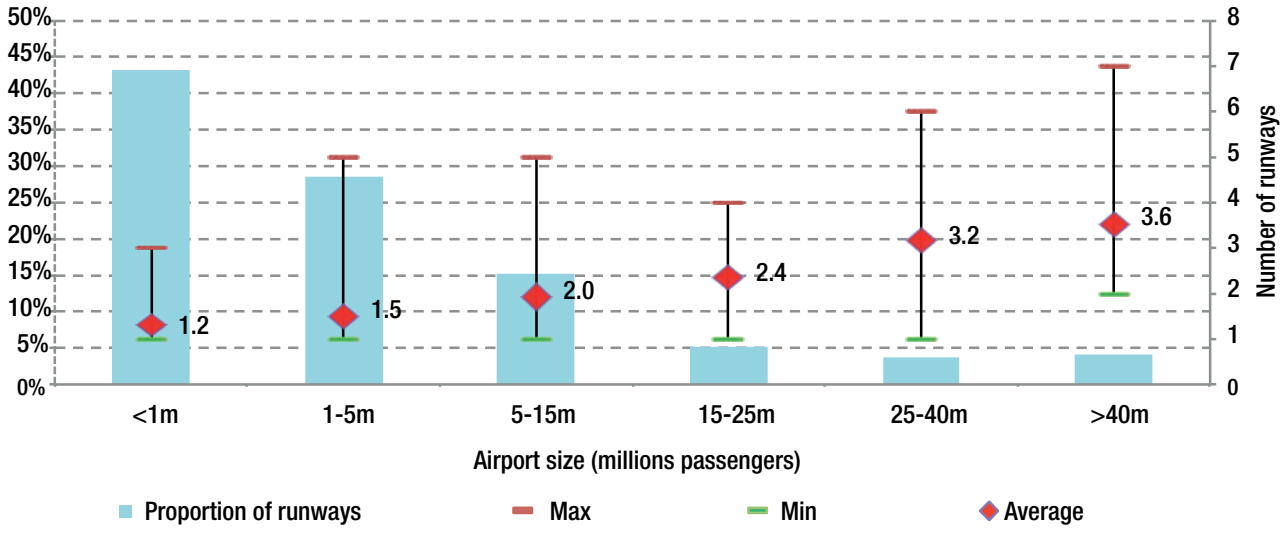
While airports have a core function of enabling passenger and aircraft movement, they are increasingly operated as businesses that must seize the opportunity for revenue growth from non-aeronautical activities to finance the entire facility. Over the years, airports have maximized their commercial opportunity by designating a proportion of the terminal for commercial activity. That said, commercial activity can be considered any entrepreneurial pursuit beyond the aeronautical function inside and outside the passenger terminal on the airport site. While each airport is different in terms of space, the passenger terminal typically will contain a number of retail and food and beverage outlets. However, there are other revenue-generating activities, such as the rental of property and car parking services, that occupy considerable space on an airport site.

2.1.3 Infrastructure units

As described earlier, airports hold some of the most visible infrastructure in the aviation network. While the previous section looked at airport size and the spatial aspects of airports, this section looks at some of the critical airport infrastructure that has become fundamental both from an aircraft operations perspective and a passenger perspective.

Runways are clearly critical to airport operations. They serve as key enablers to move aircraft between destinations. Analysis shows that the average number of runways at a typical airport is 1.65 (or ranges between one and two runways). Chart 24 shows the differences in numbers of paved runways by airport size (passengers). While all airports that serve more than 40 million passengers have at least two runways, some airports in this passenger traffic category have as many as seven. A closer look at the regional differences reveals that North American airports tend to have more runways, irrespective of passenger numbers, with an average of 3.19 runways per airport.

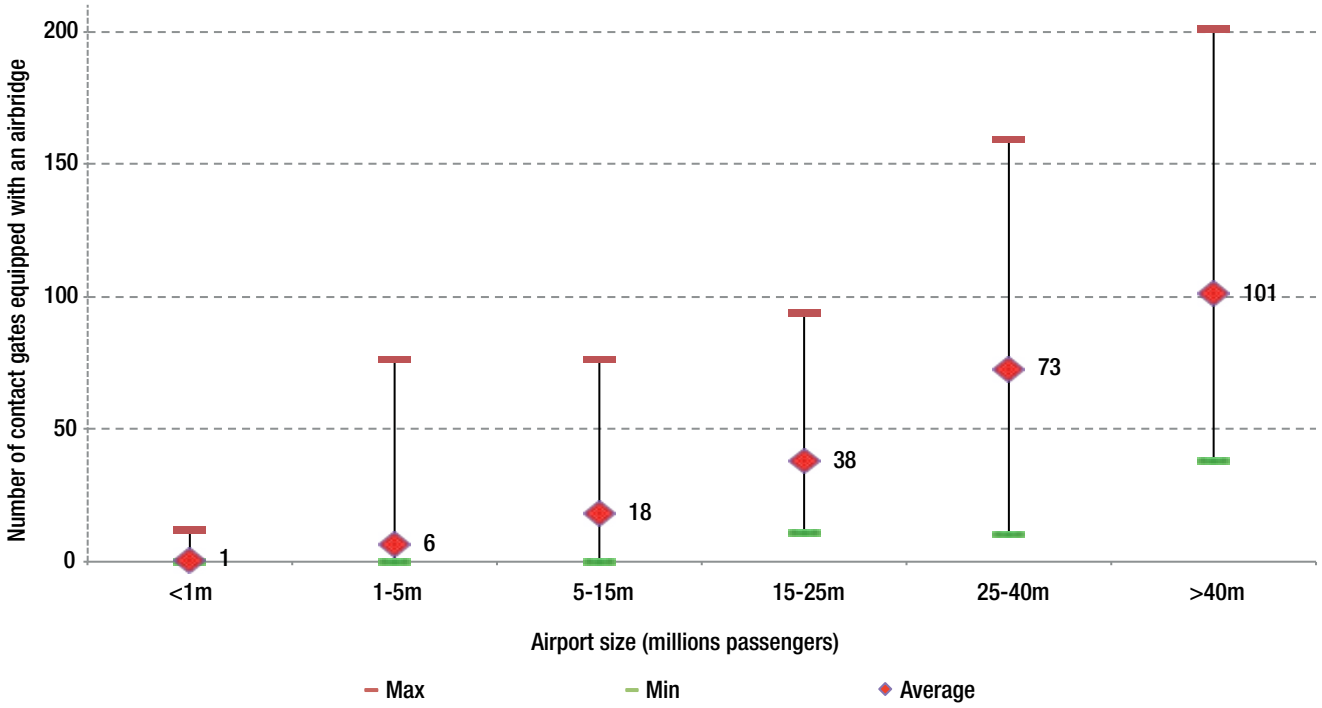
Chart 24: Distribution of runways by airport size (2013)



Source: ACI Airport Economics Survey (2014)

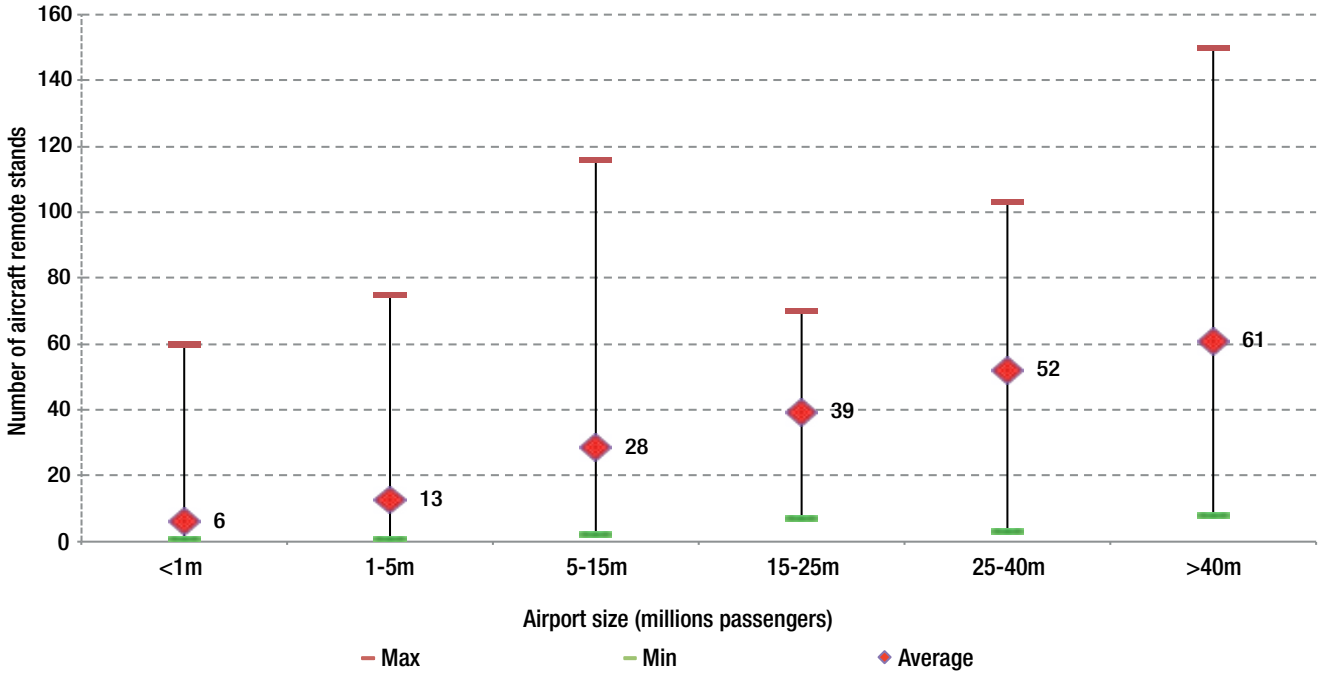
Passenger terminals and aircraft gates (bridges and remote stands) are also vital pieces of airport infrastructure. Depending on the market, airports may have separate domestic and international terminals. Within these facilities are different aircraft gate options for passenger embarkation and disembarkation. The typical airport has one or two passenger terminals and 15 gates (jet bridges and remote stands). Charts 25, 26, 27 and 28 show the differences among regions and airport size with respect to jet bridges and remote stands. While larger airports are expected to have more gates with jet bridges, the regional differences show that North American airports have a higher average number of gates with jet bridges.

Chart 25: Distribution of contact gates with airbridges by airport size (2013)



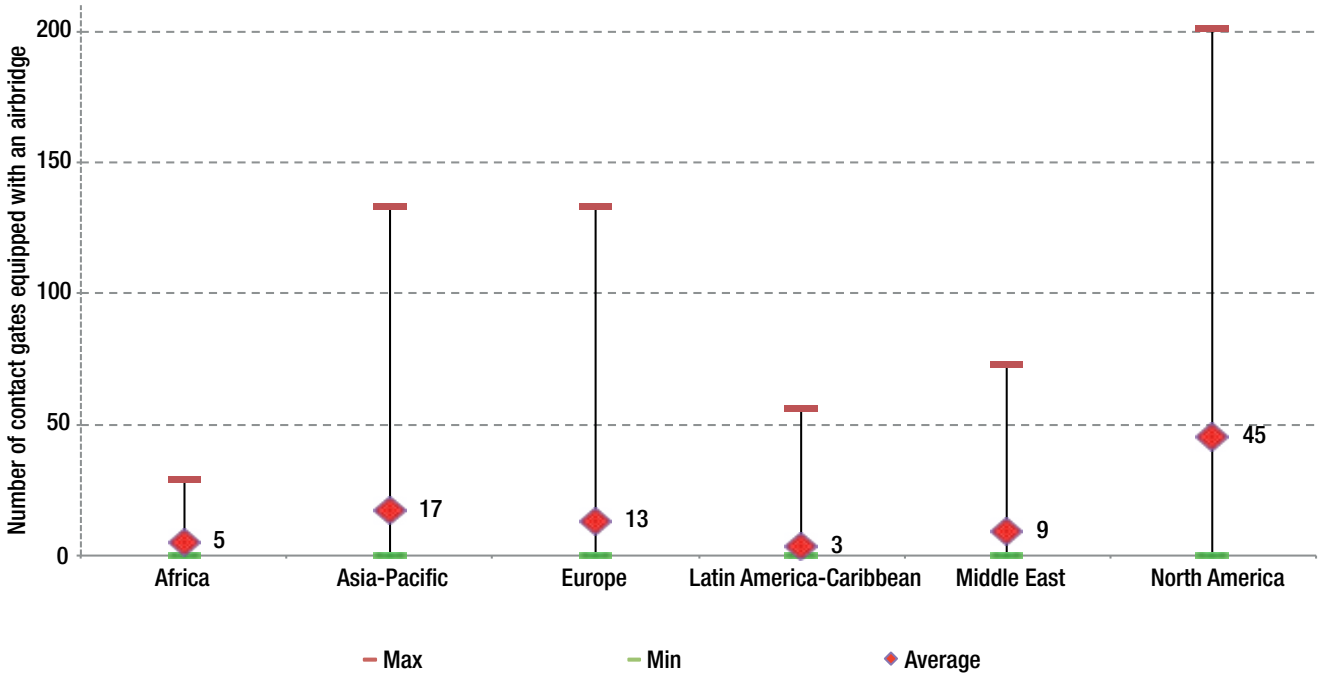
Source: ACI Airport Economics Survey (2014)

Chart 26: Distribution of aircraft remote stands by airport size (2013)



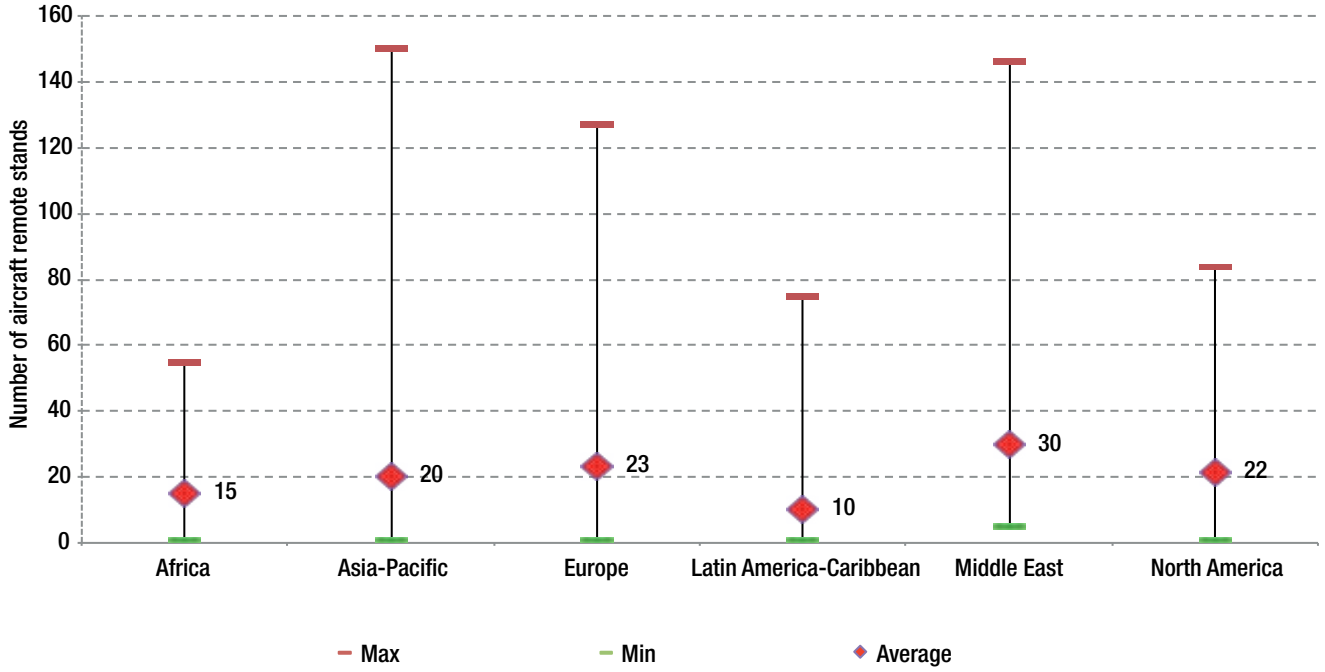
Source: ACI Airport Economics Survey (2014)

Chart 27: Distribution of contact gates with airbridges by region (2013)



Source: ACI Airport Economics Survey (2014)

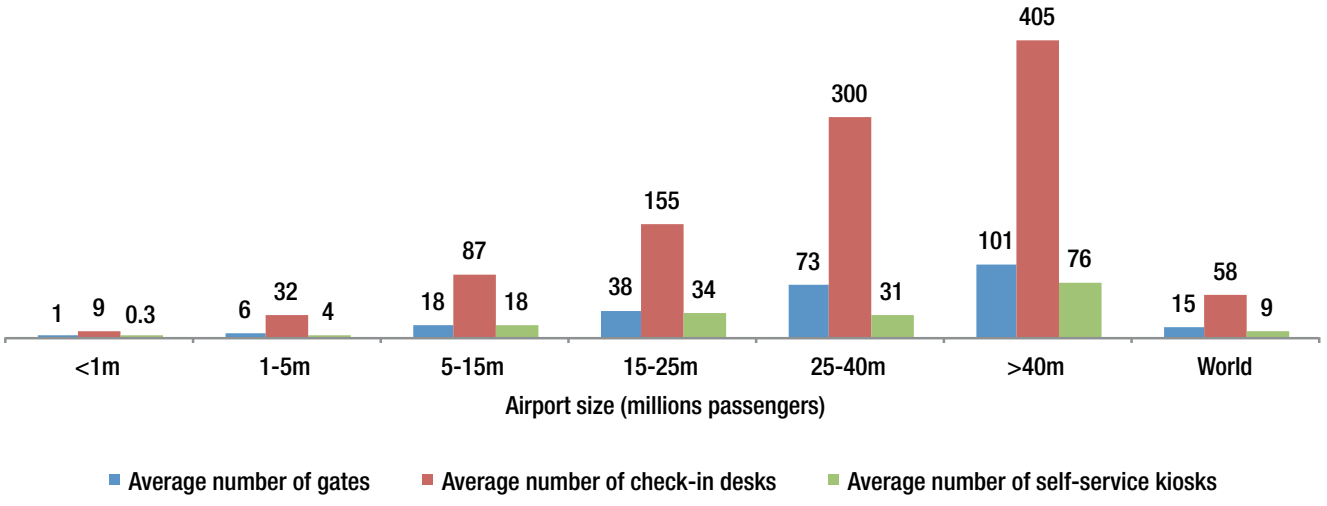
Chart 28: Distribution of aircraft remote stands by region (2013)



Source: ACI Airport Economics Survey (2014)

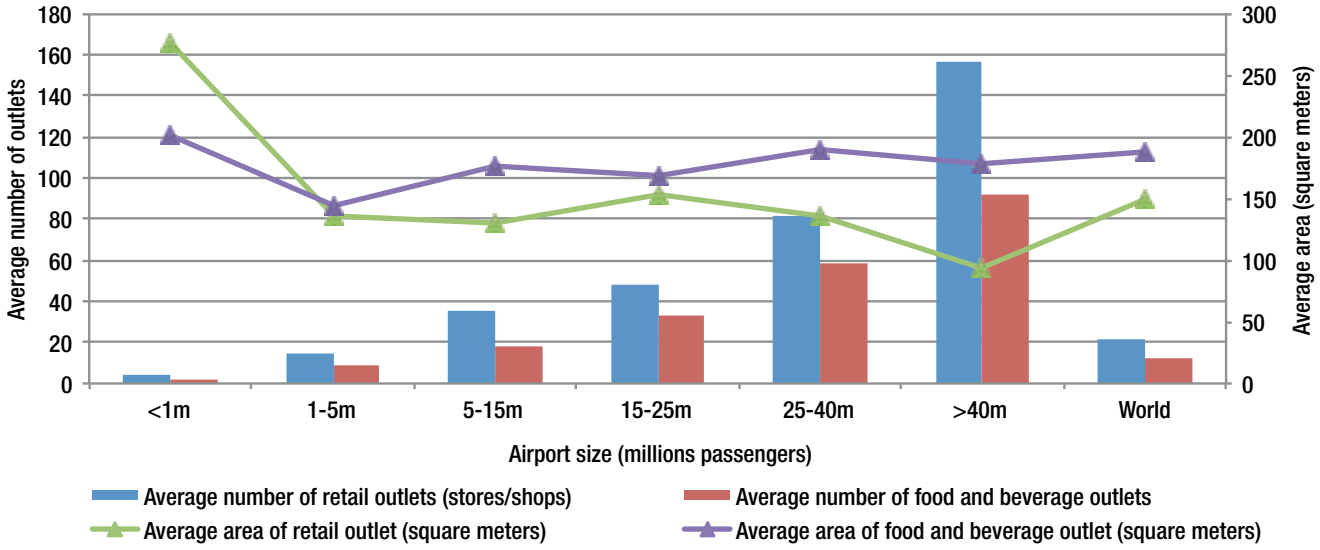
The passenger check-in landscape has altered over the years. In an effort to make more use of technological advancements and to reduce overhead costs, airlines have introduced self-service check-in kiosks for passengers. The global average number of self-service kiosks per airport across this year's submission is nine. Chart 29 shows the averages of some key infrastructure items within passenger terminals according to airport size (total passengers).

Chart 29: Selected infrastructure units (2013)



Source: ACI Airport Economics Survey (2014)

Chart 30: Number of retail and food and beverage outlets with respective area by airport size (2013)

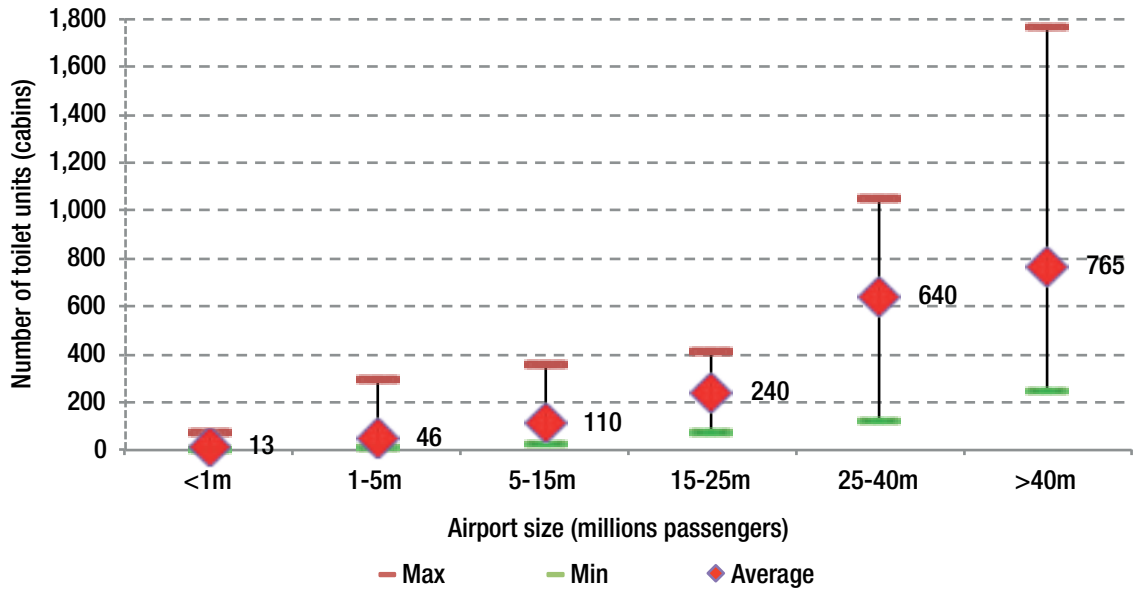


Source: ACI Airport Economics Survey (2014)

The number of passenger facilities and amenities inside terminals has increased as the airport environment has evolved. Airports have catered to the needs of passengers based on the amount of time they spend in these terminals by offering more retail and food options. As expected, airports with higher passenger totals have a higher average number of food and beverage outlets and retail options for passengers, as shown in Chart 30. Generally, the average area per food and beverage outlet does not vary that much across the different market sizes. The chart also shows that while larger airports have more retail outlets, the area tends to be smaller per outlet. The typical airport has 22 retail outlets and 12 food and beverage outlets with average areas of 149 and 189 square meters per outlet, respectively.

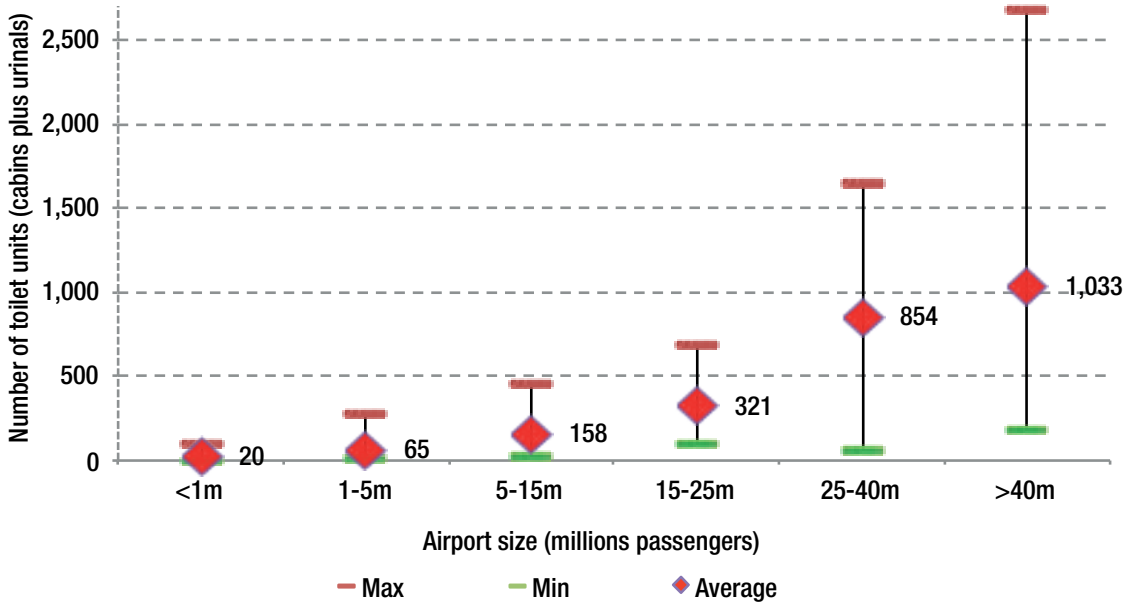
This year's report also includes an analysis of the number of passenger hygiene facilities. This is summarized according to airport size in Charts 31 and 32. There is not a significant difference in the average number of these facilities among regions. The capacity of toilet units tends to increase steadily with overall market size. The reason for highlighting this infrastructure is that ease of access and cleanliness are very important for passengers. Data from ACI's Airport Service Quality (ASQ) programme suggests that there is a strong correlation between the cleanliness of hygiene facilities and overall airport satisfaction.

Chart 31: Distribution of toilet units (cabins) for women by airport size (2013)



Source: ACI Airport Economics Survey (2014)

Chart 32: Distribution of toilet units (cabins and urinals) for men by airport size (2013)

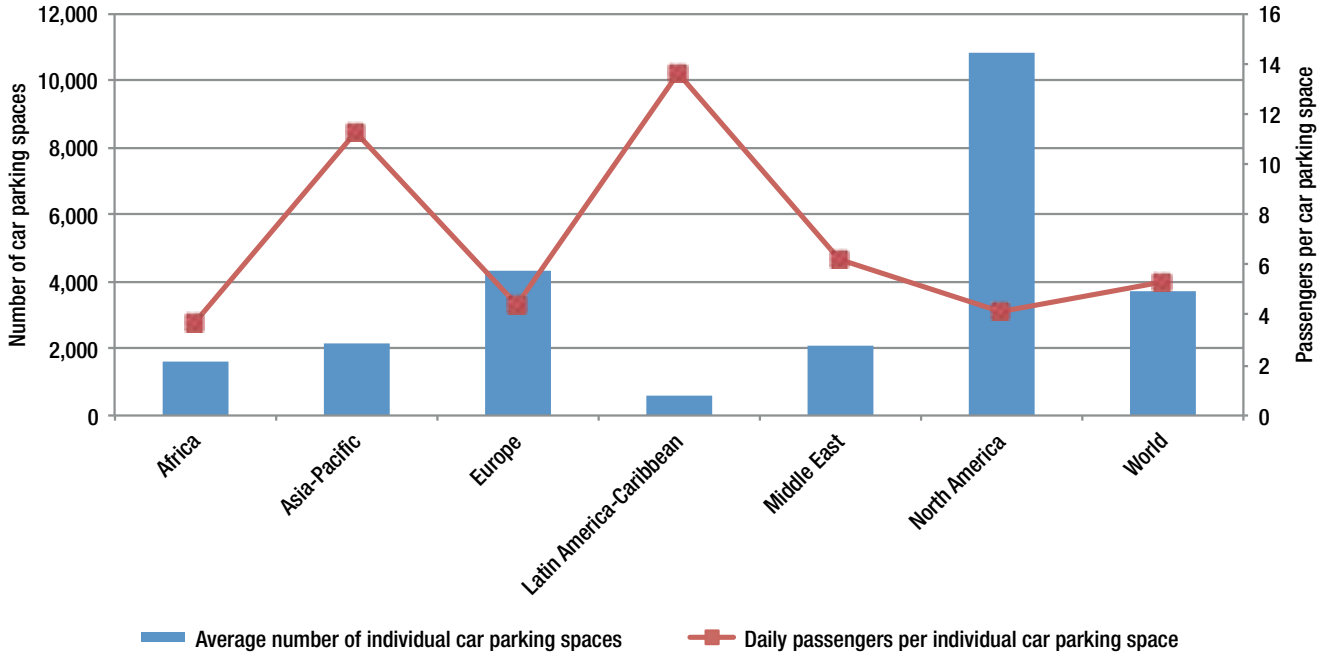


Source: ACI Airport Economics Survey (2014)

A review of the passenger car parking data shows that, as expected, larger airports offer more car parking spaces to passengers. Regional variations are largely attributed to overall lifestyle differences. North American airports have a significantly higher average number of car parking spaces, which may indicate a stronger tendency for passengers to drive themselves to the airport rather than make use of other available options.

Airports in North America have the highest number of parking spaces, with an average of 10,803 parking spots. Put differently from a passenger's perspective, on a typical day there are four passengers per car space. The regional differences are illustrated in Chart 33, which shows the average number of car parking spaces and the daily passengers per car space.

Chart 33: Car parking spaces



Source: ACI Airport Economics Survey (2014)

This analysis identifies variances in the spatial aspects of car parks and surrounding infrastructure across regions. A deeper analysis would involve all transportation options available to passengers to access airports. This may include availability, cost and timeliness of trains, subways and buses for airport access.

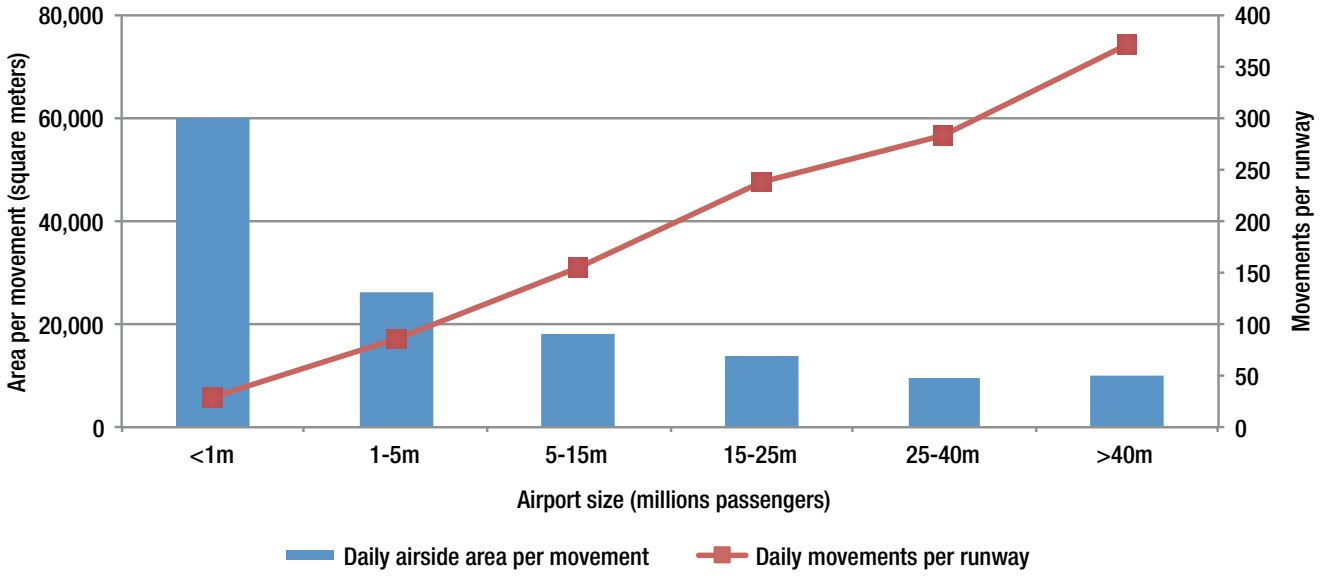
2.1.4 Airport capacity and output

The ability of airports to withstand the demands of air transport is becoming an increasingly important consideration worldwide. Many analyses are being undertaken to understand if airport infrastructure is adequate for future demands. This section aims to better understand an airport's throughput and operation efficiency by looking at a series of performance indicators and in so doing perhaps provide opportunities for airports to benchmark their own performance. This analysis may also provide a better understanding of the adequacy of airport infrastructure.

Looking at airport operational performance from an aircraft throughput perspective, it is important to assess the daily movements per runway metric. Chart 34 identifies this indicator and the daily airside area per movement metric. Not surprisingly, the chart shows that airports with higher passenger throughput are more productive with their runways and total airport site airside area. This chart also supports previous comments showing that airports, irrespective of how large their throughput, require a certain amount of fixed assets to operate. However, for a more granular analysis of aircraft movement per runway, one should take into consideration runway configuration (single, parallel, intersecting, open-V), different operation modes (simultaneous, segregated, mixed), night curfews limiting runway operation hours and other factors.

It is also important to mention that Europe is the region with most curfews that curb night-time operations and that lead to very intensive operations during business hours. Moreover, major European hubs have unequal distribution of movements throughout a typical day because of flight schedules of legacy carriers organized around time spans–typically five or six waves of arrivals and departures spread out over the day to give rise to a maximum number of connections in the shortest possible time.

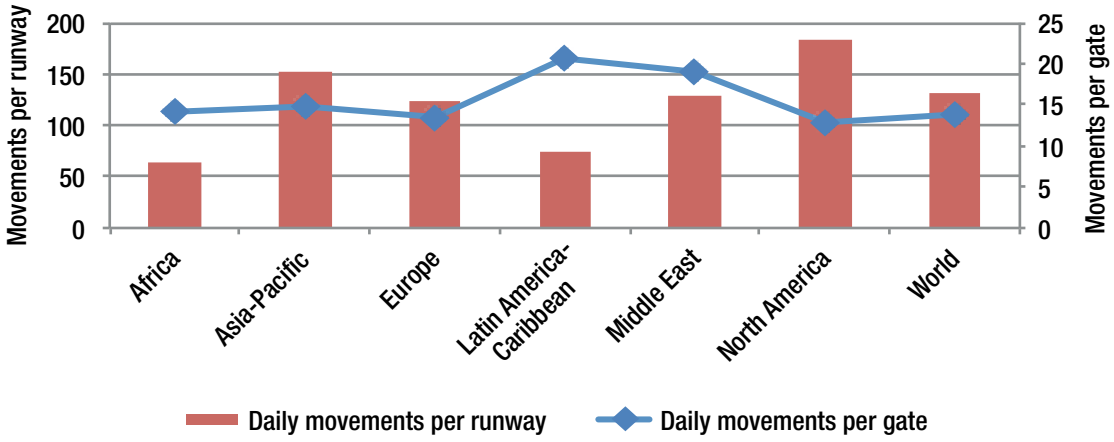
Chart 34: Movements and airside area (2013)



Source: ACI Airport Economics Survey (2014)

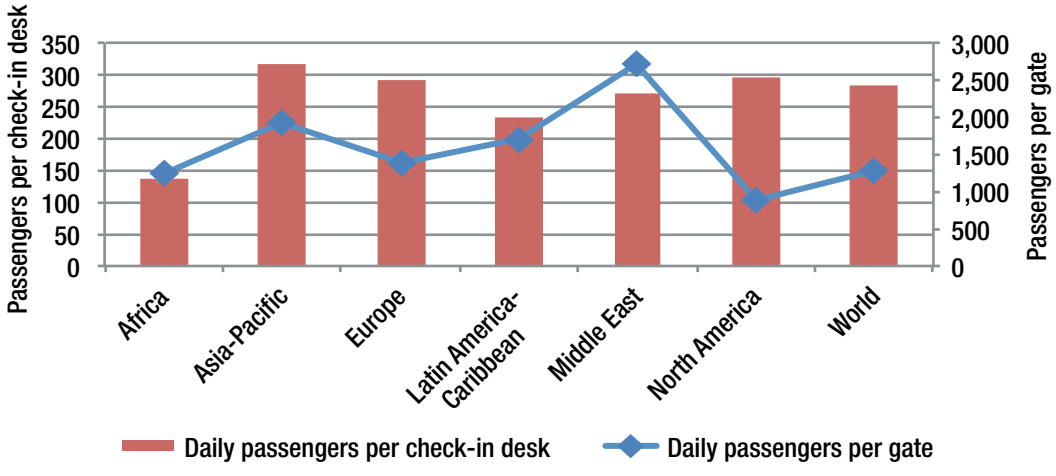
There are some distinct differences between regions, as shown in Chart 35. Of particular note is the high runway throughput of aircraft in North America (183 movements per runway), remembering that this region also has more runways per airport compared to other regions. The results are also due in part to significant short-haul domestic traffic of smaller aircraft in this region. Chart 36 reinforces this fact. With the relatively lower number of passengers per gate (888) for North America, this helps further characterize the hub-spoke arrangement of many of the major North American airports. The Middle East, on the other hand, shows the highest passengers per gate, which is indicative of the high passenger numbers on long-haul flights coming out of major hubs, such as DXB and Doha (DOH).

Chart 35: Movements per runway and gate (2013)



Source: ACI Airport Economics Survey (2014)

Chart 36: Passengers per gate and check-in desk (2013)



Source: ACI Airport Economics Survey (2014)

It is important to acknowledge other factors that contribute to throughput performance, especially in terms of runway productivity including air traffic control procedures and runway and taxiway design. Additionally, while it is important to understand the airside productivity at an airport and the issues that may lead to congestion and capacity constraints, it is equally important to see how this relates to other productivity in the air transport system. Often, an airport's productivity is dependent on the capability of the air traffic control system that serves the airport and the airspace surrounding the facility. As the following section on airport personnel will allude to, air traffic services are generally provided by organizations independent of the airport operator.

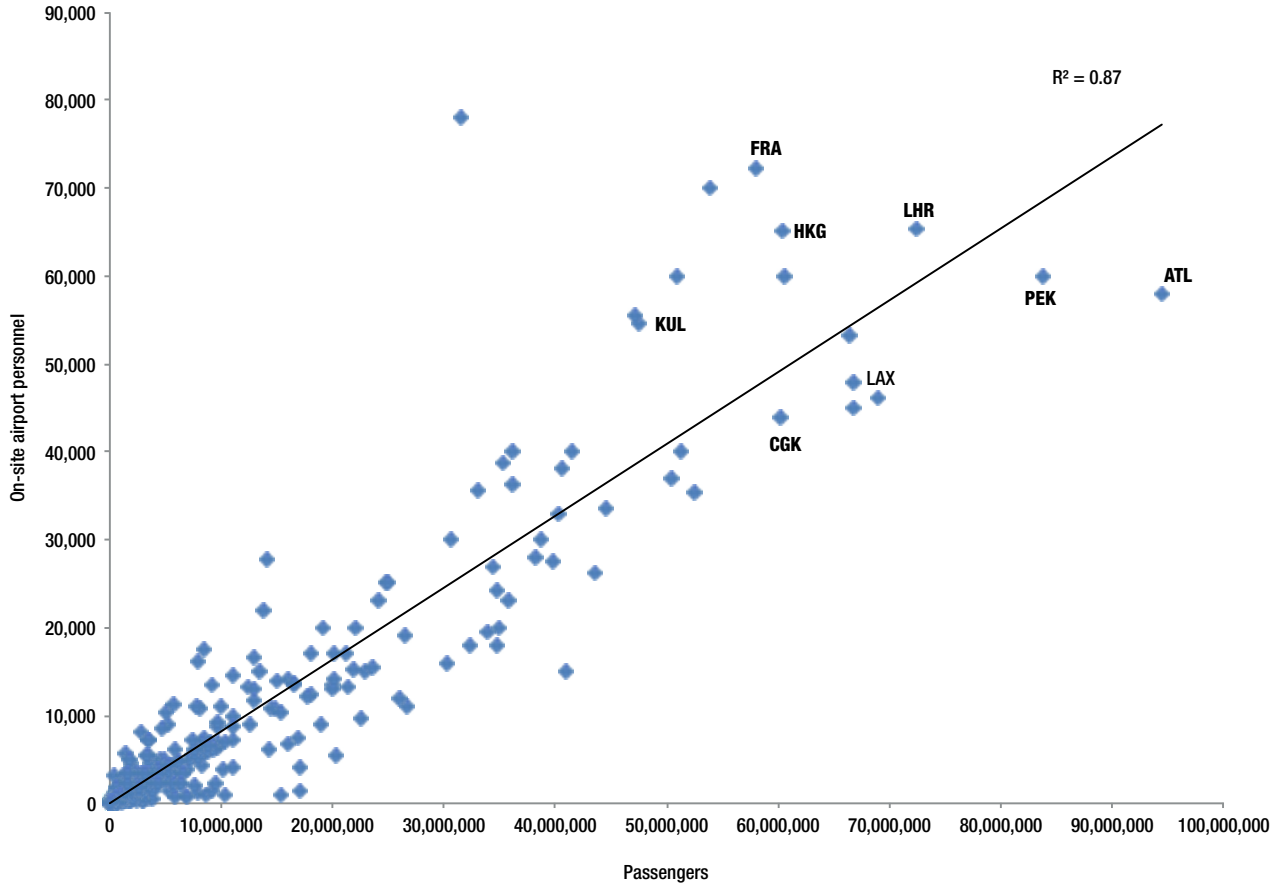
2.2 Airport personnel

Airport infrastructure and facilities are critical components of an airport's ability to withstand and accommodate demand for air transport services. Equally important, however, is the workforce that drives the airport operations and services. Airports could not function the way they do without the variety of skilled and qualified personnel to perform key operations.

Past surveys and reports have indicated that generally, only a small proportion of the labour force that works at an airport is directly employed by the airport operator, that is, the organization that manages airport operations and services. Typically, the clear majority of employees that work at an airport are employed by outside entities. Generally, these workers provide the commercial activities, such as food and beverage and retail services, aviation-related services such as ground handling, and governmental services such as border control.

Global estimates using the data from this year's submissions suggest that close to five million people work on airport sites. In comparison, just over 454,000 are employed directly by airport operators. As expected, the larger the airport in terms of passenger traffic, the more on-site employees. Chart 37 shows this positive relationship between passenger size and the number of on-site employees and also identifies some of the larger airports observed where this relationship is concerned.

Chart 37: Relationship between passenger traffic and employment

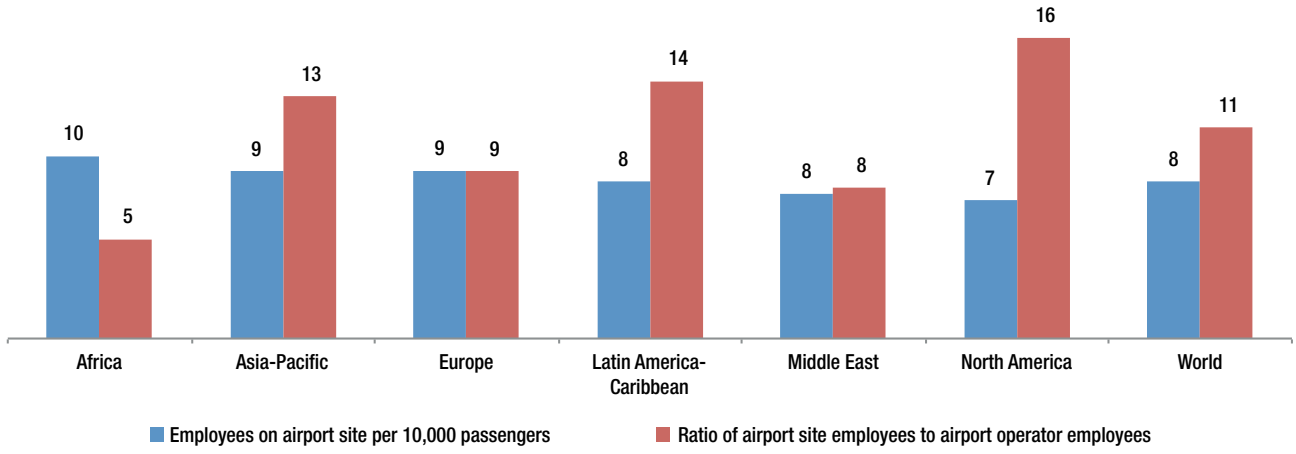


Source: ACI Airport Economics Survey (2014)

2.2.1 On-site airport personnel versus airport operator employees

Previous surveys and reports have identified a general benchmark of 10 airport employees per 10,000 passengers. However, there has been a slight decline over the last several years. In 2012, this global indicator was nine employees, whereas in 2013 the indicator was eight employees per 10,000 passengers. It is not so much that staffing at airports is being reduced but rather for a fixed airport labour force, traffic is growing. While this figure is computed from a comprehensive dataset, it is recognized that each airport faces different circumstances. Thus, it should be noted that there are numerous operational, managerial and ownership models that influence the employment structure at different airports. In particular, Chart 38 highlights the variation in the numbers of employees at airports in different regions.

Chart 38: On-site airport employees by region



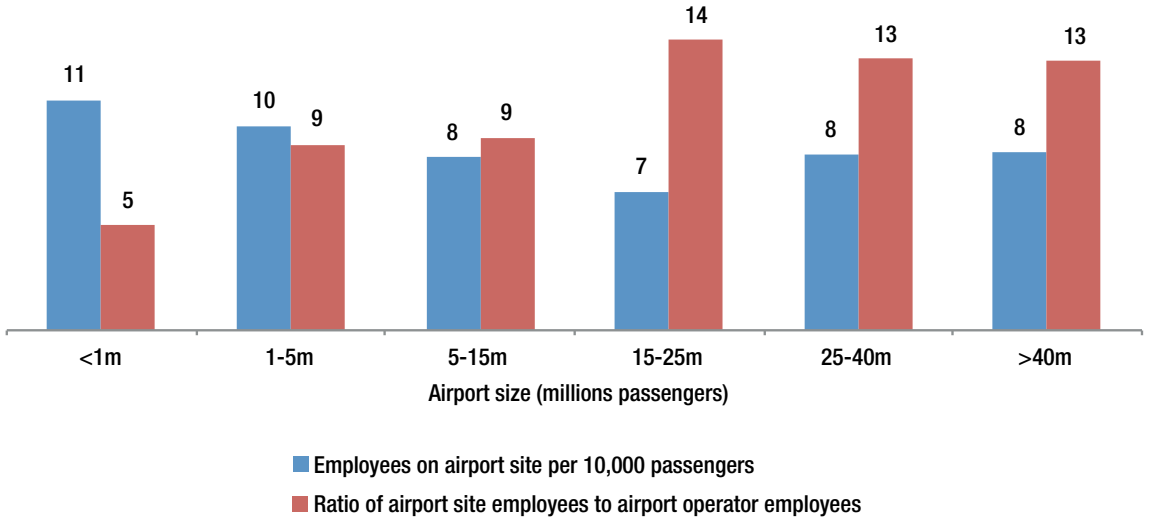
Source: ACI Airport Economics Survey (2014)

North American airports have the highest ratio of on-site airport employees to airport operator employees at 16:1. At the other extreme, Africa has a ratio of 5:1. The Asia-Pacific region is closer to the global average (11:1) with a 13:1 ratio, while Europe has a ratio of 9:1. The higher number of employees working for airport operators in Europe is largely attributed to a relatively high proportion of ground handling services under the airport operator's administration and payroll. Moreover, European unions and labour law limit the potential for outsourcing compared to other regions.

Conversely, North American airports, which are in large part run by municipalities, usually employ administrative and managerial staff, while operational staff is outsourced to other companies. Moreover, airlines in the United States play a significant role in managing certain operational aspects of airports, which is not the case in other parts of the world. Additionally, airlines in North America have more control over their space in the airport compared to airlines in other parts of the world and directly employ more staff at airports. This explains the relatively lower number of employees working for airport operators in North America. Finally, Middle Eastern airports meet the global average of eight on-site employees per 10,000 passengers.

There is very little overall variation across airport size in the analysis of on-site airport employees on a per-passenger basis, although airports with more traffic tend to have a relatively lower number of on-site employees per 10,000 passengers. While smaller airports have 11 employees per 10,000 passengers, the largest airports, boasting over 25 million passengers, have eight employees per 10,000 passengers (see Chart 39).

Chart 39: On-site airport employees by airport size (2013)

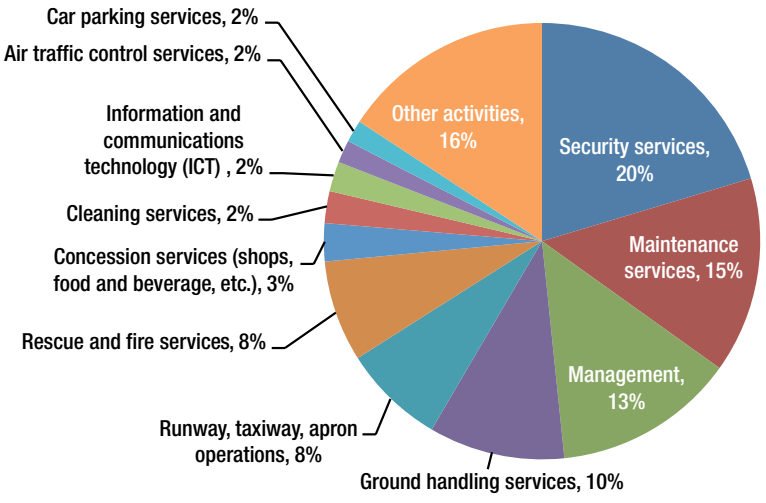


Source: ACI Airport Economics Survey (2014)

2.2.2 Airport operator employees

The airport operator, by which we mean the organization that manages airport operations, provides an array of essential services via specialized functions and personnel. The decision to outsource some of these activities, and therefore the workforce associated with these activities, is often a function of the economic context. Chart 40 shows a breakdown of the activities performed directly by the airport operator. The chart shows that globally, of the people employed by the airport operator, the highest proportion is employed in the field of security services at 20%. As expected, other elements of airport operations, such as maintenance services and management, also employ significant proportions (15% and 13%, respectively).

Chart 40: Distribution of airport operator employees* by type of activity (2013)

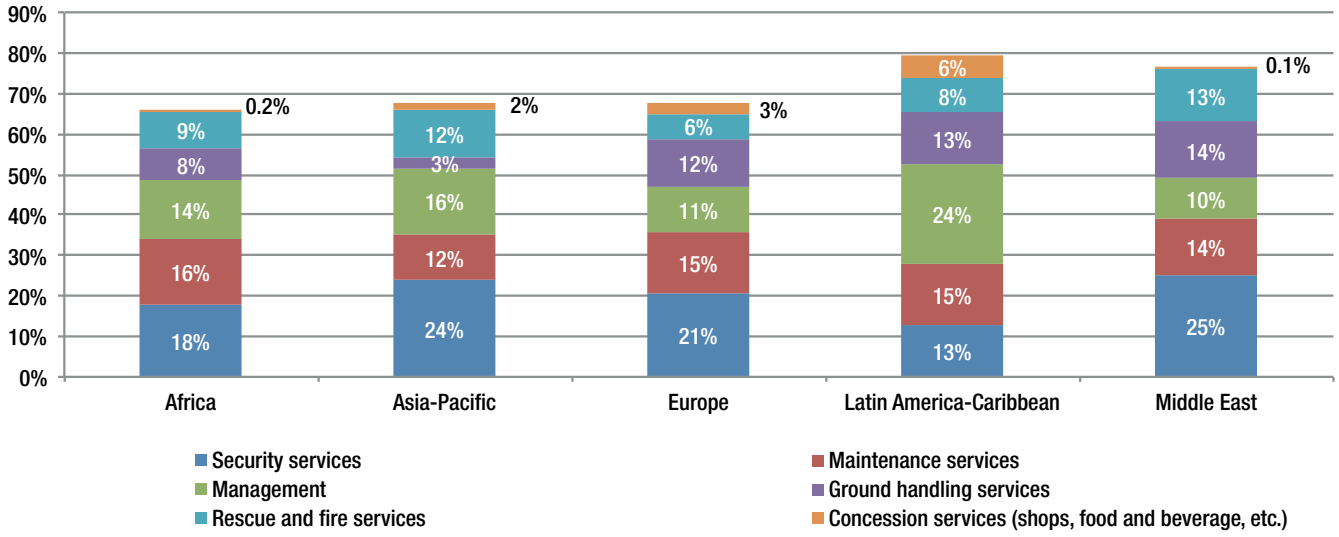


*Does not include North America

Source: ACI Airport Economics Survey (2014)

Security services encompass over 20% of the operator's workforce in the Middle East (25%), Asia-Pacific (21%) and Europe (21%). Looking at variances between regions, Latin American and Caribbean airports recorded a much higher proportion of employees working in the management fields at 24%, while Middle Eastern and European airports showed lower values of 10% and 11%, respectively. There was less variance between regions in the maintenance fields. Not surprisingly, those services that have historically largely been outsourced by airports, including car parking, cleaning and concessions (retail), all recorded low proportions of actual personnel employed by the airport operator, with little variance between regions.

Chart 41: Distribution of airport operator employees by type of activity and region (2013)

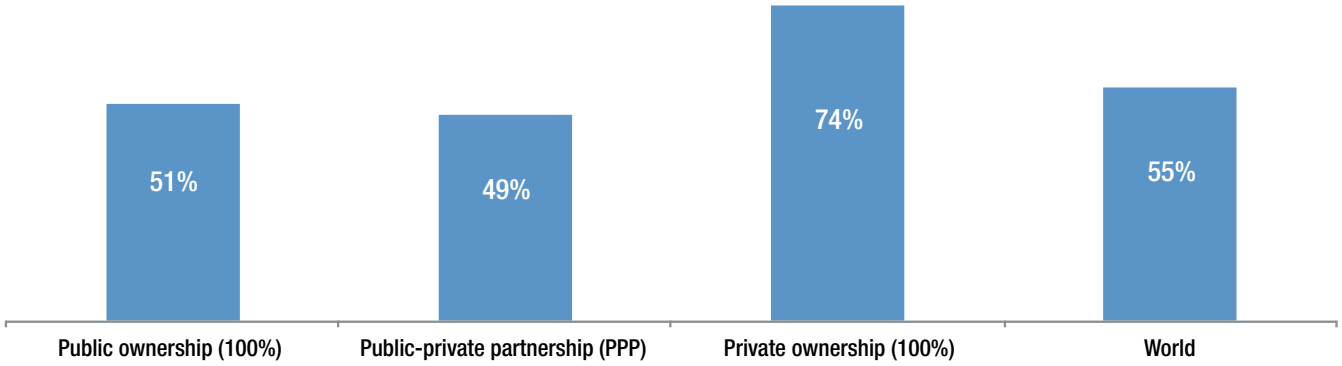


Source: ACI Airport Economics Survey (2014)

2.2.3 Outsourced activities

The need to outsource a large number of airport activities to specialized companies or service providers is present across the world, irrespective of airport size. That being said, there are some differences across regions and by ownership model. Chart 42 below shows the proportion of activities in terms of employees on the airport site that are outsourced by the airport operator according to ownership model. Across the globe, approximately 55% of airport employees are outsourced by the operator, and as the chart illustrates, this figure is as much as 74% for airports that are operated privately. Publicly owned airports and those airports that have both a private and public stake in the airports' operations outsource approximately 50% of their workforce and activities.

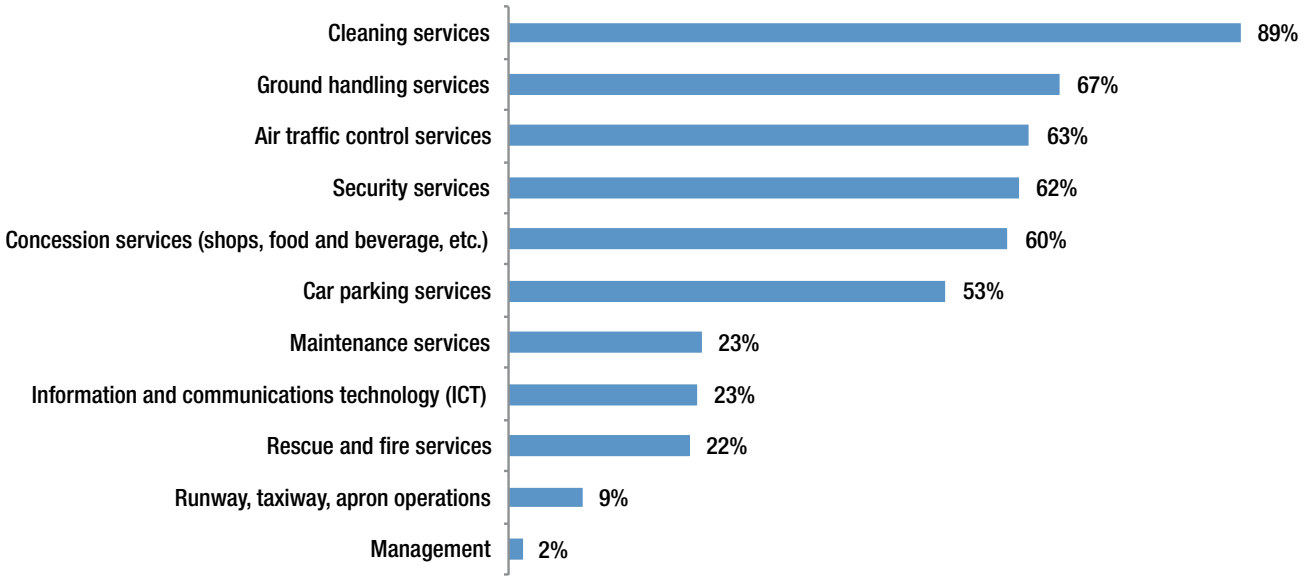
Chart 42: % Proportion of activities that are outsourced (in terms of employees) by ownership model (2013)



Source: ACI Airport Economics Survey (2014)

Cleaning services are the most prevalent activity outsourced at airports. Based on the data, 89% of airports outsource all or some of their cleaning services. This is followed by ground handling services (67%). Although security personnel make up a significant proportion of employees on an airport operator's payroll, a significant proportion of airports nevertheless outsource some or all their security services (62%). Chart 43 summarizes the proportion of airports that have outsourced various services.

Chart 43: % Proportion of airports* with activity and services that are outsourced (2013)



Source: ACI Airport Economics Survey (2014)
*Does not include North American airports

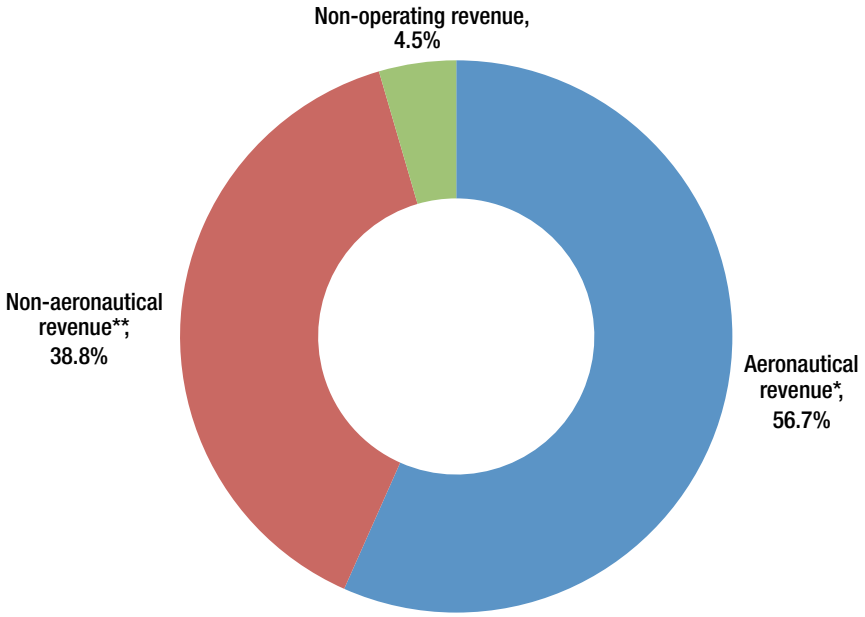
3. Airport revenues

In the face of the ongoing uncertainties in the global economy, global airport revenues remained largely impervious to the downside risks that have persisted across the world's markets. Airport revenues experienced sound growth rates in 2013 compared to the previous year. Although there are some regional disparities, growth in key emerging market airports has circumvented the slowdown in the Euro area and other mature markets. Industry revenues as a whole grew by 5.5% from 2012, reaching US$131 billion in 2013. Viewed another way, if the industry were a country it would approximate the GDP of the 60th-ranked country in terms of economic output out of a possible 200 countries.

3.1 Industry revenues

Airports receive their revenue from two primary sources, aeronautical and non-aeronautical. Non-operating revenue[1] represents a smaller proportion of the total. While non-aeronautical revenue continues to be an important source of income for airports, the major share of revenue remains aeronautical revenue. Aeronautical revenue represents 57% of the total, whereas non-aeronautical and non-operating revenues makes up 39% and 5%, respectively (see Chart 44).

Chart 44: Industry revenues by source (2013)



Source: ACI Airport Economics Survey (2014)

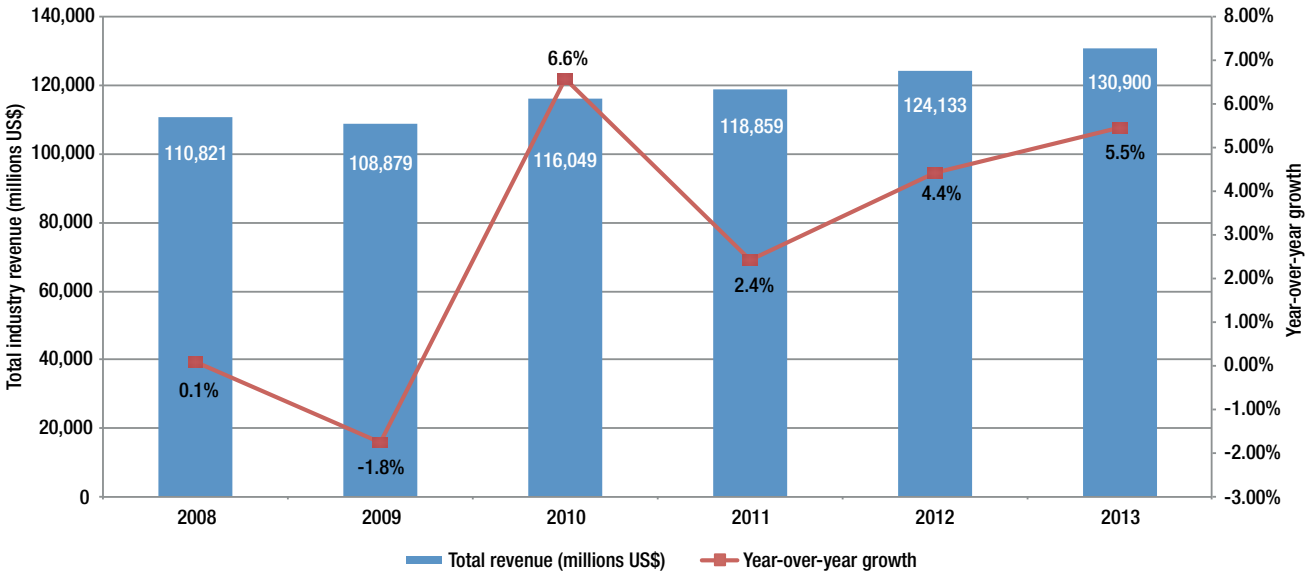
*Aeronautical revenue includes ground-handling revenue reported by airports as a charge.

**Non-aeronautical revenue includes ground-handling revenue reported by airports as a concession.

[1] Non-operating revenue is composed of interest income, subsidies, grants, asset divestments and other related non-operating items.

Since the 2008 Great Recession, overall industry revenues have grown by 3% on an annualized basis. However, a deeper analysis shows some differences in the growth rates of the sources of revenue. The actual year-over-year growth rate for non-aeronautical revenue was greater than the growth rate for aeronautical revenue in 2010 and 2011. Conversely, in 2012 and 2013, there was a reversal in that the growth in aeronautical revenue exceeded that in non-aeronautical revenue. The reason for this reversal is explored in greater detail in Box 3. Given that aeronautical revenues have always exceeded non-aeronautical revenues, a substantial increase in non-aeronautical activities would be required to surpass the ongoing increase in aeronautical revenues. Chart 45 shows the evolution of industry revenues and year-over-year growth over time.

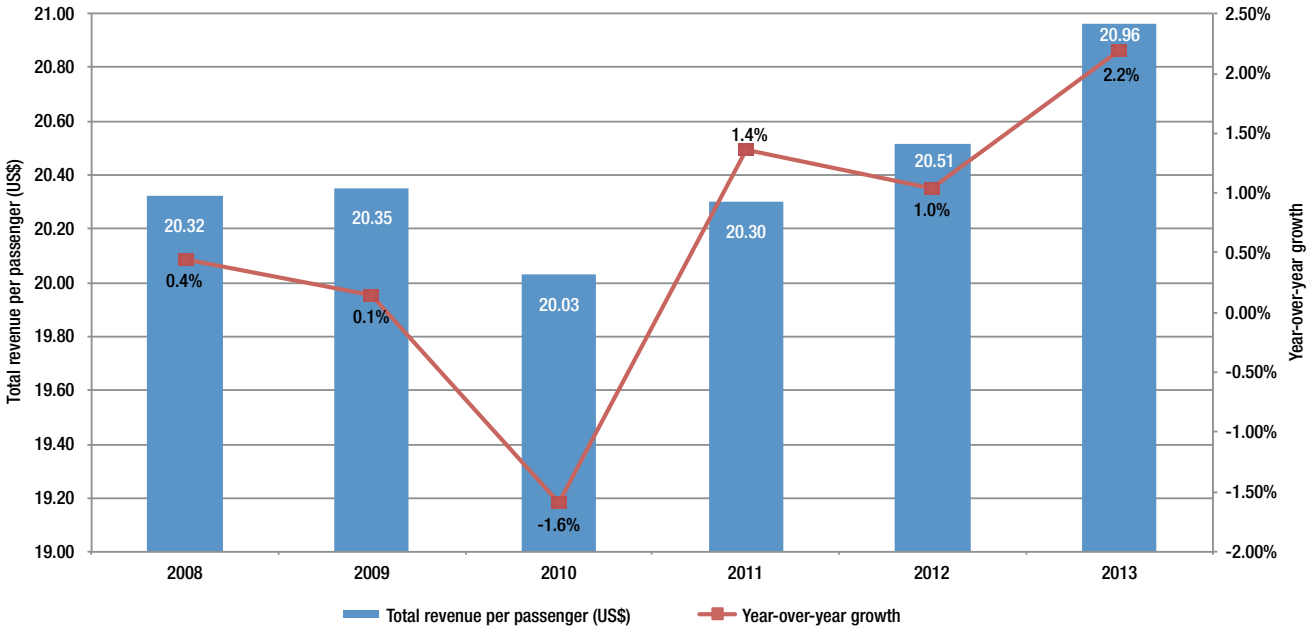
Chart 45: Evolution of total industry revenue and year-over-year growth (2008–2012, US$)



Source: ACI Airport Economics Survey (2014)

Although industry revenues continue to grow (even after adjusting for inflation), revenues on a per-passenger basis have grown more modestly. Total revenue remains in the realm of US$20 per passenger. Revenues per passenger increased by 2.2% from 2012–2013, whereas total industry revenues grew by 5.5%. Chart 46 shows the evolution of total revenue on a per-passenger basis from 2008–2013. On the whole, revenue per passenger has remained stable, with a CAGR of 0.5% over this period.

Chart 46: Evolution of total revenue per passenger and year-over-year growth (2008–2013, US$)



Source: ACI Airport Economics Survey (2014)

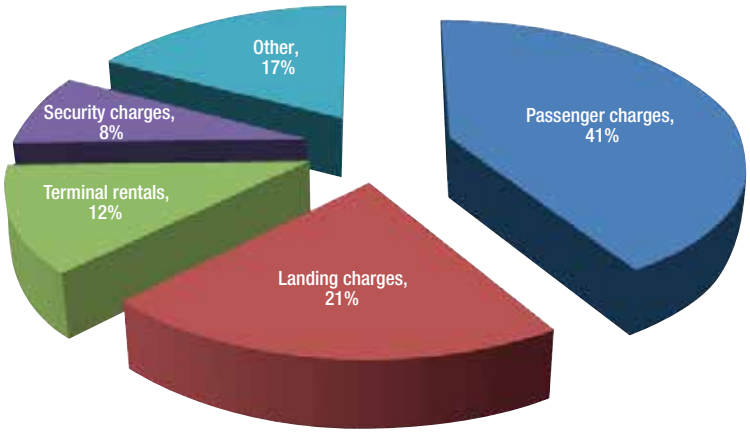
3.2 Aeronautical revenues

3.2.1 Sources of aeronautical revenue

Aeronautical revenue is derived from charges relating to the recovery of the costs incurred by airports in providing the infrastructure and services to airlines seeking to provide transportation services for passengers and cargo. This infrastructure may be regarded as being either aircraft-related (i.e., runways, taxiways, aprons, lighting and fire services) or passenger-related (i.e., passenger terminal facilities used exclusively for the travel requirements of passengers, such as check-in areas, gate rooms, ground handling and security). There may also be aeronautical revenue related to the use of cargo facilities.

Chart 47 provides a detailed breakdown of global aeronautical revenue. As shown, passenger- and aircraft-related charges represent a combined 62% of all aeronautical revenues. Terminal rentals paid by airlines for space utilization account for almost 12% of global aeronautical revenue and are mainly limited to North America.

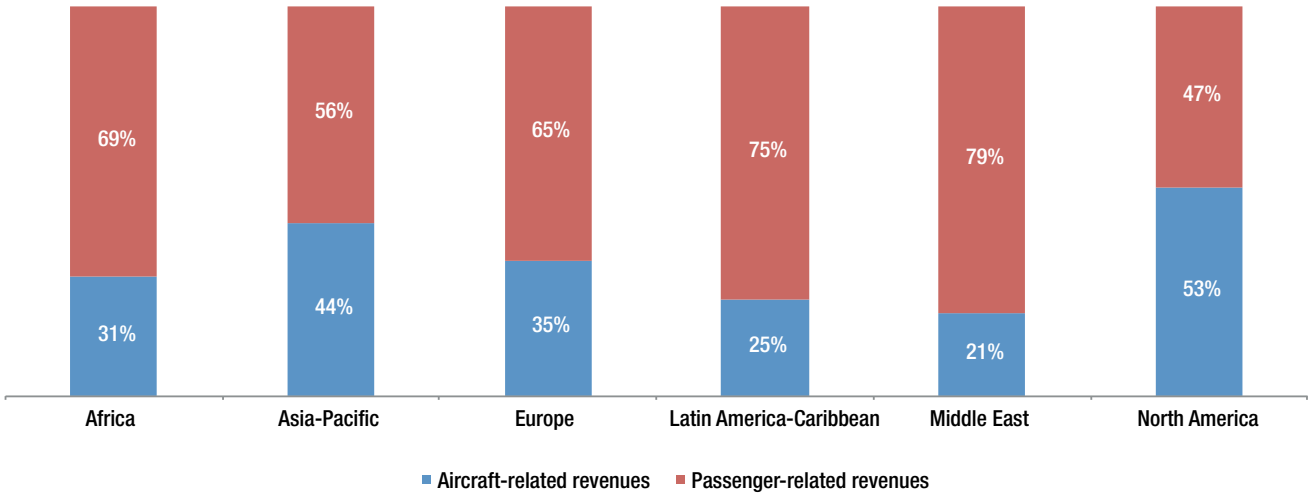
Chart 47: Distribution of aeronautical revenue (2013)



Source: ACI Airport Economics Survey (2014)

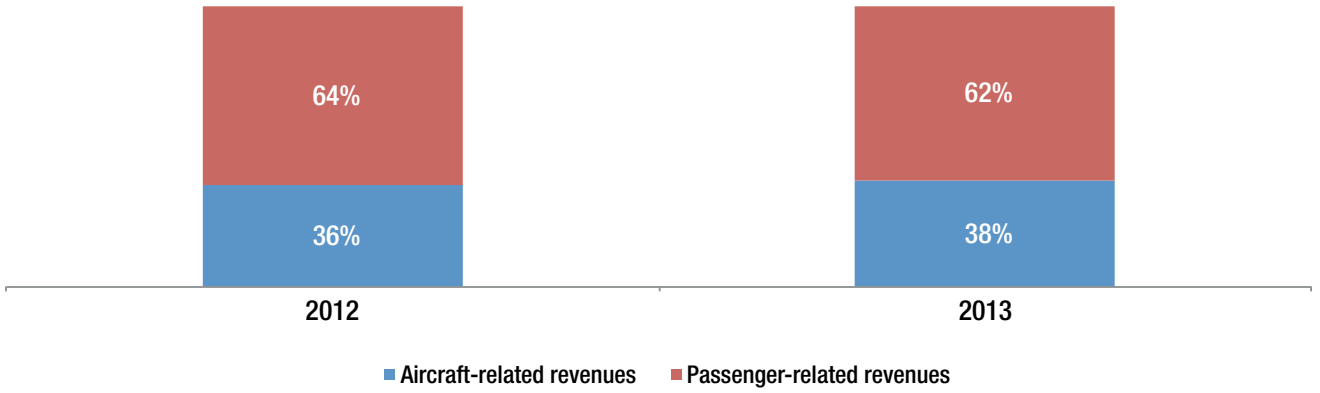
Some airports still generate aeronautical revenues mostly through aircraft-related charges, but the majority of airports have gradually put their emphasis on charging passengers. Chart 48 shows the ratio of aircraft- versus passenger-related revenue by region. There is significant variation across regions; in Europe, Latin America-Caribbean and the Middle East, a high proportion of revenues come from passenger-related charges. North America has a more equal ratio of one revenue source versus the other. Chart 49 compares the overall proportions between 2012 and 2013. On the whole, there is greater reliance on passenger-based revenues. Although passenger-based revenues made up 62% of the two types of aeronautical revenues, Chart 49 shows a slight decrease in this proportion from 2012–2013.

Chart 48: Ratio of aircraft-related to passenger-related revenues by region (2013)



Source: ACI Airport Economics Survey (2014)

Chart 49: Ratio of aircraft-related to passenger-related revenues (2012–2013)



Source: ACI Airport Economics Survey (2014)

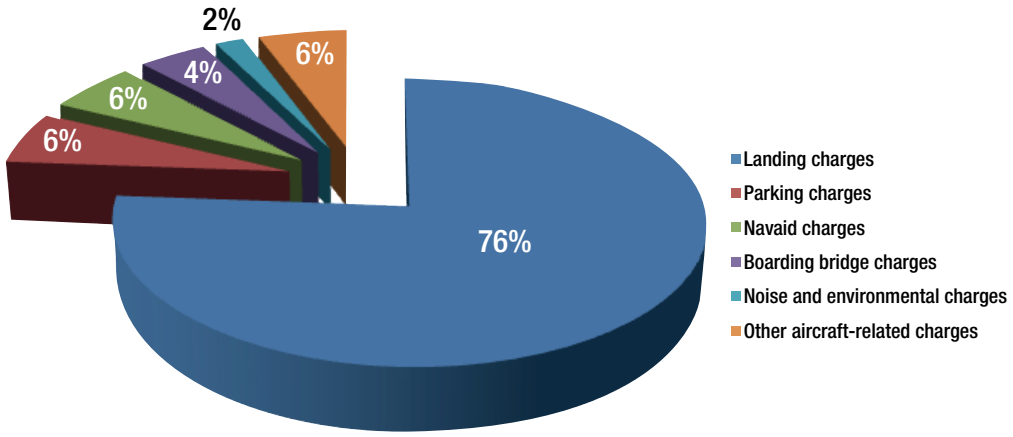
At a large majority of airports, aircraft-related revenues are derived from two main sources of aeronautical charges, namely the landing charges, which are usually based on aircraft weight, and the aircraft parking charges, which are also usually based on aircraft weight but can vary depending on the length of time an aircraft is parked.

Passenger-related charges, often called passenger service charges or terminal charges, and security charges are all charged on a per-passenger basis. Finally, a transit or transfer charge may be levied on passengers transferring to another aircraft.

Traditional aeronautical charges were usually limited to these main charge categories (i.e., a landing charge and a passenger charge), and this remains the case at many airports today. However, over time there has been a trend towards a more granular approach to pricing, with the gradual introduction of individual charges for the use of centralized infrastructure, air bridges, baggage sorting, and screening systems and check-in desks, as well as separate charges related to aircraft noise and emissions.

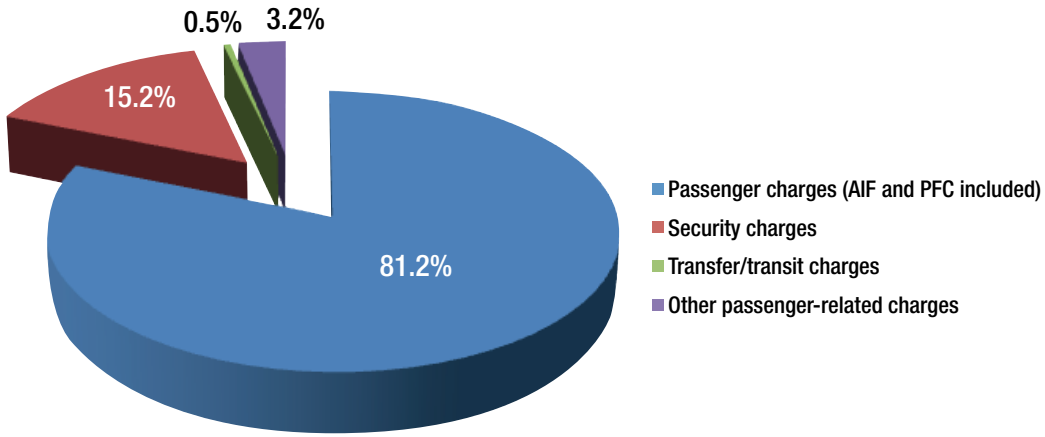
Charts 50 and 51 show the distribution of the various industry revenue streams for aircraft-related and passenger-related charges, respectively. By and large, landing charges make up 76% of all aircraft-related charges. Typically, there is a single charge levied on passengers (81% of passenger-related revenues), with certain airports having distinct charges for security and/or transit/transfer passengers.

Chart 50: Distribution of aircraft-related charges (2013)



Source: ACI Airport Economics Survey (2014)

Chart 51: Distribution of passenger-related charges (2013)

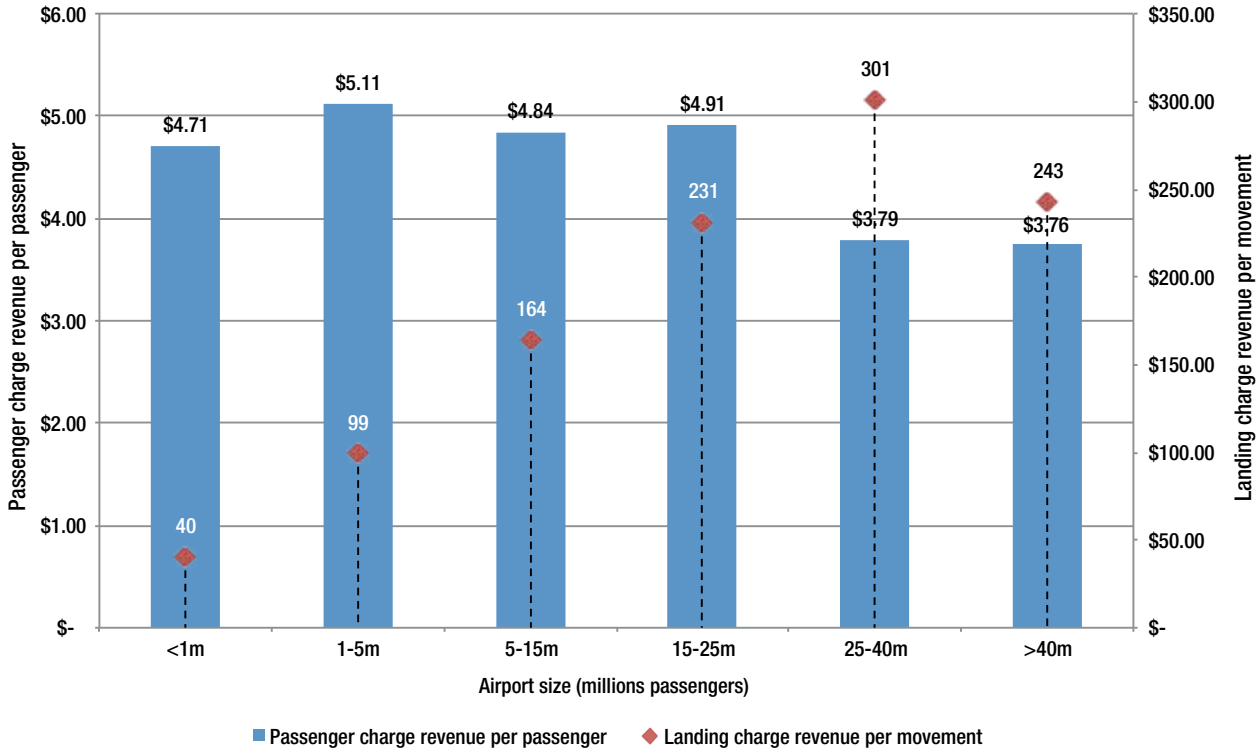


Source: ACI Airport Economics Survey (2014)

Analysis of the main landing and passenger charges on a per-movement basis and a per-passenger basis yields further insights. Average aeronautical revenue from passenger charges on a per-passenger basis reveals that the larger airports have the lowest average revenue per passenger (US$3.76), which tends to be a reflection of the efficiency of large aircraft, while the world average is US$4.74 per passenger. There is some variation, of course. Based on the sample of airports, certain airports reported an average charge as high as US$18 per passenger, while other airports reported negligible charges on a per-passenger basis.

Chart 52 shows average landing charges per movement, revealing the high variation in unit revenues across the various airport market size categories. Airports that accommodate passenger traffic of over 25 million passengers per annum have the highest landing charges on a per-movement basis. This group of airports also has very high total unit costs in terms of operating expenses and capital costs, both on a per-passenger and a per-movement basis. This indicates that revenues must also be relatively higher in order for the airports to remain financially viable.

Chart 52: Passenger charge revenue per passenger and landing charge revenue per movement (2013, US$)



Source: ACI Airport Economics Survey (2014)

3.2.2 Trends in aeronautical charges

Two clear trends in aeronautical charge structures can be identified. The first includes a movement away from the use of weight-based charges, and the second involves an increasing tendency to use a more granular approach to pricing.

3.2.2.1 Trends away from weight-based charges

The use of weight-based structures for landing charges and aircraft parking charges has existed for many years, and it is enshrined in ICAO Document 9082. The widespread acceptance of this system cannot be denied, although its basis in terms of sound pricing theory can be questioned, particularly if an airport's runway is subject to congestion.

Landing charges may be regarded as a fee for the use of the runway and other airside facilities, such as lighting and the fire service. Under a cost-related charging system, weight-based charges would imply that larger aircraft represent a larger cost to the airport than smaller aircraft. But the relationship between aircraft weight and cost incurred is not clear, and it is certainly not always linear. At some airports, the landing charge increases with weight, whereas in others it decreases and in some it is a fixed charge per unit of weight. On the other hand, if a small aircraft occupies a runway for a similar length of time as a large aircraft, it imposes an opportunity cost amounting to the difference between the charge that would be applied to the larger aircraft and that relating to the small aircraft. This is particularly the case if there is a shortage of runway capacity.

Some of the first airports to move away from weight-based pricing were the two main London airports, where various permutations of fixed charges, differentiated only according to aircraft noise levels, were first introduced in the 1980s. This system was specifically devised to address the shortage of available runway slots at both airports. A different approach was taken by the main Australian airports in the early 2000s. Here, a radical overhaul of charge structures saw the removal of weight-based charges for all international services, with a single all-encompassing charge per passenger being introduced.

The reasoning behind this development was that at times of declining traffic, there was a greater degree of risk sharing between airport and airline than would be the case with a normal weight-based landing charge, under which the landing charge for an aircraft is the same regardless of whether the aircraft is full or empty. This development took place in the immediate aftermath of 9/11, and with diminished passenger loads it represented a more equitable structure from an airline perspective.

More recently, other airports have adopted one of two approaches to reducing their reliance on weight-based charges. One of these has been to introduce a passenger-based landing charge while retaining a weight-based charge at a lower charge rate than that which prevailed previously. The other approach, which is quite widespread, is simply to leave weight-based charge rates unchanged at the time of making annual tariff adjustments, while applying all of the overall allowable increase to passenger-based charges. Both of these approaches serve to move the airport towards a greater level of risk-sharing with airlines in the event of a traffic downturn.

3.2.2.2 Granular pricing

The underlying principle behind moves to more granular pricing is that of greater transparency, so that airline users are better able to identify exactly how much they are paying for the various airport services they use. This trend first manifested itself in the 1980s, with the gradual introduction of terminal navigation charges, particularly in Europe. These charges are intended to cover the cost of the provision of terminal area navigation services. With traditional charging systems, the cost of such services was recouped by the service provider through a contract with the airport, and the airport then recovered the cost through an incremental addition to its landing charges. With terminal navigation charges, the air navigation service provider charges the airline user directly, so the cost and the responsibility for its recovery no longer rest with the airport.

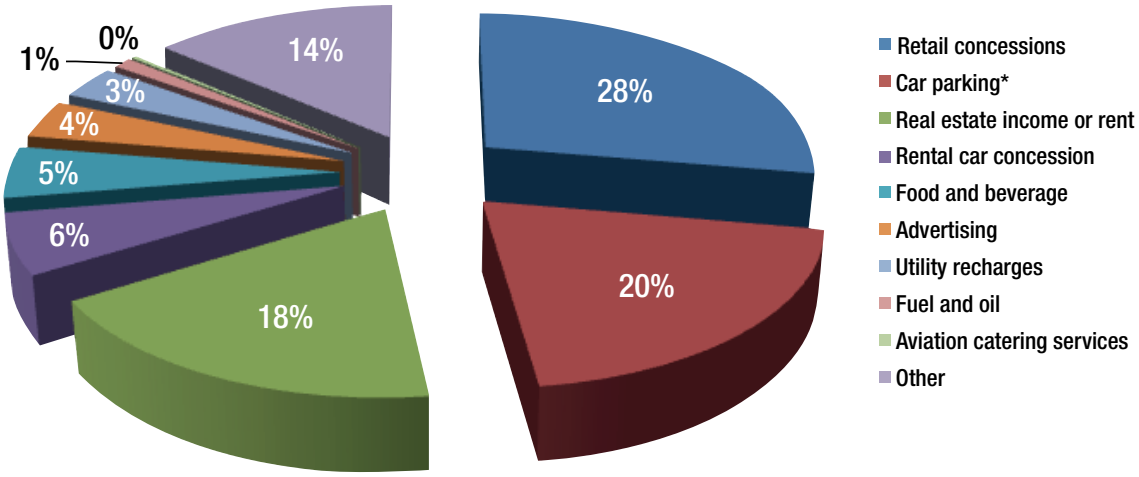
More recently, airports have begun to separate out various components of their services for the application of individual item-specific charges. Examples include charges for the use of air bridges, baggage sorting and screening systems, security charges, charges for pre-conditioned air and other centralized infrastructure. Again, the purpose behind the proliferation of such charges is to improve transparency, as traditionally the recovery of the cost of these services would be through an all-encompassing passenger service charge. And in some cases, if an airline is not making use of a particular service, it no longer has to pay for it.

3.3 Non-aeronautical revenues

3.3.1 Sources of non-aeronautical revenue

Non-aeronautical revenue is much more diverse than aeronautical revenue. It 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. It may also relate to revenue from 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, more minor sources of non-aeronautical revenue may include various charges, such as those for third-party employee security passes, pass-through charges for utilities consumption or access charges to public transport operators. Chart 53 provides the global breakdown of non-aeronautical revenue by source.

Chart 53: Distribution of non-aeronautical revenue by source (2013)



Source: ACI Airport Economics Survey (2014)

*Car parking revenue includes revenue from airport-operated parking lots and car parking concessions revenue.

Retail concessions remain the leading source of non-aeronautical revenue for airports, representing 28% of non-aeronautical revenue. Car parking revenue and property revenue/rent follow retail concessions as the secondary sources of revenue at 20% and 18% respectively.

The Middle East has the highest proportion of non-aeronautical revenue attributed to leasing of or revenue-sharing from retail concessions at almost 49% of revenue. Revenue generated from car parking is growing in importance because the proportional share has increased across all regions. In particular, North America continues to be the world leader in generating revenue from car parking services, with these services representing as much as 39% of the region's non-aeronautical revenue. At 16.6%, revenue from rental car concessions is also relatively higher in North America compared to other regions. This offsets the relatively low proportion of revenue that North American airports obtain from retail concessions. Table 4 shows the distribution of non-aeronautical revenues by region.

Table 4: Distribution of non-aeronautical revenues (% of total non-aeronautical revenue, 2013)

Region	Retail conces-sions	Food and beverage	Car parking*	Rental car con-cessions	Adver-tising	Fuel and oil	Aviation catering services	Utility recharges	Property and real estate revenue or rent	Other
Africa	37.1%	1.3%	15.1%	3.9%	7.1%	3.2%	0.3%	4.4%	14.9%	12.6%
Asia-Pacific	39.7%	3.4%	9.2%	1.2%	4.5%	1.7%	0.5%	4.1%	27.9%	7.9%
Europe	34.6%	4.8%	15.1%	2.2%	2.2%	0.8%	0.3%	5.6%	18.7%	15.7%
Latin America-Caribb.	25.3%	6.0%	8.9%	2.6%	4.7%	3.6%	0.4%	1.8%	13.1%	33.6%
Middle East	48.6%	4.9%	7.7%	2.2%	3.0%	7.0%	1.4%	2.7%	10.7%	11.9%
North America	8.3%	7.1%	39.3%	16.6%	5.7%	N/A	N/A	N/A	13.5%	9.4%
World	27.7%	5.2%	20.3%	6.2%	3.9%	1.1%	0.3%	3.4%	18.3%	13.7%

Source: ACI Airport Economics Survey (2014)

*Car parking revenue includes revenue from airport-operated parking lots and car parking concessions revenue.

3.3.1.1 Concessions

Concession payments may come from a wide range of service operators; mainstream and specialist retail, food and beverage, car parking, foreign exchange and ground handling are the main sources at most airports. Payments will generally be decided on the basis of a percentage of either gross revenue or net operating profit, often with a minimum guaranteed level of payment.

As the leading source of non-aeronautical revenue worldwide, retail concessions continue to provide an array of business opportunities for airports to diversify their revenue streams. While some airports operate in contexts that allow them to fully exploit the opportunities of developing this aspect of non-aeronautical revenue, other airports have yet to gain ground in this area.

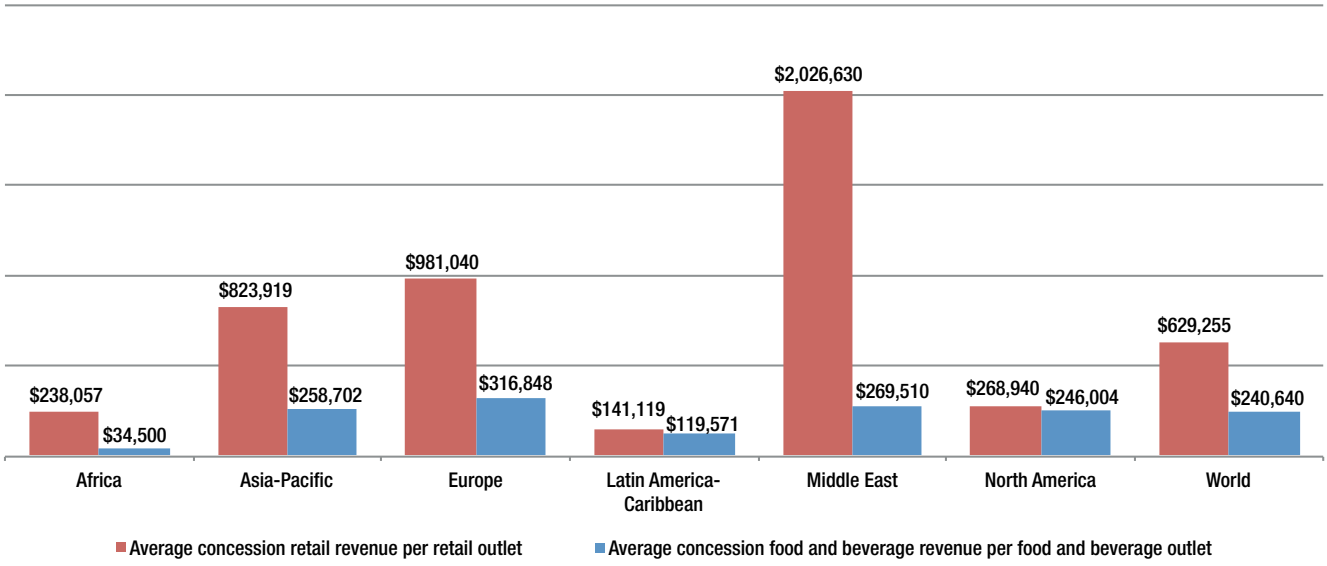
Chart 54 shows that daily retail revenue per square meter is maximized for airports with over 40 million passengers, with these airports achieving daily retail concession revenue of US$33.42 per square meter. The revenue generated is positively correlated with airport market size.

Chart 54: Retail revenue per square meter (2013, US$, per day)

Source: ACI Airport Economics Survey (2014)

Chart 55 summarizes average concession revenue per retail outlet and food and beverage outlet. While Middle Eastern airports lead average concession revenue for retail (over US$2 million), European airports report the highest food and beverage revenue at US$316,848 for the average outlet.

Chart 55: Average concession food and beverage revenue per food and beverage outlet (2013, US$)



Source: ACI Airport Economics Survey (2014)

Box 2: Exploiting non-aeronautical opportunities in duty free retail

Duty free shops can be found in every major international airport. These retail outlets are normally located in the post-security international zone of international airports and are exempt from local or national taxes and duties. However, the number of countries allowing duty free shops in airport arrival areas is increasing. A typical duty free shop offers a wide range of traditional duty free products, such as perfumes, cosmetics, alcohol, tobacco, confectionery and jewelry. These are mainly luxury goods with high income elasticity of demand for goods with high-quality design, craftsmanship and exclusivity. The luxury goods market has been growing for many years but experienced difficulties after the Asian Financial Crisis in 1997 and the Great Recession of 2008, which demonstrates the risk of duty free retail associated with downturn shifts in the economic cycle.

Irrespective of the risks associated with macroeconomic crises and changes in legislation (abolishment of duty free sales for travellers within the EU in 1999), there is not only a consumer advantage from sales tax exemptions on duty free goods but also a combined benefit of a high volume of traffic with higher-revenue passengers, which benefits retailers and airports.

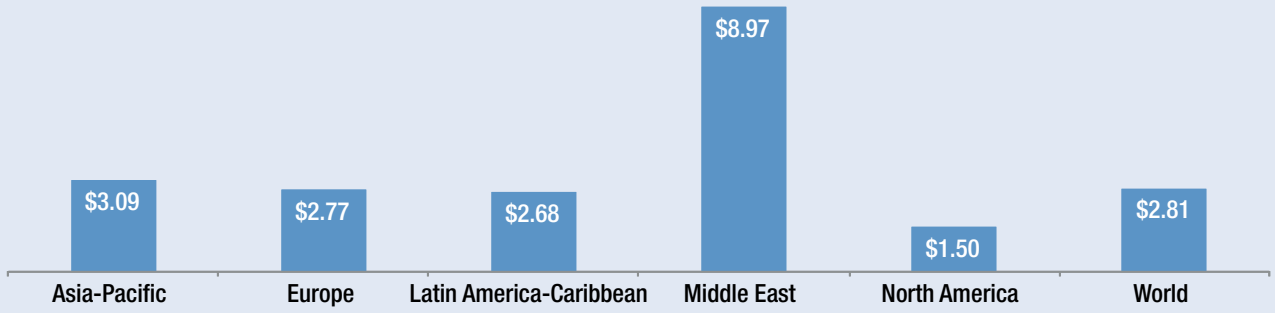
The first airport duty free shop was established at Shannon Airport in 1947. Shannon Airport was built as the gateway between Europe and the Americas and became the model for other airports opening duty free shopping facilities. Duty free shopping was in its infancy when two American entrepreneurs, Charles Feeney and Robert Miller, created what is now Duty Free Shops (DFS) in 1960. DFS started operations in Hong Kong and spread to Europe and other places around the globe. During the past half-century, duty free shops were successfully developed in airports in Europe and Asia-Pacific, but in the last decade these regions yielded the palm to the Middle East. This was partly because several countries in the Middle East (Oman, Qatar, Saudi Arabia and United Arab Emirates) have zero VAT/GST/sales taxes, which gives a competitive advantage to airports where all airport retail is duty free. Dubai Duty Free (DDF) is the world's largest single-airport duty free retailer. According to *Gulf Business* magazine, DDF represents over 5% of global duty free sales worldwide, generating US$1.9 billion in 2014. Duty free retail serves as a strong base for non-aeronautical revenues at DXB and other airports in the region, employing thousands of people and producing direct and indirect positive impacts on the local economies.

Duty free retail is a lucrative non-aeronautical opportunity to take advantage of. Yet it is essential to monitor for the latest trends in key related industries—especially alcohol and tobacco—that are vulnerable to heavy-handed regulation amid shifting sociocultural trends.

Based on data from a sample of airports from ACI's Airport Economics Survey, the most developed duty free markets may be found in the airports of the Middle East, Asia-Pacific and Europe. It is not surprising because these regions boast over 80% of the world's international passenger traffic. Given that passenger traffic is largely domestic in North America, there is a lower prevalence of duty free outlets in airports in this region. Chart 56 shows duty free concession revenues generated by airports on a per international passenger basis across selected regions. Airports in the Middle East generate the highest duty free concession revenue at US$8.97 per international passenger.

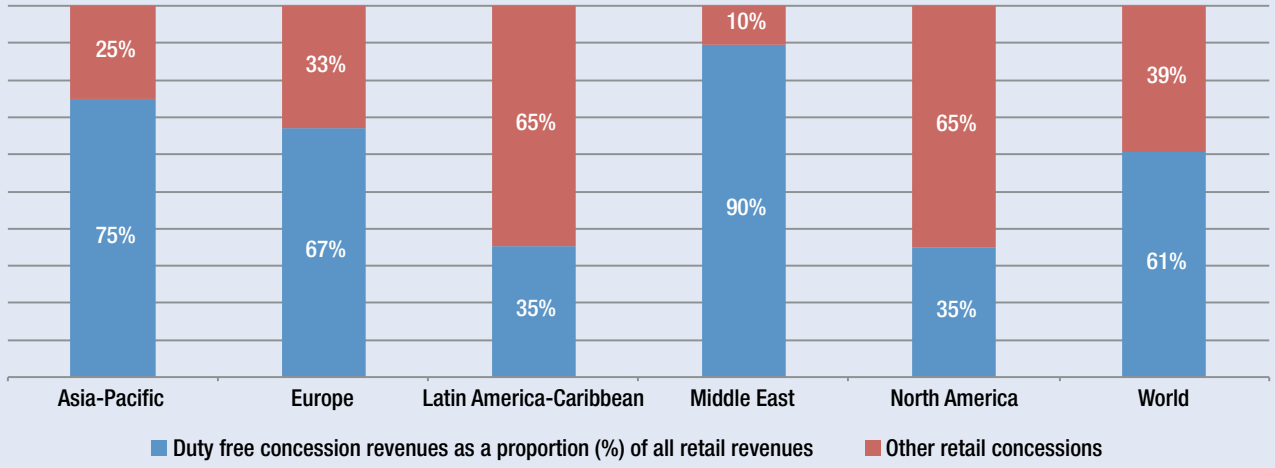
As can be seen in Chart 57, irrespective of the region, a significant proportion of overall retail concession revenue is generated by duty free concessions, although the Middle East, Asia-Pacific and Europe have the greatest percentages at 90%, 75% and 67%, respectively.

Chart 56: Duty-free concession revenues per international passenger (2013, US$)



Source: ACI Airport Economics Survey (2014)

Chart 57: Duty-free concession revenues as a proportion (%) of all retail revenues (2013)



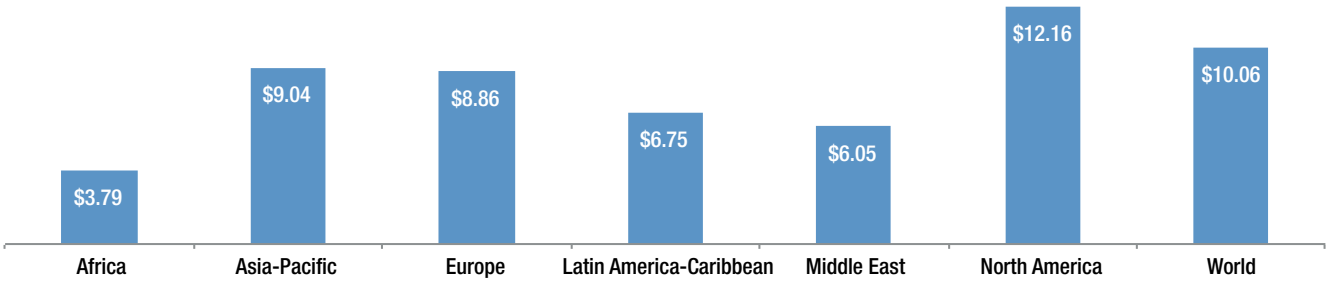
Source: ACI Airport Economics Survey (2014)

3.3.1.2 Car parking

Car parking is the second-largest source of non-aeronautical revenue after rental and real estate revenue, representing one fifth of non-aeronautical revenues. As discussed in Section 2, there is significant variation in the infrastructure designated for car parking across regions. In North America, most airport users commute to airports using their own automobiles, but in other parts of the world, passengers are typically dropped off at terminal buildings or use public transit as the preferred mode of transport to and from airports. As a result, it is not surprising that a key revenue generator in North America is car parking and related concessions. Boasting an average of over 10,000 car parking spots per airport, North American airports handle an

average of four passengers per car parking space and generate daily revenue of US$10.06 per space. The Asia-Pacific region is also a leading revenue generator at US$9.04 per car parking space (see Chart 58). North America has a greater supply of such spaces, so airports in North America average half of Asia-Pacific's passengers per car parking space.

Chart 58: Revenue per car parking space (2013, US$, per day)

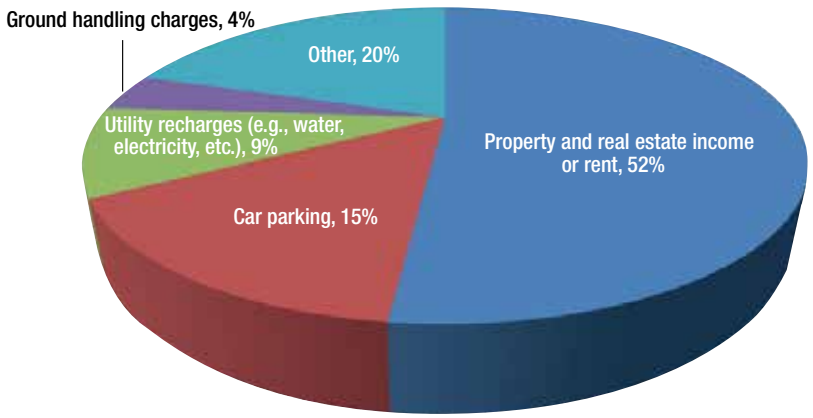


Source: ACI Airport Economics Survey (2014)

3.3.1.3 Revenues from airport-operated activities

In a relatively small number of cases, airports operate services such as ground handling, retail or food and beverage as direct activities, bearing all the costs of staff and raw materials/stock. Chart 59 shows the distribution of revenues from activities undertaken by the airport. The main source of revenue stems from rents on property (over 50%).

Chart 59: Distribution of revenues from activities undertaken by the airport (2013)



Source: ACI Airport Economics Survey (2014)

3.3.2 Trends in commercial activities

A key trend in airport commercial activities is the development of a more scientific approach to the way airport retail facilities are presented and the range of goods that are on offer. A coming challenge for many airports will be the extent to which local regulations make the sale of tobacco products more difficult or less obvious, and because this has been an important revenue source for airports in the past, the development and improvement of other revenue streams is even more important.

Airports have also become aware that a more holistic approach is needed to improve retail sales. While the range and quality of goods is important, it is also necessary for passengers to arrive in the retail area in a suitable frame of mind to wish to use the retail facilities. To this end, airports are working to improve a wide range of landside services and facilities, including car park shuttle services and check-in and security queuing times.

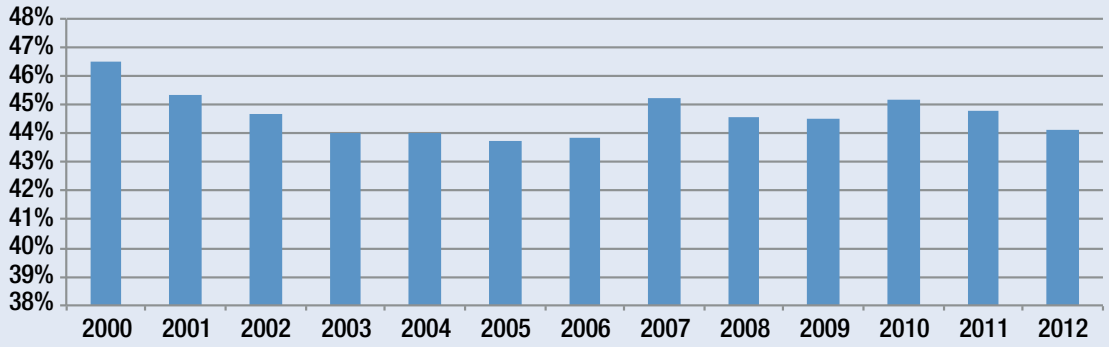
At a more sector-specific level, there are particular challenges for revenue from car parking and advertising. Airport car parks have always been subject to competition from off-site facilities, but increasingly they have to compete with public transport services that remove the need to access airports by car. Public transport for airport access, particularly trains, is seen as a means of reducing air pollution in the vicinity of airports, and the requirement to increase the proportion of airport passengers using public transport is often a planning condition for airport expansion and a feature of master plans.

Airport revenue from advertising has tended to decline in recent years because of the large increase in online advertising, which has had the effect of eating into advertising budgets that may themselves have been squeezed by general economic conditions. While advertising in airports is unlikely to reduce in quantity, rates may be expected to come under continuing pressure.

Box 3: Evolution of aeronautical versus non-aeronautical revenue

It is a widely held belief that non-aeronautical revenue is gaining increasing importance for airports. It is certainly true to say that retail facilities inside the terminals of many airports are becoming increasingly attractive and that airports are striving to provide more space within terminals for retail and food and beverage outlets. However, the chart below indicates that since the year 2000, non-aeronautical revenue as a percentage of total revenue has dropped.

Chart 60: Non-aeronautical revenue as a percentage of total revenue (2000–2013)



Source: Annual reports from a sample of 50 large international airports.

A number of factors may help to explain the trend illustrated in this chart. First, the events of 9/11 initially resulted in a fall in passenger numbers and a drop in the propensity to spend on the part of those passengers who still chose to fly because of an overall negative impact on passenger sentiment. As new and more rigorous security requirements were instituted, new security charges were introduced, boosting the share of aeronautical revenue. The new requirements often resulted in longer queues at security checks, which meant that although passengers may have felt more confident about flying, the amount of time available to them to use retail facilities was reduced.

The slight proportional decline in non-aeronautical activities is also attributed to weakness in Europe as a result of the Euro area crisis. While European airports alone generate over a third of global non-aeronautical revenue, the region has seen very little growth in this area since 2010. Therefore, although the stream of aeronautical revenue stayed relatively strong throughout the Euro area economic crisis, non-aeronautical revenue for European airports showed more sluggish growth at the aggregate level.

Finally, it is important to note that aviation activities are growing at a faster rate than non-aviation activities. The exponential growth in traffic at many major airports in emerging markets means that there has been greater investment in aeronautical activities. Naturally, corresponding aeronautical revenues rise in tandem as some or all the associated costs are reflected in user charges.

The airports represented in the chart above are a cross-section of airports around the world that handle 10 million passengers or more per annum. Thus, it can be expected that their retail facilities are relatively sophisticated and more attractive to passengers than those at most smaller airports. It may therefore be assumed that the share of commercial revenue shown in the chart is towards the upper end of the scale for the airport industry as a whole, although clearly there will be variations both by region and by airport size.

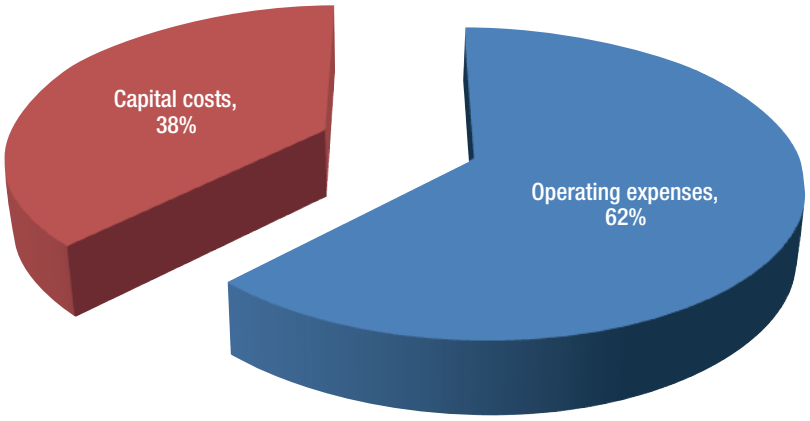
4. Airport costs

The airport cost structure is characterized by predominantly high fixed costs in the operation and maintenance of major infrastructure components, such as runways and terminal buildings. As airports in many regions of the world reach capacity due to growth in airport throughput, the expansion of such facilities inevitably increases the personnel expenses, maintenance costs, utilities and depreciation related to operating these fixed assets. Airports saw their total costs, operating expenses and capital costs increase modestly by 2.1% in 2013 compared to 2012. However, there is significant variation in costs from one region to the next. Africa and Europe saw declines in total costs of 3.7% and 2.5%, respectively, which is reflective of cutbacks and downward pressure on input prices in the weakened economies of the Euro area and Northern Africa. On the other hand, the Latin America-Caribbean region recorded the greatest gains in total costs from 2012–2013. This is mainly the result of the increase in capital costs within the region. The growth in costs for this region exceeded the growth in revenue in 2013.

4.1 Industry costs

Total airport costs can be divided between operating expenses and capital costs. Operating expenses make up 62% of total costs, with the remaining proportion designated to capital costs (see Chart 61).

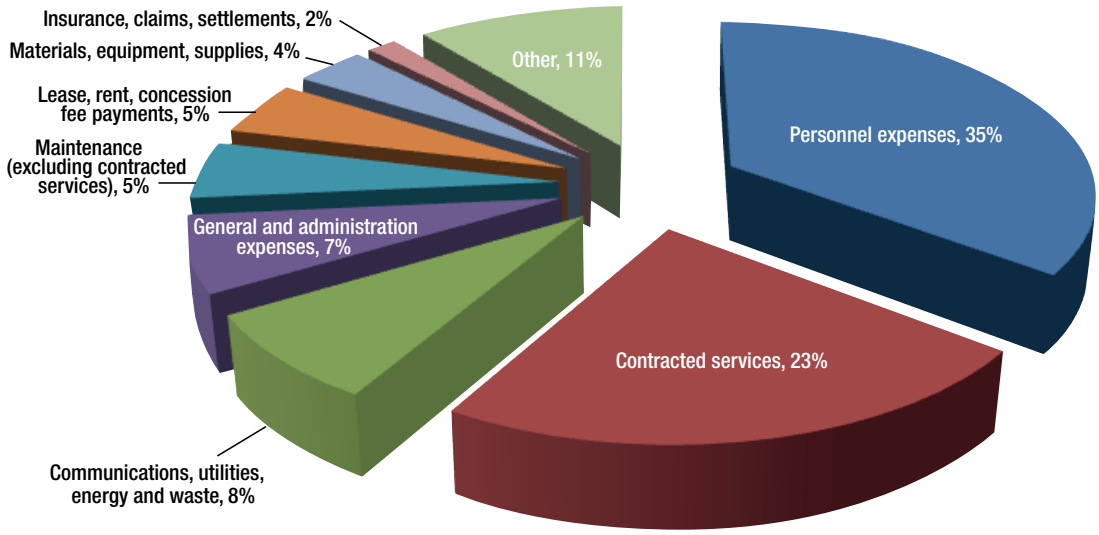
Chart 61: Distribution of total costs (2013)



Source: ACI Airport Economics Survey (2014)

The largest component of operating expenses continues to be personnel costs, which account for 35%. Contracted services, which are comprised of activities outsourced to third parties, represent the second-largest component of operating expenses. These services make up 23% of operating expenses. Personnel costs refer to salaries, pensions and other employment costs relating to an airport's staff. The extent to which an airport chooses to operate essential services using its own employees (insourcing) or by contracting services out to third parties (outsourcing) will inevitably affect the proportion of costs in the two main categories of operating expenses. Chart 62 presents the distributional breakdown of operating expenses.

Chart 62: Distribution of operating expenses (2013)

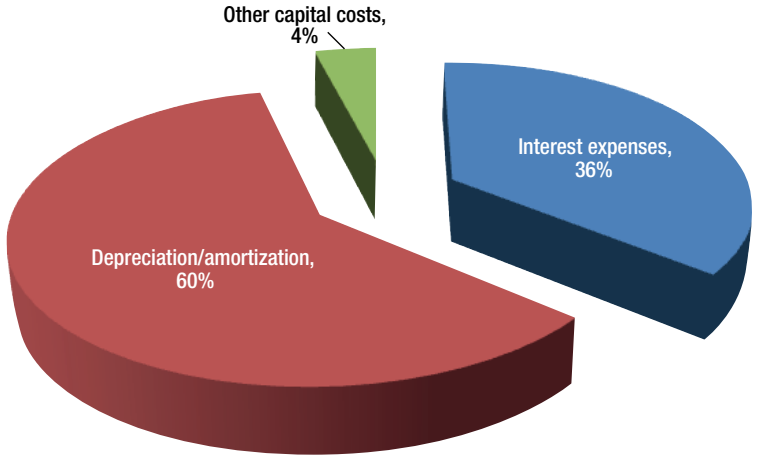


Source: ACI Airport Economics Survey (2014)

A facet of costs that has a significant impact on an airport's bottom line is capital costs. These costs include interest on outstanding debt and depreciation on airport infrastructure. When capital costs are taken into consideration within the overall cost structure, the significant weighting of depreciation as part of capital costs relative to operating expenses is indicative of the role that fixed assets and infrastructure play in the overall accounting of airports' costs.

Depreciation, which is the cost of a fixed asset allocated over time, makes up as much as 60% of capital costs and more than one fifth of all costs and expenses incurred by a typical airport. Chart 63 shows the breakdown of capital costs.

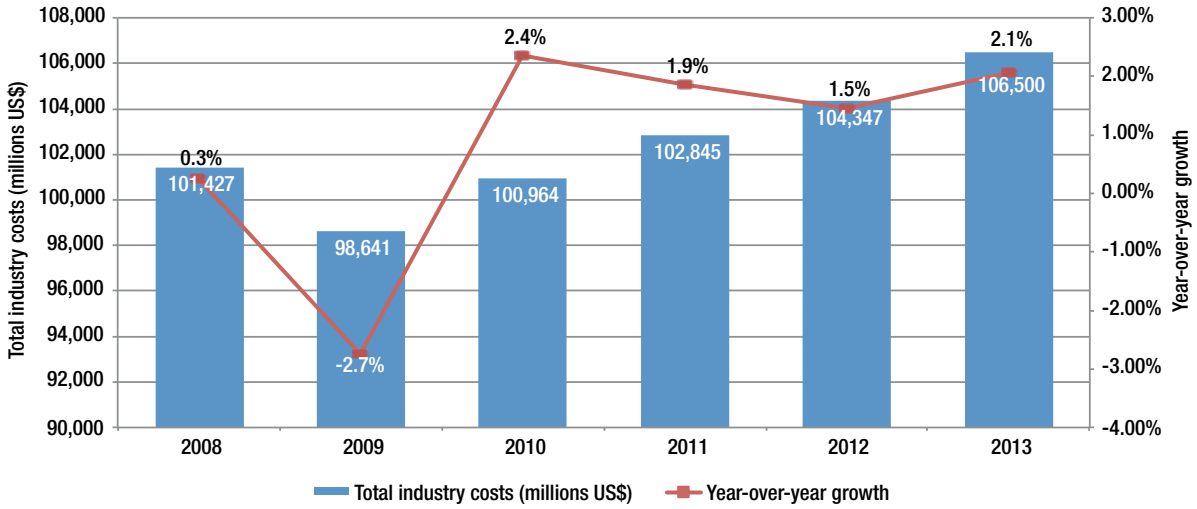
Chart 63: Distribution of capital costs (2013)



Source: ACI Airport Economics Survey (2014)

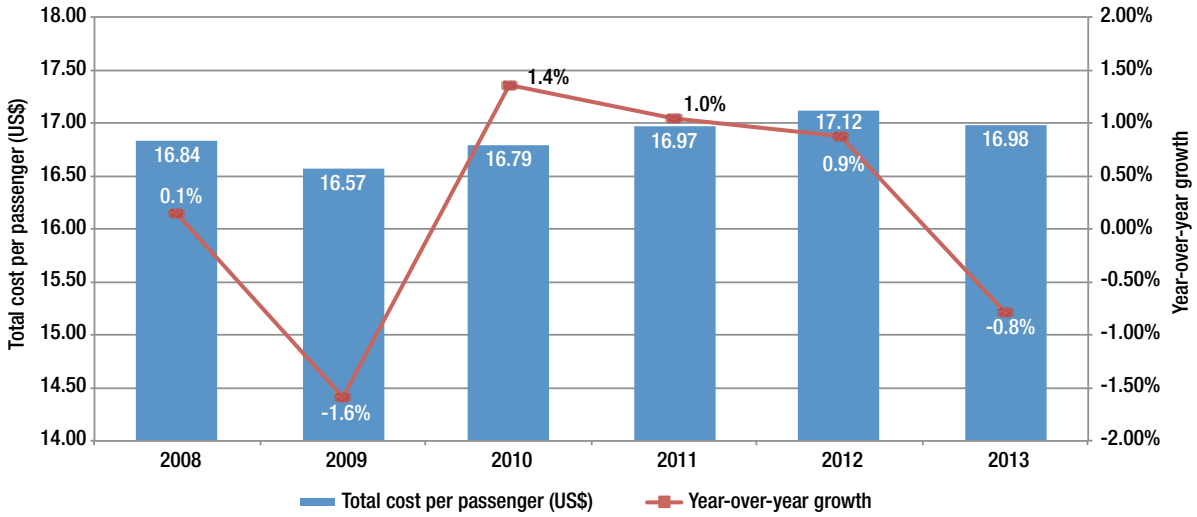
After adjusting for inflation, the evolution of industry costs demonstrates that only modest growth levels are apparent over the period of 2008–2013. In fact, by 2009 and following the Great Recession, industry costs dropped by 2.7% (see Chart 64). Unit costs on a per-passenger basis have remained relatively stable. Over the six-year period, compounded annual growth has hovered around 0%, which confirms the continued flatness in year-over-year growth.

Chart 64: Evolution of total industry costs and year-over-year growth (2008–2013, US$)



Source: ACI Airport Economics Survey (2014)

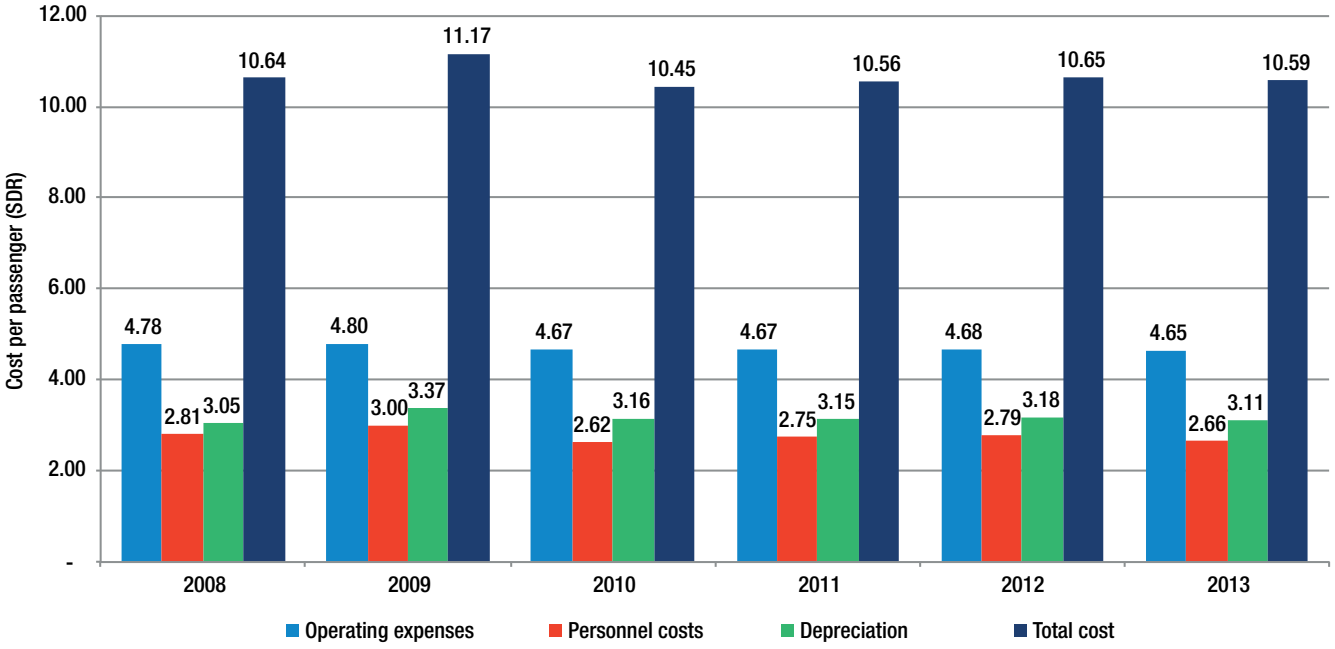
Chart 65: Evolution of total cost per passenger and year-over-year growth (2008–2013, US$)



Source: ACI Airport Economics Survey (2014)

A further breakdown of the data reveals the same story for a sample of airports. Chart 66 shows the recent evolution in various costs on a per-passenger basis, adjusted for inflation, at a cross-section of airports worldwide that handle 10 million or more passengers per annum. The data indicate that over the period 2008–2013, total airport costs expressed in real terms did not increase. There is no discernible trend in the data; there is a very small negative CAGR over the period, but this is too negligible to be an indication of a declining trend.

Chart 66: Evolution of airport costs per passenger (2008–2013, SDR*)



Source: ACI Airport Economics Survey (2014)

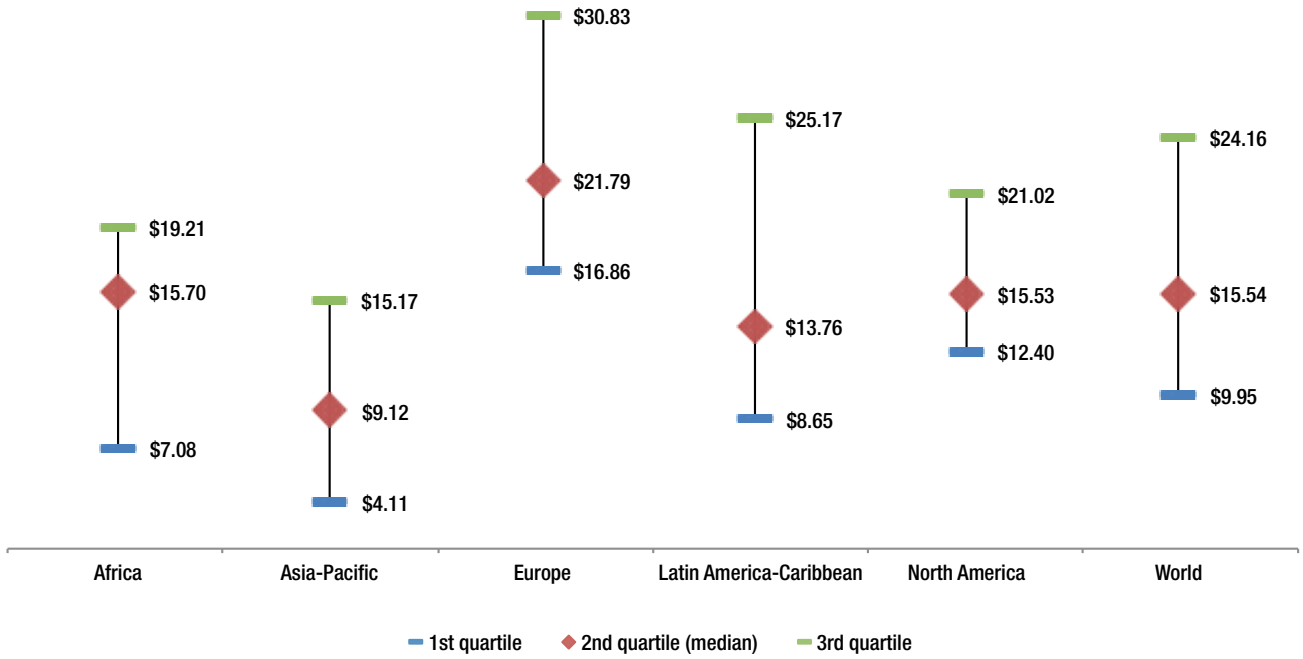
*SDR (Special Drawing Rights) is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies.

While the chart above shows a largely static relationship between the components of total costs, it is worth noting that the 2009 levels of personnel costs per passenger have not been reached since. This may suggest that costs had reached a level that became unsustainable once the financial crisis took hold and that airports took action in 2010 and thereafter to contain costs, both through staff rationalization plans and through cutting other operating expenses over which they had direct control.

4.1.1 The distribution of unit costs

Unit airport costs vary by geographical location. Moreover, airport costs not only contrast significantly across regions but also within certain regions. The greatest variation in unit costs may be found in the Latin America-Caribbean region, with total unit costs ranging from US$8.65–US$25.17 between the first and third quartiles. Costs are particularly high for small island airports in the Caribbean basin. Europe has the highest overall unit costs at US$21.79 per passenger for the median airport in the sample.

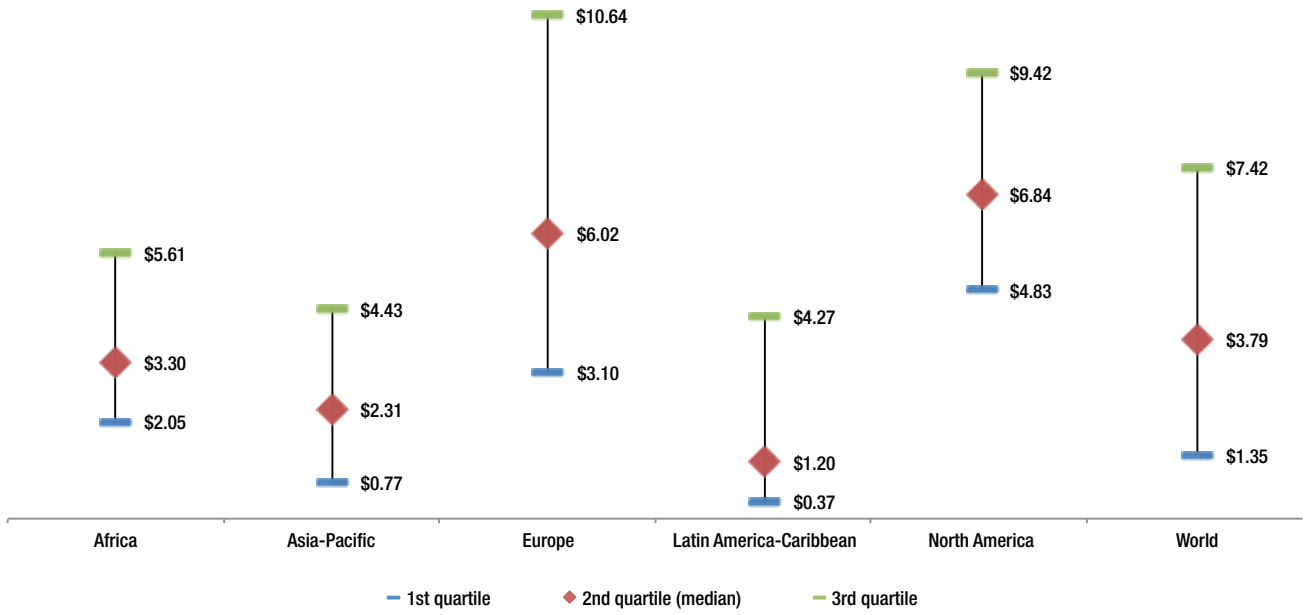
Chart 67: Total unit costs per passenger (2013, US$)



Source: ACI Airport Economics Survey (2014)

Meanwhile, North America has the least variation in total unit costs, with a range of US$12.40–US$21.02. In comparison to other regions, a relatively large component of North America's overall costs is devoted to capital costs. With a well-developed municipal bond market in the United States acting as a major source of airport finance, the interest expense component is relatively higher for North American airports (see Chart 68).

Chart 68: Capital costs per passenger (2013, US$)



Source: ACI Airport Economics Survey (2014)

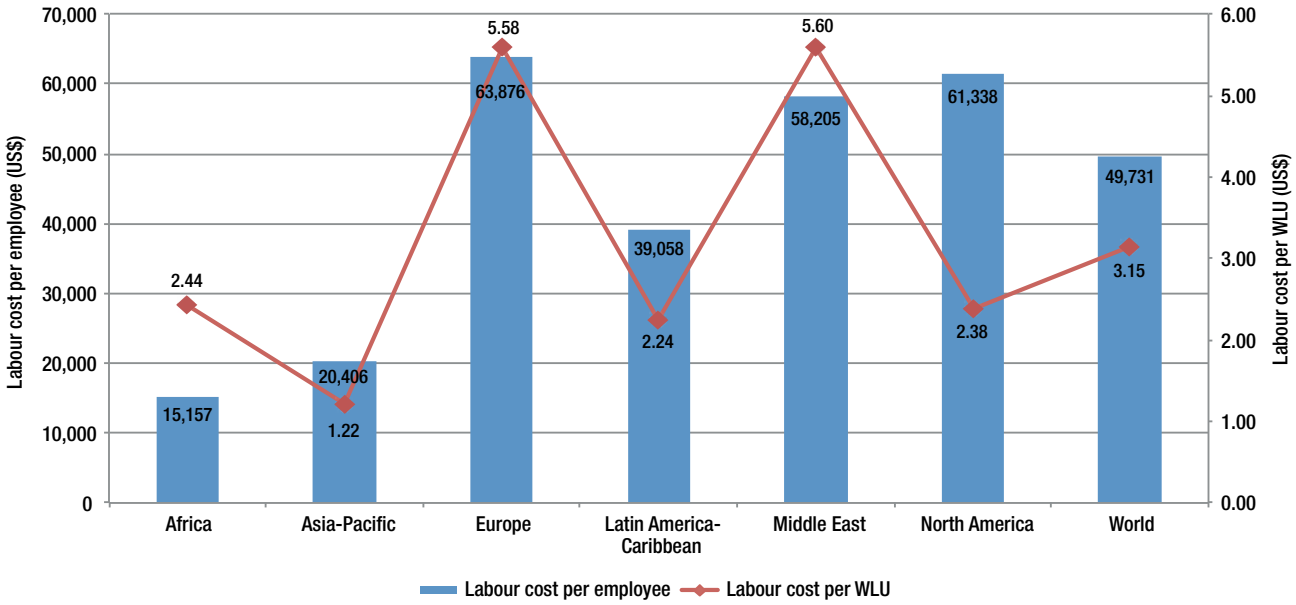
In general, the statistical distribution of unit costs is positively skewed (skewed to the right), implying that the right tail is longer and the mass of the distribution is concentrated on the left. In other words, a high proportion of airports have unit costs that are centred in the US$10–US$15 range. Unit costs extend out to as high as US$65 per passenger along the distribution curve, but this range of unit costs is for a fewer number of smaller airports.

4.1.2 Personnel costs and labour productivity

As in many other industries, personnel expenses—which are comprised of salaries and benefits—make up a substantial portion of the operating costs of many airports. In 2013, personnel expenses represented slightly more than one-fifth of total costs. With this in mind, the analysis of the relationship between personnel costs and corresponding labour output across the globe provides useful insights. Output per airport operator employee serves as a foundation measure of labour productivity. The WLU is a commonly used measure that combines passenger and cargo output. It is based on the assumption that, from a productivity point of view, handling one passenger is equivalent to handling 100 kilograms of cargo. Such an indicator should be approached with caution because not all airports offer the same services, and different services may be outsourced at different airports. Thus, the personnel associated with specific services may be outsourced.

Chart 69 shows the average labour cost per airport operator employee and per unit of output on a regional basis. Europe and North America have the highest labour costs with regard to salaries and benefits, at over US$60,000 per employee. On the other hand, labour cost per WLU is comparatively lower in North America (US$2.38) compared to Europe (US$5.58). There is a caveat to this difference in that airports in North America subcontract more activities than do airports in any other region worldwide, whereas European airports tend to outsource less compared to airports in other regions. Therefore, the pool of employees working for North American airport operators is smaller, which affects the denominator for this indicator.

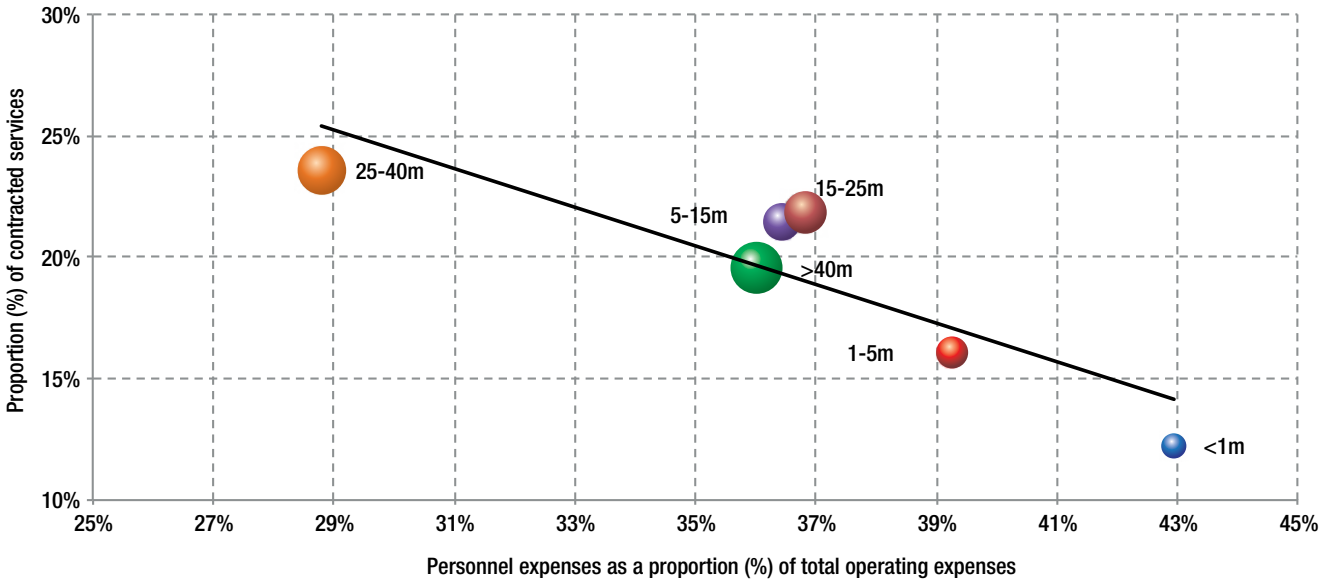
Chart 69: Labour cost per employee and unit of output (2013, US$)



Source: ACI Airport Economics Survey (2014)

Labour productivity and personnel costs also vary by airport size. On the whole, as airports expand in terms of market size beyond five million passengers per annum, the proportion of operating expenses devoted to contracted services tends to increase. In other words, the need to cater to a growing market tends to result in an increase in contracted services. These outsourced activities may include the cost of external contracts—for example, services such as maintenance, cleaning and, in some cases, security. Smaller airports tend to have a higher proportion of total expenses devoted to personnel costs. In Chart 70, there is a slight inverse relationship between the proportions of expenses devoted to contracted services versus personnel expenses. That is, the relative cost of contracted services increases relative to personnel costs. Airports with fewer than one million passengers (bubbles in Chart 70 correspond to airport size categories) have the highest proportion devoted to personnel expenses at 43% of total operating expenses, while only 12% is dedicated to contracted services for this category of airports. These percentages move in opposite directions for the different airport size categories.

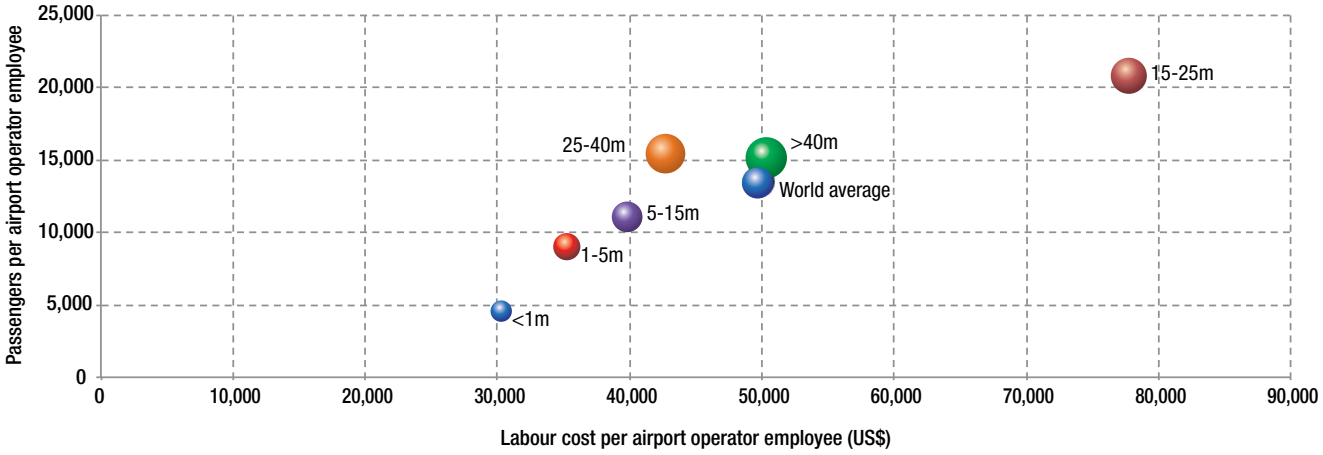
Chart 70: Relationship between contracted services and personnel expenses as a proportion of total operating expenses (2013)



Source: ACI Airport Economics Survey (2014)

Airports that incur a higher spend on labour or personnel also have greater output on a per-passenger basis. While there is some positive correlation between airport size, output and cost per employee, airports in the size category of 15–25 million passengers can be considered outliers (see Chart 71) in this analysis. Airports in this market size have both the highest labour cost per employee and the highest passenger output per employee. Many of these airports are working at full capacity in terms of inputs (infrastructure utilization and personnel) vis-à-vis outputs.

Chart 71: Relationship between airport output, labour cost and airport size (2013)

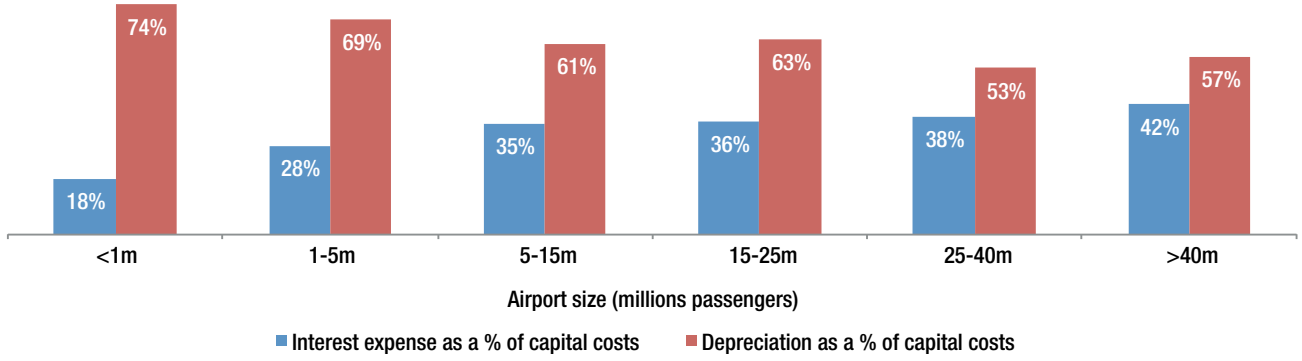


Source: ACI Airport Economics Survey (2014)

4.1.3 Capital costs

The fraction of capital costs apportioned to depreciation (see Box 4) tends to be greater for smaller airports. On the other hand, larger airports have relatively higher interest expenses compared to depreciation. Interest expense is often referred to as the cost of capital or the cost to finance certain airport activities or expansion. Airports serving larger markets often depend on bond markets and other instruments to finance or expand operations. As a result, the interest paid on those debt instruments represents a more significant proportion of capital costs. Smaller airports frequently rely on subsidies to finance their operations or financial shortfall beyond revenue. Chart 72 shows that as passenger markets grow, depreciation costs relative to interest expenses decrease (and vice versa).

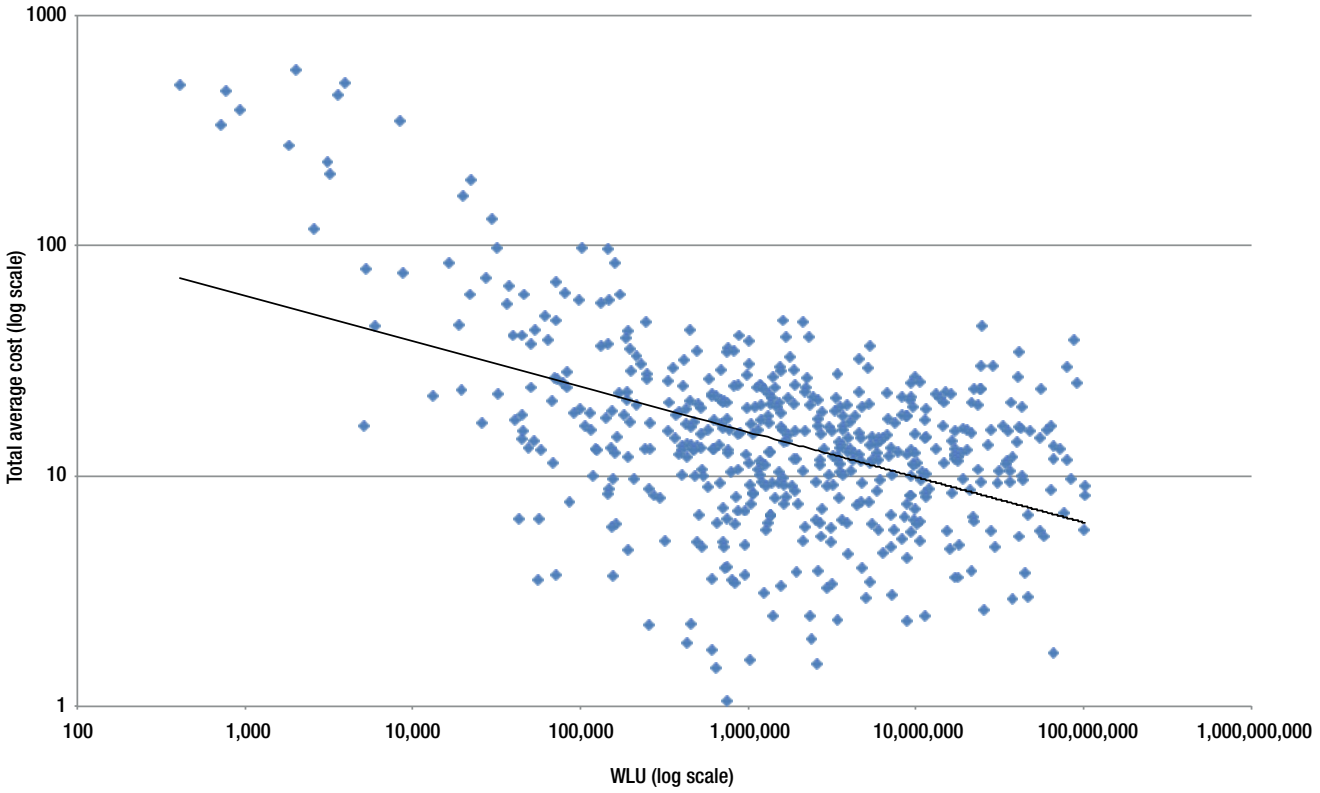
Chart 72: Depreciation and interest expenses as a proportion of capital costs (2013)



Source: ACI Airport Economics Survey (2014)

Moreover, airports that serve smaller markets tend to have higher overall costs on a per-passenger or per-WLU basis. Average total costs tend to decline with an increase in market size. Fixed costs (or capital costs), which are predominantly made up of depreciation and interest expenses, are spread over an expanding airport's throughput. Given that airports vary significantly in terms of both output and total average cost on a per-unit basis, Chart 73 depicts the inverse relationship between the two variables on a logarithmic scale. Consequently, the negative relationship between average costs and market size serves as a proxy indicator of the presence of economies of scale for this group of airports. Each point in Chart 73 represents an airport's unit cost corresponding to its traffic (i.e., market size).

Chart 73: Average total cost by market size (2013)



Source: ACI Airport Economics Survey (2014)

Box 4: Depreciation on fixed assets

Airport depreciation costs depend on the outlay of the assets, the residual value of the assets, the estimated useful life of the assets and the method of apportioning the cost over determined life periods.

To a large extent, the residual value of airport assets and the estimated useful life are functions of infrastructure utilization frequency and intensity. For example, a runway should in theory be amortized differently depending on the number of aircraft movements (frequency parameter) and the landed weight (intensity parameter). This is not accounting for differences in climate in various parts of the world, such as different ranges of temperature, precipitation levels, humidity, sun exposure and wind erosion. The quality and regularity of maintenance is another factor to be considered. Similar principles of utilization frequency and intensity are applicable to other airport assets, such as aprons, taxiways, terminal buildings and facilities.

The depreciation periods adopted and residual values assumed are often determined by an airport's financial policy, national legislation, international accounting standards or particular accounting conventions. Nevertheless, some airports have flexibility in determining the effective commercial life of their assets and their residual value at the end of their life cycles.

The idea of depreciating capital assets is based on two premises: (1) to allocate the cost of an asset over its useful commercial life and (2) to accumulate reserve funds to replace existing assets when they are no longer functional or productive at the required economic level.

If an airport is not able to cover its depreciation costs, it means that the airport is not generating enough revenue to renew its assets. As a result, its long-term viability is questioned.

The depreciation policies currently in use by different airports show significant variations in resultant depreciation costs. Additionally, most airports tend to have a mix of old and new infrastructure, with some assets nearing the end of their life cycles and others being recently built or acquired. Table 5 compares depreciation policies and the useful life of certain assets for selected airports.

Table 5: Useful economic life of key airport assets at selected airports

	Frankfurt (FRA)	Sydney (SYD)	Vienna (VIE)	Dallas/ Fort Worth (DFW)	Vancouver (YVR)	Miami (MIA)	Beijing (PEK)	Manchester (MAN)
Terminals and buildings	3–80	5–60	20–50	10–50	5–40	40	8–45	10–50
Runways, taxiways and aprons	7–99	6–99	20–60		3–30	30	40	5–75
Plant and machinery	2–30	14–20	5–20	3–30	5–15	5–16	5–15	5–30
Vehicles and equipment	4–20		2–10	2–20		5–16	6–12	3–10

Physical life of assets versus economic life of assets

Just like in any other capital-intensive business, it is essential to differentiate between the physical life of an asset and its economic or service life. The economic or service life of an asset refers to how long it will be useful for revenue-generating activities, whilst its physical life refers to how long it will function.

If built well, the physical life of key airport infrastructure, such as runways, aprons, taxiways and terminal buildings, can be very long. Indeed, evidence shows that many airports are able to provide service using very old infrastructure and equipment. However, this model might not be best as old infrastructure and equipment does not generate the maximum possible return. For example, older taxiway layouts might not be optimal for a given airport where traffic has increased significantly and rapid-exit taxiways are required to allow aircraft to leave the runway at higher speeds and vacate the runway faster, permitting the next landing or take-off operation in a shorter time. Similarly, older terminal buildings might not have sufficient space to establish non-aeronautical activities, which would be suboptimal in relation to airport revenue generation. It should be realized that if a certain piece of infrastructure shows signs of reaching the end of its economic life, it need not necessarily be demolished and replaced with a new one in order to maximize airport revenue. Extensive refurbishment or a change in use may extend the economic life of existing facilities. For example, older terminals can accommodate low-cost traffic after new terminals are built.

5. Airport profitability

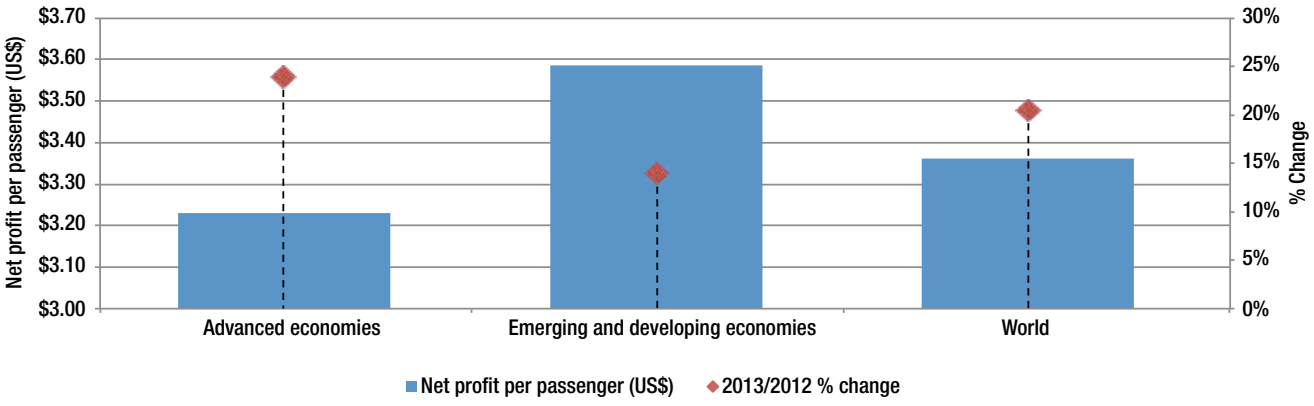
Measuring profitability is a complex task for the airport industry because of the diversity of capital structures that airports employ. While a number of airports are listed on stock exchanges across the globe, the highest proportion is government-owned. We know that an airport's ownership model has a direct impact on its capital structure, influencing the make-up of its invested capital and its major methods of financing. For example, government-owned airports use different methods of raising capital than airports that are publicly listed and traded on stock exchanges.

On the revenue side, airports are faced with heterogeneous regulations that vary from one region to another with regard to the fees they may charge users of infrastructure. Accordingly, the propensity to generate revenue differs across airports depending on the jurisdictions in which they operate. Although some airports are geared towards profit maximization, others are mandated purely to recover the costs of providing airport services and infrastructure. For instance, airports in the United States are owned by local governments and are financed by local government or municipal bonds. The objective of airports and local governments in the United States is primarily to generate local economic benefits as opposed to generating a high return on investments. Given that airports may differ along an array of dimensions, caution should always be taken with aggregate-level indicators. Thus, in addition to global indicators, airports are also analyzed by region, airport size and other economic groupings to allow greater comparability and granularity.

5.1 Net profits in 2013

From a pure accounting perspective, net profit is defined as the difference between total revenue (aeronautical, non-aeronautical and non-operating revenues) and total costs, which includes total operating expenses, capital costs and taxes. From 2012–2013, there was an overall increase in net profits by 24%. The year-over-year growth is explained by the fact that the relative increase in costs grew at a slower rate compared to revenue in 2013. Furthermore, the net profits of airports located in advanced economies grew at faster rates than those of airports in emerging markets, although airports in emerging markets earned more net profits on a per-passenger basis (see Chart 74). At the global level, net profits per passenger grew by 20% to US$3.35 in 2013.

Chart 74: Net profit per passenger (2013)



Source: ACI Airport Economics Survey (2014)

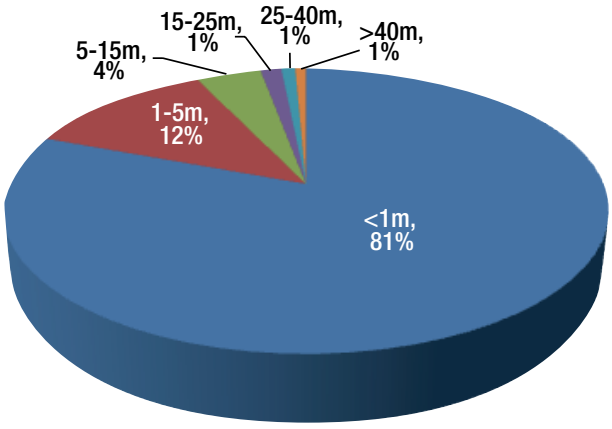
5.2 Airport profitability and airport size

While a single measure of global airport profitability provides a good barometer of industry health, it often masks the important nuances and industry facts crucial for evidence-based policy decisions.

The challenge remains that most airports in the world are small, with high traffic volumes concentrated in only a handful of airports. Therefore, the airport industry faces a conundrum. While the airport industry as a whole is profitable, a significant number of airports are actually in the red on their financial statements. The latest estimates suggest that as many as 69% of airports worldwide operate at a net loss. Most of these airports are small in that they have less than one million passengers per annum. Therefore, industry profitability is concentrated among airports with higher throughput.

Chart 75 displays the estimated proportion of airports in each airport size category. The chart shows that an estimated 81% of the world's airports with scheduled traffic have less than one million passengers per annum.

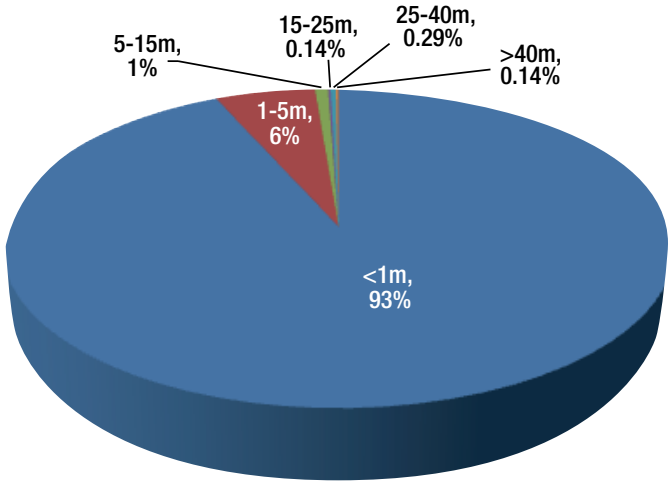
Chart 75: Distribution of airports by airport size – passenger traffic (2013)



Source: ACI Airport Economics Survey (2014); Simulation based on Official Airline Guide (OAG) scheduled seats (2013);

The interplay between market size, costs and the presence of economies of scale has important implications for an airport's bottom line. Generally, due to this cost structure, airports that have low annual throughput operate in a context where total costs exceed total revenue. Thus, while the airport industry as a whole reports a healthy ratio of outstanding debt to operating income (EBITDA) and net profit margins, the earning propensity is concentrated principally among airports achieving a certain critical mass of passenger and cargo traffic. However, the fact that a significant proportion of the world's airports serve markets of fewer than one million passengers means a majority of airports actually operate at a loss (See Box 5). As a result, the notion that net profits have grown, as was illustrated in Chart 74, may provide an inexact picture of the industry. In essence, the true underlying picture of the industry has to do with the fact that the net profits of a minority of high-traffic airports significantly exceed the net losses of the majority of airports. Chart 76 shows that of the airports that had net losses in 2013, 93% had fewer than one million passengers.

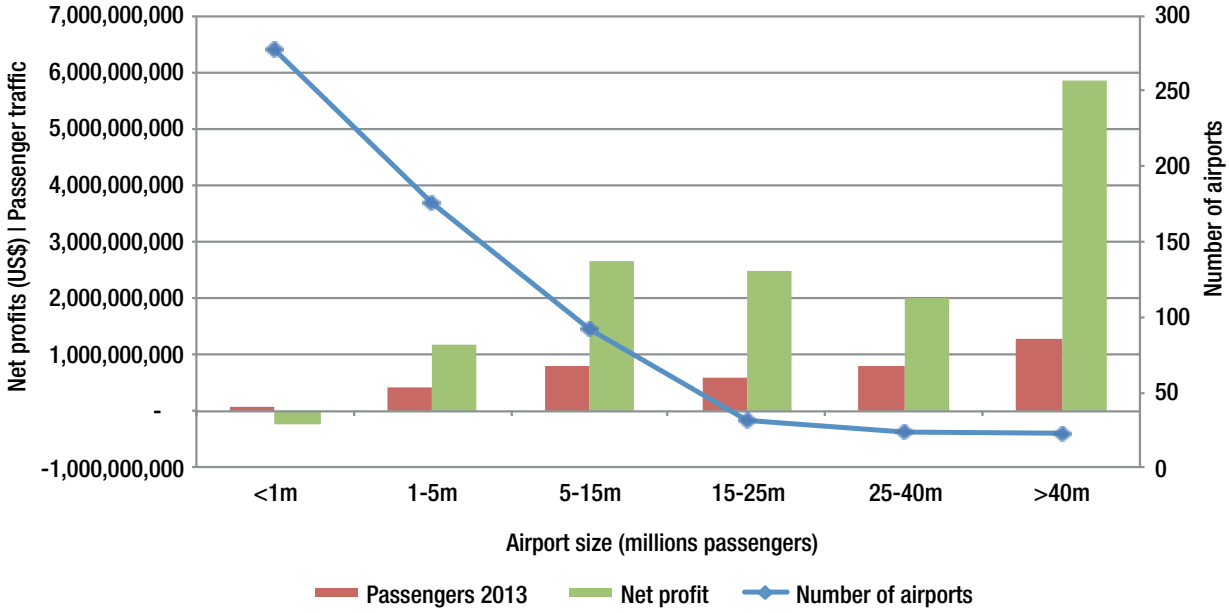
Chart 76: Distribution of airports with a net loss by airport size – passenger traffic (2013)



Source: ACI Airport Economics Survey (2014); Simulation based on Official Airline Guide (OAG) scheduled seats (2013);

Based on a sample of 624 airports, Chart 77 shows that actual net profits are highly concentrated among airports with over one million passengers. The highest category of airports (more than 40 million passengers) has the highest proportion of net profits and traffic. Conversely, the airports with lower levels of net profits, which make up a majority of airports, also have less traffic per annum.

Chart 77: Net profits and airport size (2013)

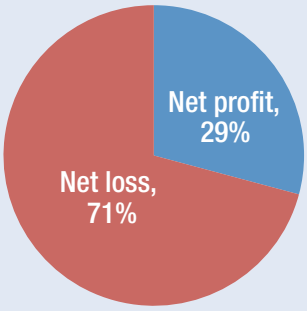


Source: ACI Airport Economics Survey (2014)

Box 5: Size matters in the airport business

Typically, airports that are gateways to centres of commerce or major tourist destinations, or that are situated in strategic geographic areas for connecting traffic, often have the lion's share of their respective countries' passenger and air cargo traffic. Smaller airports have neither sufficient traffic to drive down costs and achieve economies of scale nor to generate significant aeronautical revenue or commercial opportunities. Given that airports are asset-intensive businesses, they require large minimum investments just to accommodate a single landing. For example, an airport with a single runway can accommodate from one to over 30 million passengers (e.g., London Gatwick). Thus, there is a critical mass that must be achieved before airports can start recovering the large operating costs and infrastructure investments. This is true for the industry as a whole, irrespective of the region where the airport is located, the ownership model that governs it and the regulatory till. The reason smaller airports remain in operation hinges on the idea that they contribute to the local, social and economic development of the surrounding communities. Because these positive externalities are not fully internalized, government intervention in the form of subsidies or grants helps to cover the shortfall or deficits. In the case of major airport operators around the globe, profitable airports tend to cross-subsidize or compensate net losses of smaller airports.

Chart 78: AENA – proportion of airports with net profits (2013)

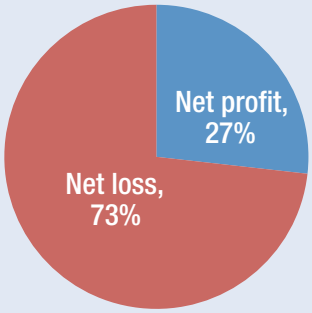


Source: adapted from AENA public financial statements (2014)

The charts below and to the left show the profitability of various national airport systems from all over the world. In each case, a minority of large airports usually turn a net profit while smaller airports in a given country suffer a loss. In the case of Spain-based AENA S.A., one of the world's major airport operators, only 29% of its airports have a net profit before taxes (see Chart 78). As can be seen, the busiest airports tend to generate the highest profits.

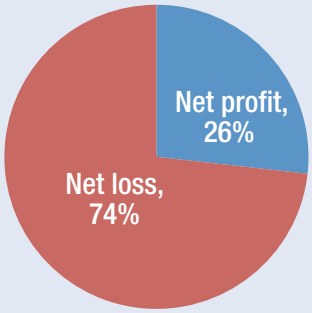
According to the China Civil Airports Association (CCAA), among the 183 airports in China in 2012, approximately 134 were in a loss position (see Chart 79). Similarly, the Airports Authority of India (AAI) manages 125 airports, 93 of which are loss making (see Chart 80). Finally, the major Brazilian airport operator, Infraero, is just shy of having one third of its airports making a net profit (see Chart 81). The culminating point of these representative examples is that the typical airport operator appears profitable on aggregate financial statements, but in fact, most airports managed by airport operators suffer losses. This is a risk that operators bear.

Chart 79: CCAA – proportion of airports with net profits (2012)



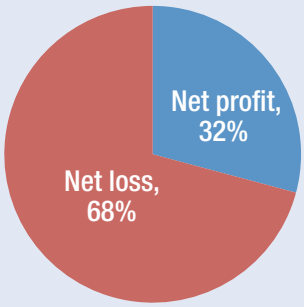
Source: adapted from CCAA - Development Report on China Airports (2013)

Chart 80: AAI – proportion of airports with net profits (2013)



Source: adapted from AAI (2014)

Chart 81: Infraero – proportion of airports with net profits (2013)



Source: adapted from Infraero (2014)

5.3 Profitability measures

Airport profitability can be examined using various measures. Profitability measures sometimes vary both in terms of calculation and interpretation. Accounting standards and methodologies aimed at calculating these profitability indicators vary not only across jurisdictions but also across companies and industries. Care should always be taken in explaining the nuances of different profitability indicators.

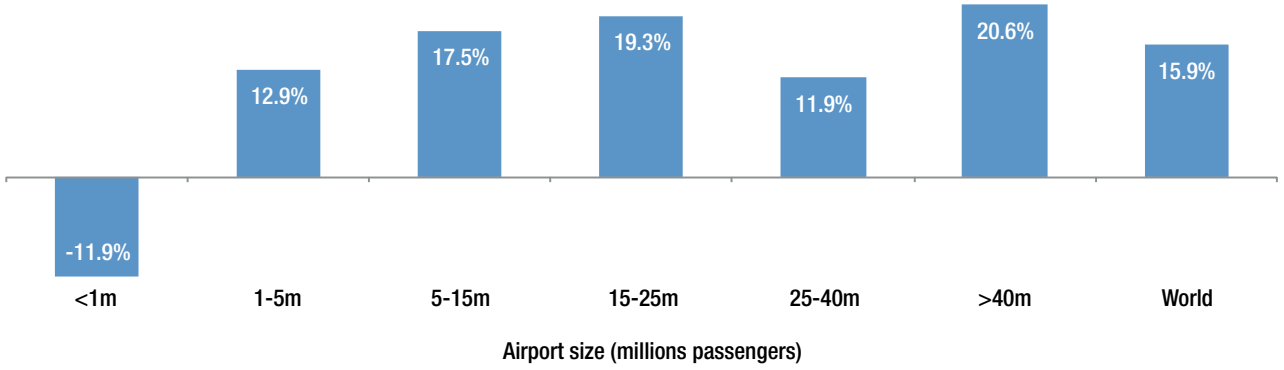
5.3.1 Net profit margin

Ultimately, from an investor's point of view, the net profit margin is an important indicator of how efficiently an airport operator is managed after taking into consideration expenses, capital costs and taxes. Because this ratio is the end result of an airport's operations for any given period, it effectively summarizes in a single measure management's ability to run the business. A higher margin or revenue in excess of costs indicates higher profitability and therefore is more desirable from an investment standpoint.

Again, airport size plays an important role in determining profitability. In order for airports to achieve economies of scale, evidenced by declining average cost curves, total costs need to be spread over the airports' outputs (i.e., passengers, cargo and movements). At a given airport, this can only be achieved with significant traffic throughput. Consequently, smaller airports with fewer than one million passengers tend to have negative margins. Taking into consideration capital costs and taxes, Chart 82 summarizes final net profit margins by airport size.

Airport margins increase as airport markets expand in terms of traffic, although a slight decrease in margins is observed for airports serving 25–40 million passengers per annum. Finally, margins peak again for airports serving a market of more than 40 million passengers. On a global level, margins are at almost 16% for the industry.

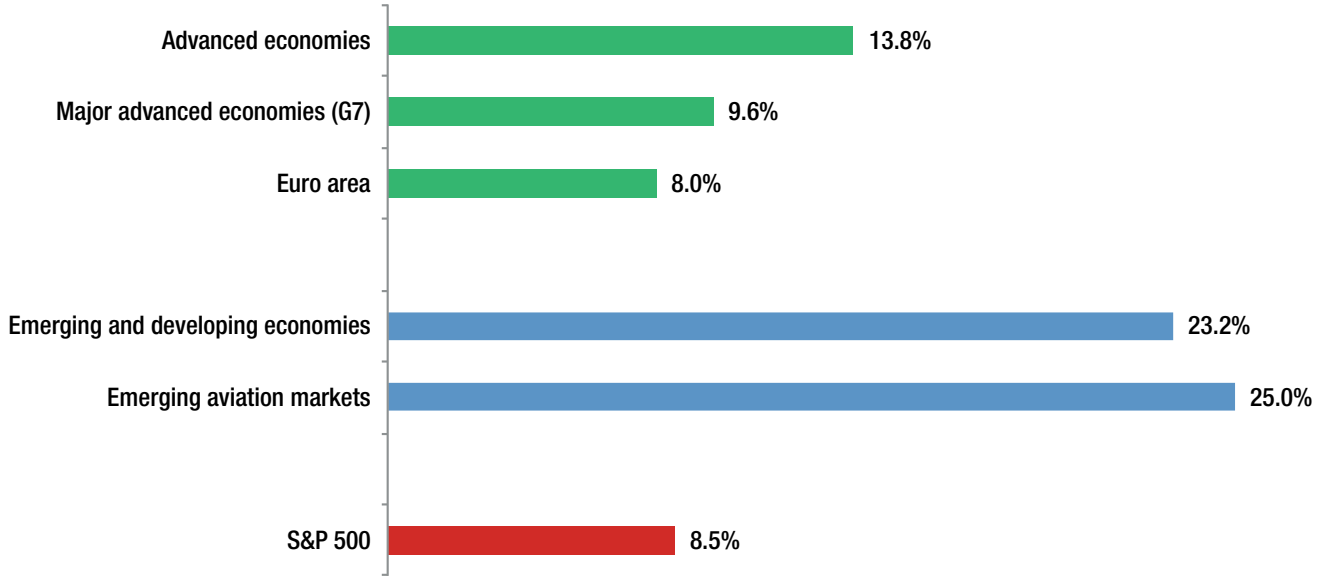
Chart 82: Net profit margins by airport size (2013)



Source: ACI Airport Economics Survey (2014); adapted from Bloomberg (2015)

Because of the high growth in traffic, and therefore revenue, in emerging and other developing economies, margins tend to be significantly higher in these markets. Margins at these airports are in the realm of 23%. On the other hand, airports in more mature markets, such as those in advanced economies, have margins in the realm of 13.8%. There is a marked variance worldwide not only from the perspective of airport size but also from the perspective of various economic groupings. As an additional point of reference to other industries, the Standard & Poor's 500, which consists of 500 large companies listed on American stock exchanges, has an estimated overall profit margin of 8.5% for the group of companies.

Chart 83: Net profit margins by selected economic groupings (2013)

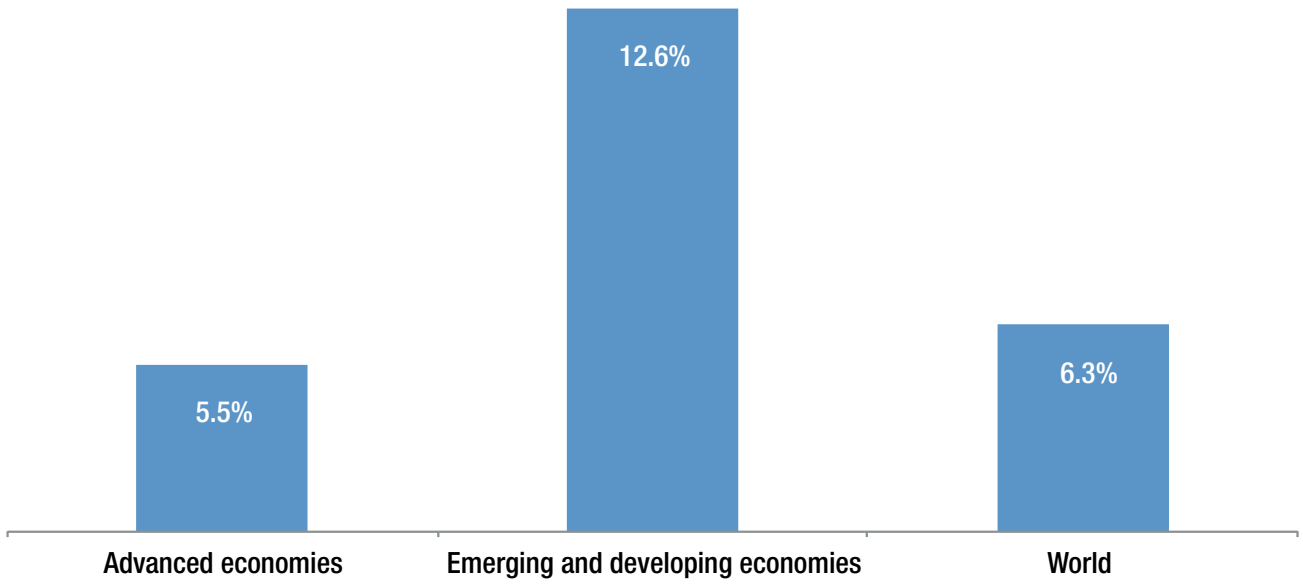


Source: ACI Airport Economics Survey (2014); adapted from Bloomberg (2015)

5.3.2 Return on invested capital

Return on invested capital (ROIC) is a measure that combines almost every element of an airport's income statement and balance sheet. It is a more robust measure of profitability because it not only considers the effective management of total revenues and total costs for a calendar year but also includes invested capital within a single measure. From an investor's point of view, ROIC measures the payment that both debt and equity holders would receive by providing their capital. In the case of equity holders, this is the return for bearing the risk. Thus, although net profit margins appear high in Section 5.3.1, this earlier measure of profitability does not capture the huge investments that must be made for this infrastructure-intensive business. Actual returns are considerably lower across the industry when examined through the lens of this measure. A global ROIC of 6.3% was calculated for the industry as a whole in 2013.

Chart 84: Return on invested capital (2013)



Source: ACI Airport Economics Survey (2014)

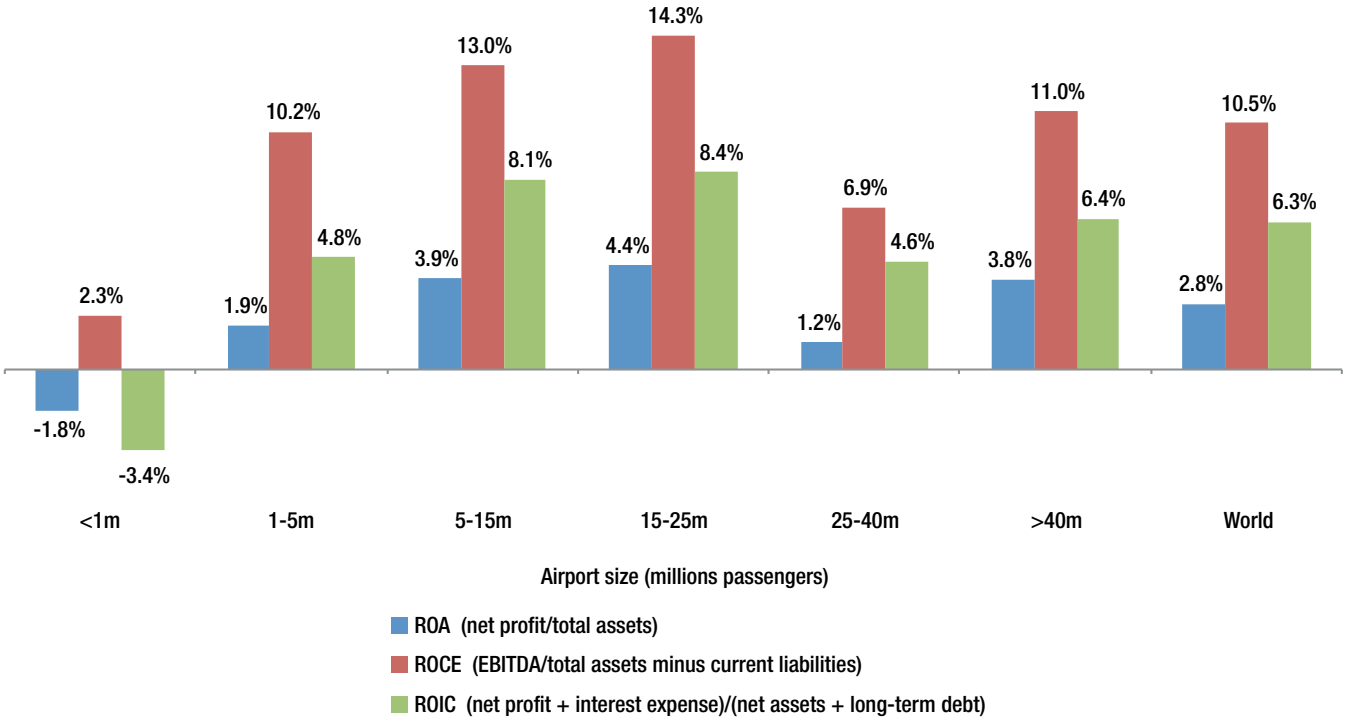
5.3.2.1 Comparative returns

Whereas ROIC will address the relative return from net profits before interest as a proportion of invested capital (net assets + long-term debt), return on assets (ROA) is used to analyze net profits relative to total assets. While both measures indicate a company's ability to generate final net profit (after taxes) for every dollar invested, ROA does not take into consideration the liabilities on an airport's balance sheet. As a result, these returns are lower compared to the ROIC.

The indicator return on capital employed (ROCE) addresses the return on earnings before interest, taxes, depreciation and amortization (EBITDA). ROCE examines an airport's facility in generating returns from operational activities independent of taxes, fixed costs and capital costs. The principal difference between ROA and ROCE lies in the denominator. ROA uses total assets as its denominator, while ROCE relies mainly on net assets in the calculation.

Chart 85 illustrates the three measures by airport size. Returns peak for airports in the 15–25 million passenger range for all three measures. In 2013, the three measures of return (ROA, ROCE and ROIC) for this airport size were 4.4%, 14.3% and 8.4%, respectively. As with their net profit margins, airports with fewer than one million passengers exhibit low ROCE; in this case, the average ROCE is 2.3%. After interest, taxes and depreciation, ROA and ROIC are in negative territory. In other words, their returns represent an actual economic loss.

Chart 85: ROA, ROCE and ROIC by airport size (2013)



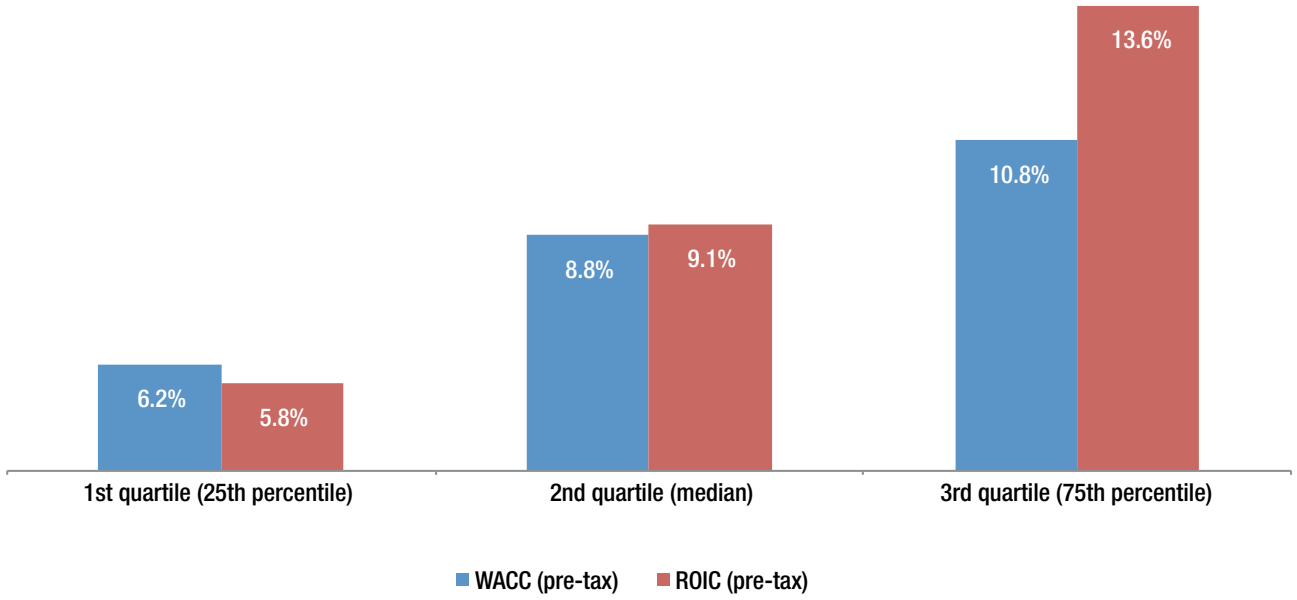
Source: ACI Airport Economics Survey (2014)

5.3.2.2 Return on invested capital and the weighted average cost of capital

ROIC by itself does not tell the full story of financial performance and efficiency. Only when it is compared to weighted average cost of capital (WACC) does it offer meaningful results. WACC essentially serves as a measure of the opportunity cost of an alternative investment with a similar risk profile. Thus, it can be viewed as the expected return on investing in airports, both from the perspective of equity holders and debt holders. ROIC is the actual return. If ROIC exceeds WACC, there is value creation in the form of real positive economic profits. In contrast, ROIC that falls short of WACC is indicative of economic losses.

Chart 86 compares WACC with ROIC for a selected number of airports that have provided available data. In this case, both WACC and ROIC are examined before taxes for the sake of comparability. WACC in Chart 86 is based on a sample of 39 airports, varying in size and located in Asia-Pacific, Europe, Latin America-Caribbean and North America. Real pre-tax WACC in Chart 86 may be derived from three possible sources: WACC that is allocated by regulators; WACC that is specified in concession agreements or WACC that is calculated directly by airport operators. The median value in the sample reveals pre-tax WACC of 8.8%, while median pre-tax ROIC is almost 9.1%, showing that ROIC is just slightly above opportunity cost (WACC).

Chart 86: Weighted average cost of capital versus return on invested capital (WACC versus ROIC, 2013)

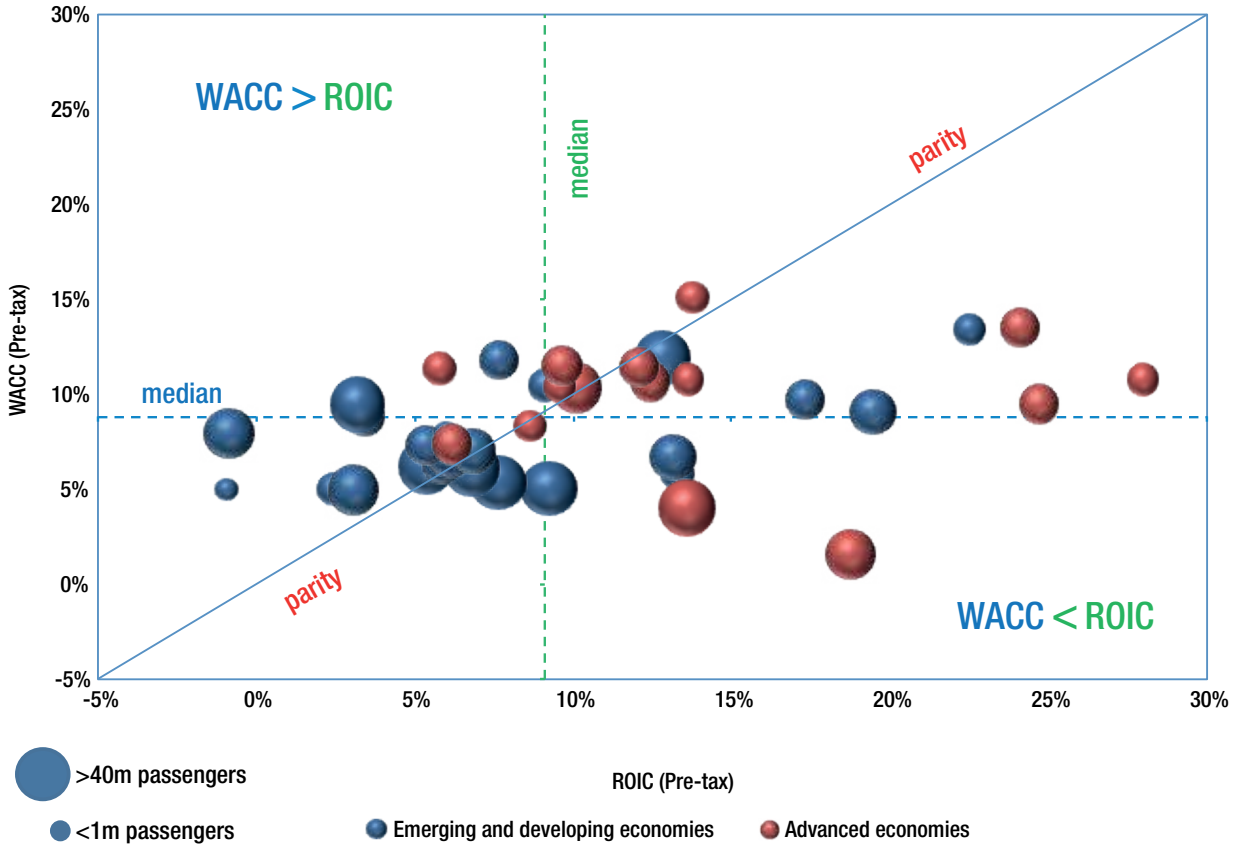


Source: ACI Airport Economics Survey (2014)

Chart 87 presents actual airport data for WACC and ROIC. The diagonal parity line is where WACC equals ROIC. Anything below this line means that ROIC exceeds WACC, suggesting that the airport or operator is generating real economic profits before taxes. Values above the parity line indicate that the airport operator is generating economic losses, in that ROIC is less than WACC.

The bubbles in Chart 87, which vary in magnitude, represent actual airports in terms of passenger traffic. While it is established that larger airports tend to be more profitable than smaller airports, there is no clear link between airport size and WACC and ROIC based on the data in Chart 87. Median ROIC is just slightly greater than the corresponding WACC. This point of intersection almost touches the parity line in Chart 87, which indicates that the return is almost equal to the opportunity cost. However, a deeper analysis shows that 11 of 14 emerging market airports have ROIC that either equals or exceeds WACC. In contrast, a smaller proportion of airports in advanced economies (10 of 25 airports) have ROIC that either equals or exceeds WACC.

Chart 87: WACC versus ROIC (2013)



Source: ACI Airport Economics Survey (2014)

5.4 Profitability, productivity and diseconomies of scale

In earlier sections, it was established that airports with fewer than one million passengers need to achieve economies of scale to become profitable. Another way of looking at this is that in order to recover costs, greater productivity needs to be achieved vis-à-vis an airport's fixed assets. This is why the returns on invested capital tend to increase as fixed asset productivity increases. However, at some point along the continuum, particularly in high-growth markets, air transport demand outpaces actual airport capacity. The result is a bottleneck. After various financing, environmental and regulatory issues are considered, airports are left with having to decide whether or not to expand to meet their growing demand. Expansion may involve a new terminal building or a new runway, among other investments. The additional cost and capacity creates diseconomies of scale in the short run for a given level of traffic. Based on a sample, airports that have 15–25 million passengers per annum are typically utilizing their infrastructure to capacity. On the other hand, airports in the higher level category of 25–40 million passengers have more infrastructure capacity on average, such as larger terminal areas. In many cases, the larger facilities aim to accommodate not only existing traffic but also the growing demand for

the future. In the short run, however, this may result in excess capacity that, in effect, reduces fixed asset productivity. As traffic expands again to over 40 million passengers per annum, economies of scale are once again achieved. Charts 88, 89 and 90 show a number of indicators where fixed asset productivity declines after 25 million passengers per annum and increases again after 40 million passengers. It should also be noted that revenue on a per-passenger basis decreases from US$22.14 for airports with 15–25 million passengers to US$19.33 for airports with 25–40 million passengers. The end result is some variability in ROIC in this range of airports, as summarized in Chart 85. That is, ROIC for airports working at capacity (15–25 million passengers) is 8.4%, whereas airports that have excess capacity in the short run (25–40 million passengers) have a return of 4.6%. Airports with over 40 million passengers have ROIC of 6.4%.

Establishing the empirical link between infrastructure utilization and profitability over time is an area that requires further research. This will deepen the understanding of economies of scale and diseconomies of scale, as well as the impact this has on an airport's bottom line. Such research will help guide future investment decisions in terms of infrastructure based on forecasted air transport demand.

Chart 88: Passengers per gate (2013, per day)

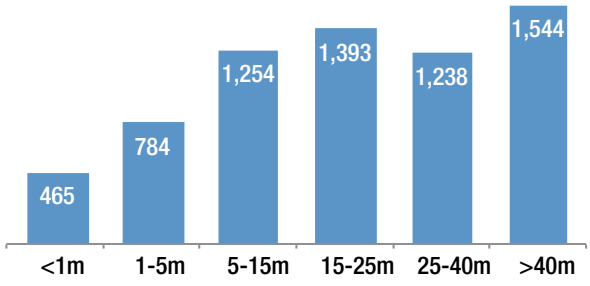


Chart 89: Passengers per check-in desk (2013, per day)

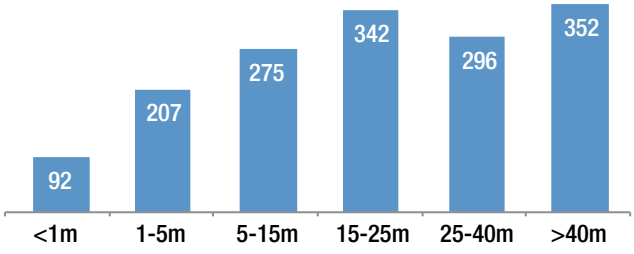
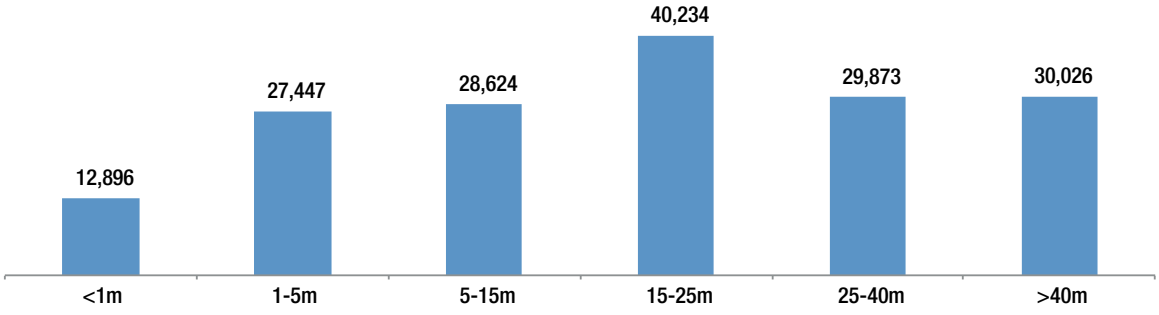


Chart 90: Passengers per square meter of terminal space (2013)



Source: ACI Airport Economics Survey (2014)

6. Airport regulation and ownership

6.1 Regulation

Any discussion of airports' revenue and profitability would be incomplete without considering the role played by economic regulation. Not only do airport managers face multifaceted challenges in the areas of safety, security and the environment, but they must also often comply with economic regulations that govern the pricing of airport services. In some sense, it could be argued that the regulations that govern airport revenues are precursors for financial performance.

Whilst the airport industry is characterized as having high barriers to entry, which include significant capital and infrastructure costs, airports also face increasing competition from other airports and other modes of transportation. Many airports compete for connecting traffic, be it domestic or international. In some regions, airports not only compete with one another for connecting traffic but also with airports in other world regions. One example of this is the competition between intercontinental European hubs and those in the Middle East for passenger flow between Europe and Asia. Thus, the crafting of regulatory schemes should always have this context in mind. In essence, airport operators must have a guarantee of not only allocative efficiency in the management of resources and revenues but also of the long-term sustainability of their operations.

6.1.1 Regulatory tills

The regulatory model not only determines an airport's business in terms of the structure and magnitude of its revenues, but also the resulting economic health and performance of its operator. The treatment of non-aeronautical revenue is one of the key aspects of the regulatory debate with respect to airports. The policy question raised is whether that revenue, or at least the net profit from that revenue, should contribute to aeronautical costs. This is commonly referred to as the "single till versus dual till" debate. The main principle behind the single till approach has to do with limiting a given airport's market power in setting aeronautical charges. Alternatively, a dual till approach creates incentives for airports to develop their commercial activities independently of their aeronautical activities.

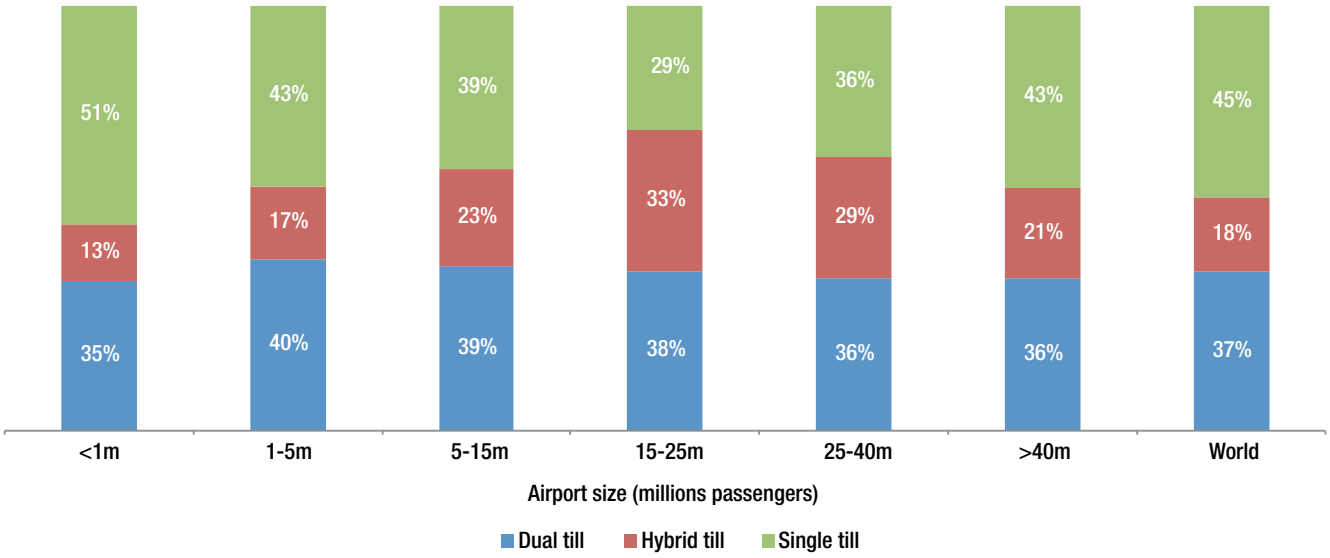
A single till approach regards all airport revenue as being available for calculating airport charges. When non-aeronautical revenue is included in the cost base for airport charge calculations, it creates an artificial constraint on the airport company. Essentially, a single till approach amounts to a subsidy for an airport's aeronautical activities and effectively becomes a subsidy for the airlines using the airport.

In contrast, the dual till system divides the airport's aeronautical and non-aeronautical business into distinct income and expenditure accounts. This ensures that the income from the aeronautical side of the business (i.e., landing fees, security costs, passenger charges and departure fees) is used for aeronautical expenditures, such as runway repairs and terminal development. This leaves the airport's non-aeronautical income to provide for non-aeronautical expenses (e.g., building new car parks and expanding the retail sections of a terminal) and to generate profits for the operating company.

Governments sometimes advocate a hybrid model. This departure from the single till model allows aeronautical fees to be partially subsidized by commercial or non-aeronautical revenue to keep regulated tariffs lower than would otherwise be the case. For example, under the hybrid till model, the airport owner/operator may choose to recover landing costs on the basis of the single till approach while establishing terminal costs on the basis of the dual till approach.

Chart 91 shows the proportional breakdown of airports by regulatory till and airport size. In general, there are no significant differences across airport size categories. With respect to airports serving fewer than one million passengers per annum, 51% operate under a single till regime. On the other hand, we see very little variation with respect to the proportion of airports with a dual till revenue structure. The proportion of airports listed as dual till ranges between 35% and 40% across the various size categories. Based on the entire sample of data, the proportion of airports that are dual till, hybrid till and single till is 37%, 18% and 45%, respectively.

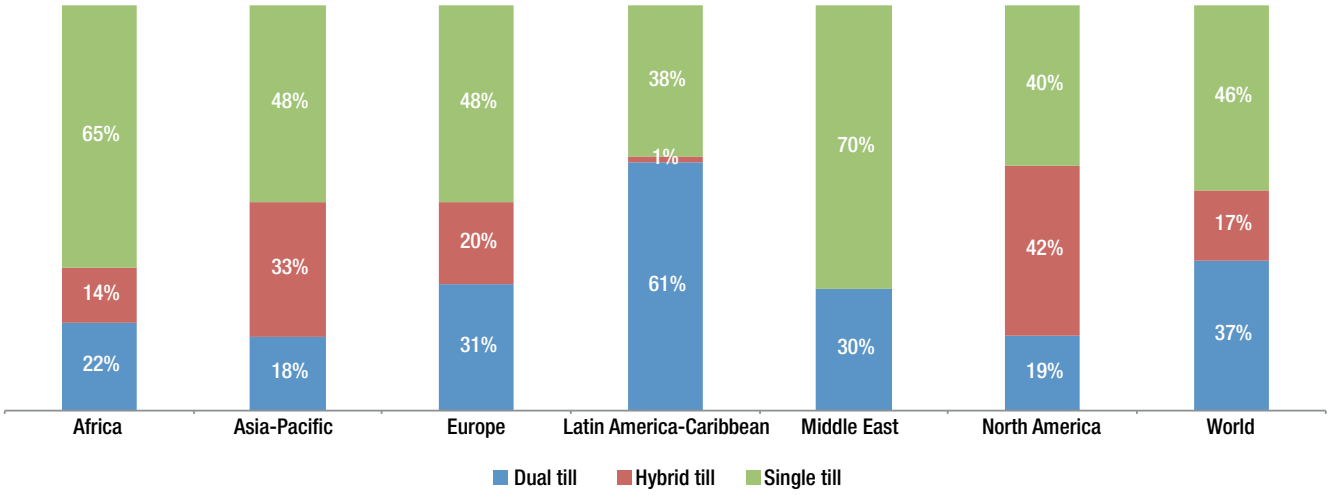
Chart 91: Proportion of airports by regulatory till – by airport size (2013)



Source: ACI Airport Economics Survey (2014)

The variation across regions is much more significant in Chart 92. While the Middle East has the greatest proportion of airports under a single till system (70%), Latin America-Caribbean has over 60% of its airports under the dual till system. The hybrid till system is most prevalent in North America at 42% of airports in the region.

Chart 92: Proportion of airports by regulatory till – by region (2013)



Source: ACI Airport Economics Survey (2014)

An analysis of the top 100 busiest airports in terms of passenger traffic reveals a very similar picture to that of the entire sample of airports. As stated earlier, there is no discernible trend between airport size and regulatory till. Charts 93 and 94, which are almost identical, show the proportion of airports and the corresponding traffic for the world's busiest airports.

Chart 93: Proportion of airports by regulatory till – top 100 busiest airports (2013)

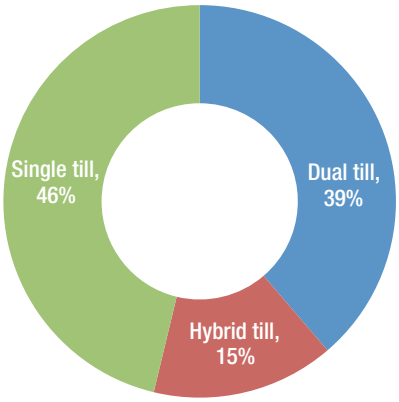
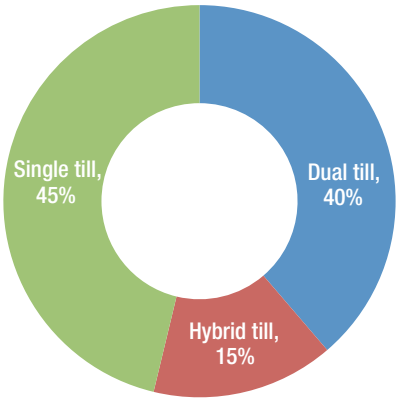


Chart 94: Proportion of passenger traffic by regulatory till – top 100 busiest airports (2013)

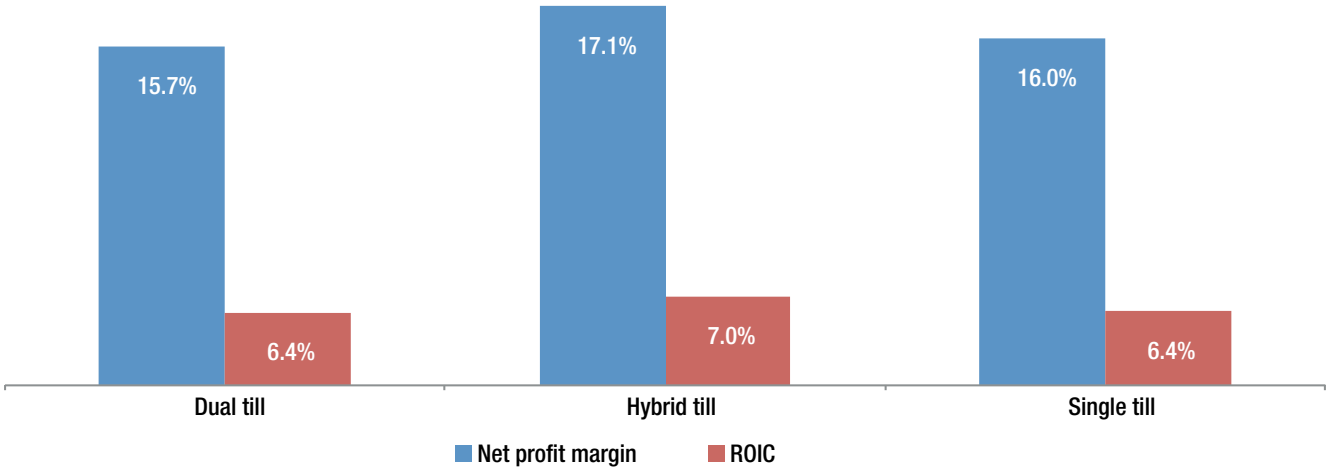


Source: ACI Airport Economics Survey (2014)

6.1.2 Regulatory till and financial performance

Conventional wisdom suggests that a dual till system would enable an airport to earn more because both the aeronautical and non-aeronautical activities are treated as two distinct businesses, unlike a single till arrangement. In theory, this would translate into higher returns on investments. In fact, this was not the case in 2013. The latest evidence shows that the net profit margins and returns on invested capital are almost identical across the dual and single till systems. Hybrid till airports actually generate the highest returns for net profit margins (17.1%) and ROIC (7%), which is only slightly higher than the dual and single till systems (see Chart 95).

Chart 95: Net profit margins and ROIC by regulatory till (2013)



Source: ACI Airport Economics Survey (2014)

6.1.3 Economic oversight and pricing models

As highlighted in earlier sections, non-aeronautical revenue typically accounts for approximately 40% of total revenue at large airports. This is an important revenue segment, and it is worth highlighting that in general, non-aeronautical charges are not subject to price regulation. In general, regulators regard non-aeronautical revenue sources as being subject to greater levels of competition or other forms of price moderation than aeronautical charges. For example, airport car parks are often subject to competition from off-site facilities; and rents for offices or other commercial facilities tend to be moderated by the prices charged for rents on similar property outside the airport boundary.

In practice, the actual pricing of airport services—particularly as it relates to aeronautical activities—may fall under several forms of regulation, irrespective of whether an airport uses a dual till or a single till approach. Independent of their regulatory business models, airports in many jurisdictions must seek government approval in setting their user charges. In other instances where certain governments or authorities advocate a light-handed philosophy, there

are no specific regulations. This approach has no prescribed regulation for airport charges other than the credible threat of sanction by authorities for abuse of market power.

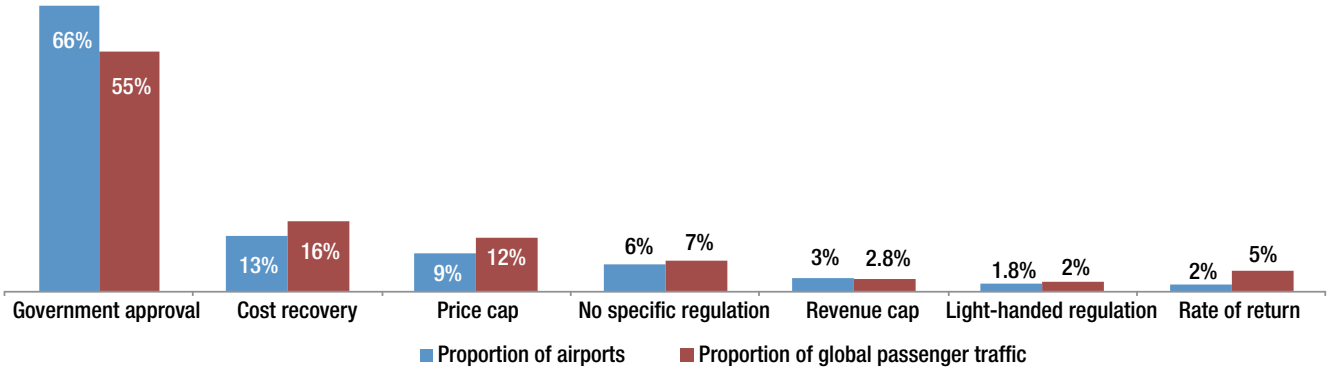
Formal airport price regulation systems are a relatively recent phenomenon, with the first formal price regulation being introduced in the United Kingdom in the 1980s. As airport privatization became more common in subsequent years, a price regulation structure was invariably introduced at the same time. Most were modelled on the original RPI-X form (or price cap) used for the three largest BAA airports, in which price increases in line with inflation are allowed, minus (or plus) an X factor intended to incentivize the airport to produce efficiency gains. Under this system, the regulator set a price cap for the regulatory period (usually five years) that defined the maximum allowable revenue per passenger in each year.

Rate of return or rate-base rate of return is a model that allows a company to earn sufficient revenue to cover its costs and provide a reasonable rate of return on capital investment. Under this pricing system, a firm operates on a full cost-recovery basis and can retain any surplus revenue in the form of a profit.

Conceptually, cost recovery models are quite similar to rate-base rate of return regulation. Instead of setting the rate of return based on invested capital, however, it sets rates based on the cost of providing the service. While the rate-base rate of return approach emphasizes determining the rate base (the capital base) to establish a reasonable rate of return, cost recovery regulation does not place much focus on determining the capital base in practice.

Chart 96 provides a breakdown of the percentages of airports employing different pricing models, along with their corresponding passenger traffic. In most cases, pricing is proposed by the operator and is approved later by the government. This is the case for 66% of airports in the sample. These airports handle 55% of global passenger traffic. Airports that have a cost recovery pricing scheme represent 13% of airports and 16% of passenger traffic.

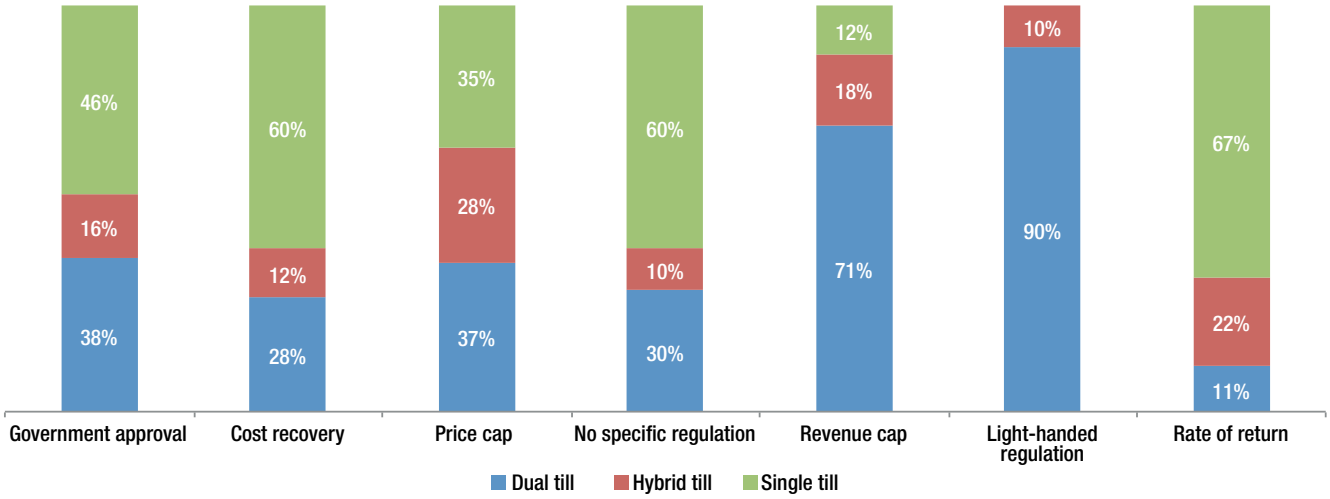
Chart 96: Proportion of airports and corresponding global passenger trafffic by pricing model (2013)



Source: ACI Airport Economics Survey (2014)

With government approval of user charges as the most prevalent form of economic oversight, there is no identifiable relationship with an airport's regulatory till. The proportion of airports with a government approval scheme has a split of 38%, 16% and 46% for dual till, hybrid till and single till systems, respectively. Of the airports that employ the cost recovery model, 60% follow the single till system to manage revenue. Airports that have a price cap regime have a more equal distribution among the regulatory tills, as shown in Chart 97. Although the revenue cap and light-handed regulation schemes are more prevalent among the dual till systems, there is only a small proportion of jurisdictions that actually exercise these pricing models.

Chart 97: Proportion of airports by pricing model and regulatory till (2013)



Source: ACI Airport Economics Survey (2014)

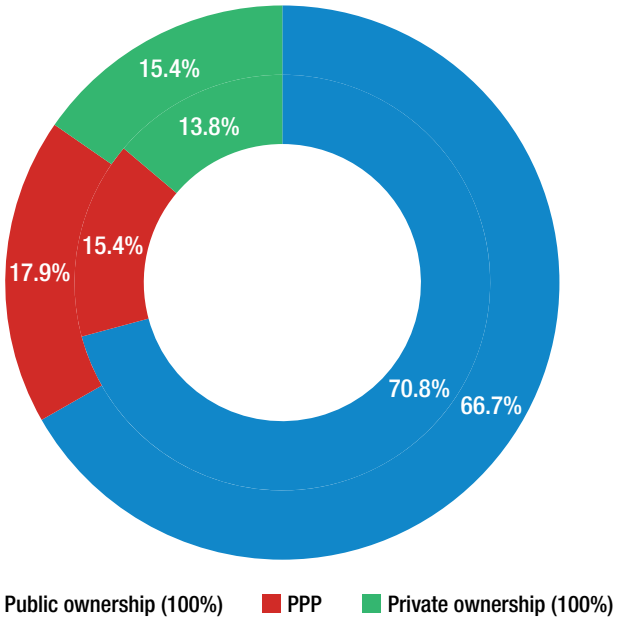
6.2 Ownership

Deregulation in the aviation sector was predominantly focused on airlines, although many countries have also divested their airports and air traffic control services. The deregulation of the aviation industry in many parts of the world was followed by a drastic shift in the way airports were operated. Now, airports no longer operate as a homogeneous group of public utilities but as a heterogeneous group with ownership structures ranging from government-owned to partially or fully privatized. Even government-owned airports are increasingly being required to have a commercial focus. Nevertheless, private investment typically flows to airports with a sufficient critical mass of traffic. Smaller airports with low traffic volumes tend to depend on government subsidies to operate.

Government-owned or exclusively public airports continue to make up the lion's share of airports across the globe, irrespective of the growing interest in private-sector financing and management of airports. Chart 98 summarizes the proportions of airports falling under different ownership models, as well as their corresponding proportions of global passenger traffic. While

a majority of airports (71%) are public in that they are owned exclusively by a government, these airports handle 67% of global traffic, based on a comprehensive sample of major airports across the globe. Taking into account both fully privatized airports and those operated under public-private partnerships (PPPs), 33% of global airport traffic is managed and/or financed by private stakeholders. This reinforces the claim that private investment flows to airports that have substantial scale and traffic (see Box 6). Thus, market size matters for private investment.

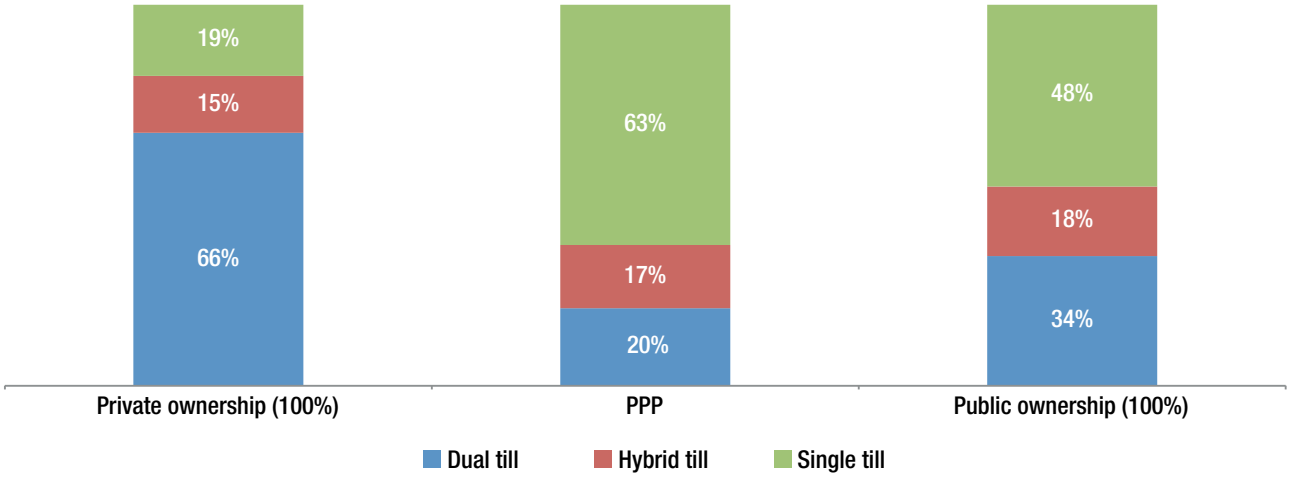
Chart 98: Proportion of airports (inside) and corresponding passenger trafffic (outside) by ownership model (2013)



Source: ACI Airport Economics Survey (2014)

Privately held airports tend to be more compatible with a dual till revenue structure. Because there are no market distortions with respect to the management of revenue, firms are free to operate both aeronautical and non-aeronautical activities in an efficient manner to guarantee a return on investment. It is more typical to see a single till system under public ownership or the PPP model of ownership. Chart 99 illustrates this fact for the sample of airports. Over 65% of privately held airports fall under the dual till system. PPPs and publicly owned airports, which have a higher prevalence of single till frameworks for managing revenue, account for 63% and 48% of airports, respectively.

Chart 99: Proportion of airports by regulatory till and ownership model (2013)



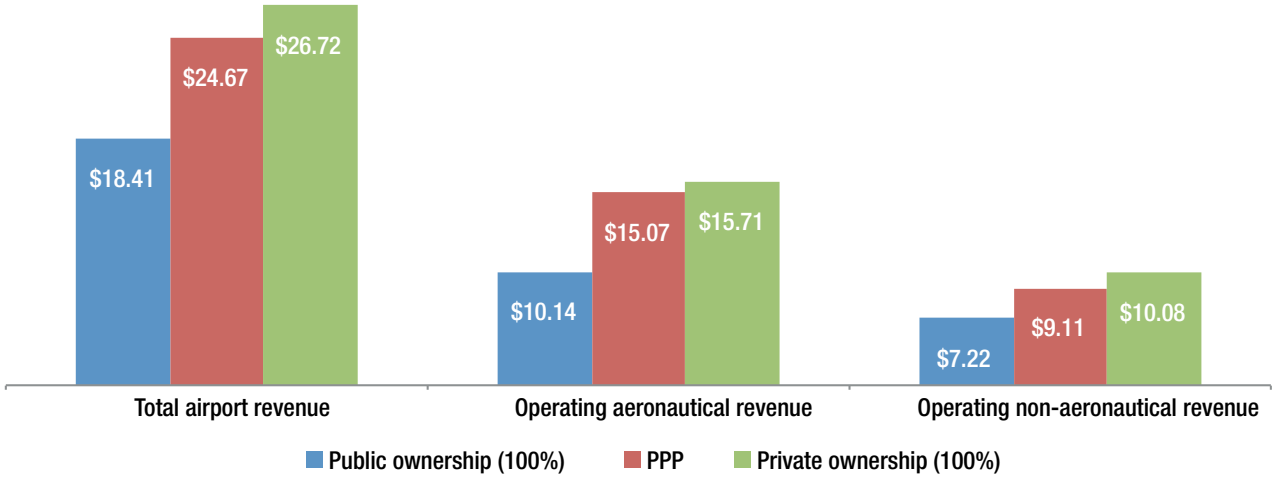
Source: ACI Airport Economics Survey (2014)

6.2.1 Ownership and financial performance

There is no prescription for an ideal airport ownership model given the vast heterogeneous landscapes and jurisdictions in which airports must operate. It is recognized that many airports are mandated to operate exclusively on a cost-recovery basis as a public service for the communities and jurisdictions in which they operate. However, there is no denying that private investment and entrepreneurship go hand in hand. Entrepreneurs generate innovations and value for customers, but they also expect a return for the risk that investors must bear in so doing. On a per-passenger basis, airports with private-sector involvement tend to generate higher revenue, although their expenditures and unit costs tend to be higher as well. Airports that are exclusively private generate more than US$26 in revenue per passenger, but public airports generate less than US$20 per passenger. Privatized airports lead their counterparts in both aeronautical and non-aeronautical revenues, at US$15.71 and US$10.08 per passenger, respectively (see Chart 100).

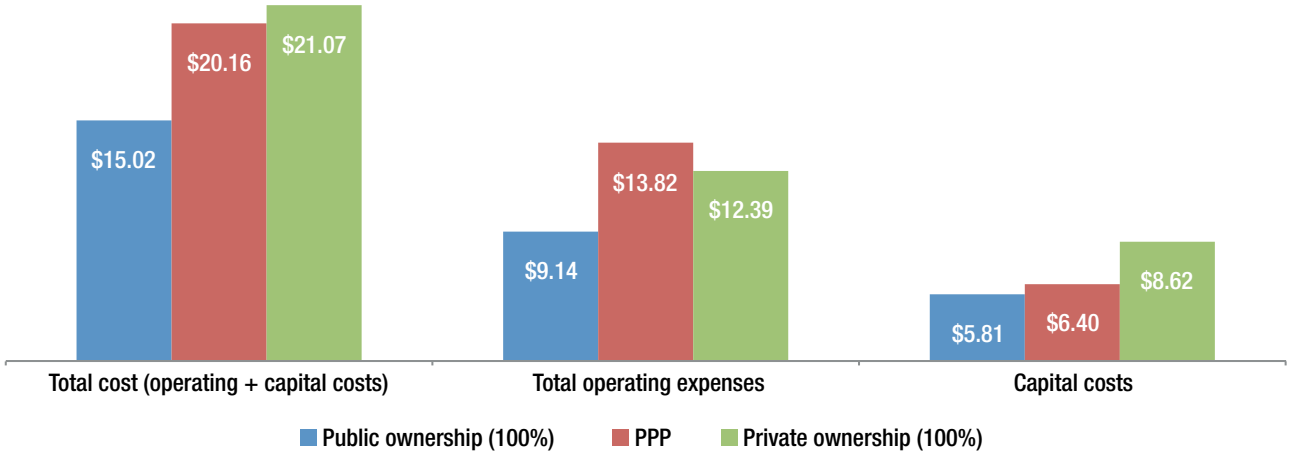
As with revenue on a per-passenger basis, unit costs are also higher for private airports. Next come PPPs and public airports (see Chart 101). On average, capital costs tend to be greater for private airports because of interest payments and depreciation expenses. The reason for this is that private airports must rely mainly on capital markets; they have to finance capital investments by issuing equity and bonds or by applying for the necessary credit. While publicly owned airports can access funds via these channels as well, they may also draw on the government treasury to finance an expansion. In other words, taxpayers contribute to the overall financing of airport operations and expansions. Total costs (before taxes) are over US$21 for privately owned airports (see Chart 101).

Chart 100: Unit revenues by ownership model (2013, US$, per passenger)



Source: ACI Airport Economics Survey (2014)

Chart 101: Unit costs by ownership model (2013, US$, per passenger)



Source: ACI Airport Economics Survey (2014)

6.2.2 Privatization

Until relatively recently, nearly all major airports were government-owned and operated, primarily on a cost-recovery basis. The first full-scale privatization of airports occurred in the mid-1980s, when the British government privatized the then British Airports Authority (which later became known as BAA). That event marked the beginning of a trend that has been gathering strength worldwide. The BAA privatization was followed by waves of airport sales in Europe, Australia, New Zealand, Latin America and Asia.

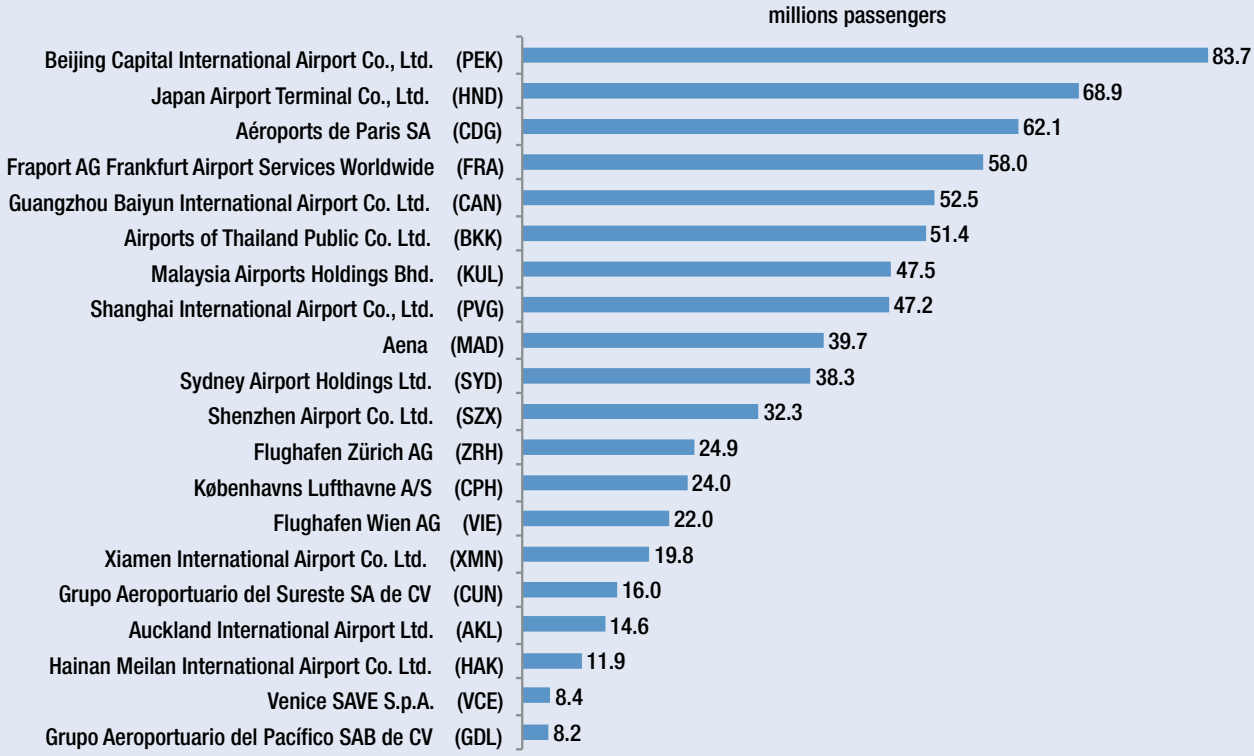
Box 6: How is privatization defined?

In this report, "privatization" is defined as participation of the private sector in the management and/or ownership of airport infrastructure. This may include any or a combination of the following:

- Full private sector ownership for an unlimited period of time (freehold).
- Listed companies – This refers to airports owned by companies whose main activity is the management of airports and that are listed on stock exchanges. The shares of these companies may be entirely in the hands of private entities and traded in the open market, or there may be a majority shareholder held by the public sector/government. These companies may own one or several airports.
- Concessions or leases – This refers to an instance where the public sector has given rights to private companies to operate and manage an airport or to take part in one or more of an airport's activities for a limited period of time. This model also includes Build–operate–transfer (BOT) schemes in all variations, which refers to an arrangement whereby the private sector may finance and build infrastructure projects based on a promise to purchase by government entities at a future date.
- Management contracts – This refers to instances when the private sector obtains a fee for the management of all or parts of the airport or certain key aeronautical activities.
- The participation of government-owned companies in other airports as an investment or for a fee (e.g., a 100% government-owned public sector airport company acquires a concession contract for the management of another airport, be it in its home country or abroad).

With the exception of freehold and listed companies (100% owned by the private sector), all other ownership models tend to be referred to as PPPs. Chart 102 shows major airport companies that are traded on stock exchanges around the world, along with the busiest top 20 airports in terms of passenger traffic under their ownership. These airports are not only privately held (or publicly traded), but they are also among the busiest airports in the world at major destinations and centres of commerce. Based on the traffic at the largest airports, the evidence shows that private investment is attracted to large markets in terms of passenger traffic. Because of airport cost structures and economies of scale, this is often regarded as a rule of thumb for the sound investment of private capital. However, many airport operators hold a portfolio of airports. The smaller airports are typically loss making (less than one million passengers per annum) while the largest airports remain profitable. Essentially, the largest airports subsidize the smaller airports within the airport company's portfolio. Chart 102 only considers the largest airport within each portfolio of each airport company. A deeper analysis of the latest private sector investments and participation is included in Section 9 of this report.

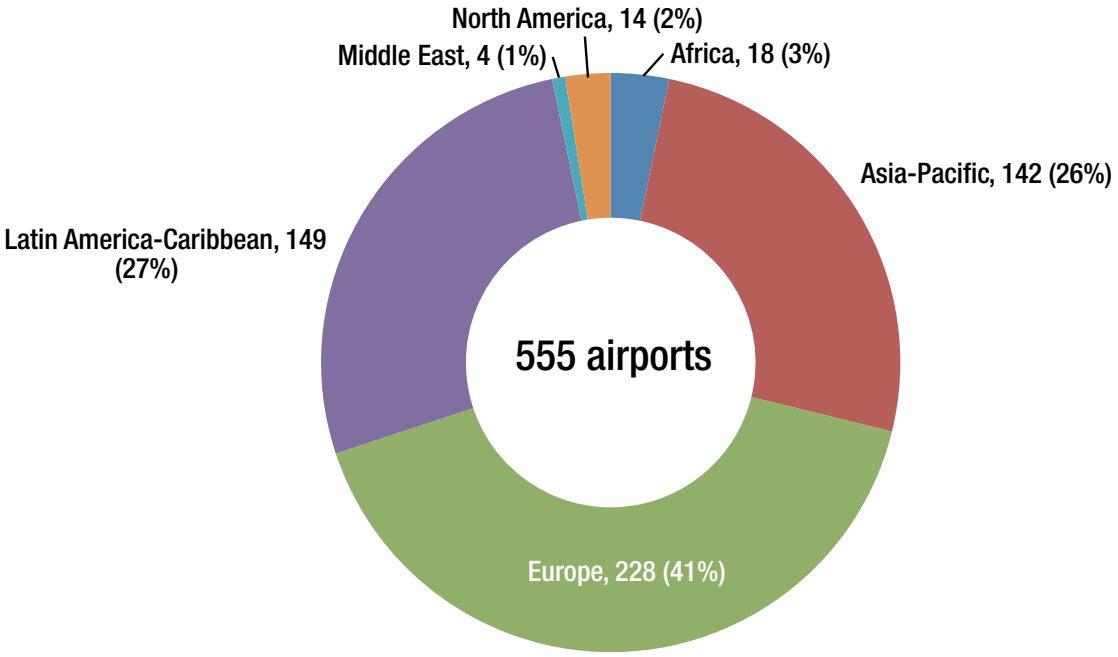
Chart 102: Top 20 busiest airports by passenger traffic with corresponding parent airport company listed on stock exchanges (2013)



Source: Adapted from the ACI World Airport Traffic Database (2015)

By the end of March 2015, there were 555 airports with private sector participation. This includes airports that handle commercial operations or are capable of handling commercial operations. In other words, airports that may be temporarily inactive because of lack of traffic are included in the count. Airports that only cater exclusively to general aviation, including air taxis, are excluded. The distribution of these airports by world region is shown in Chart 103.

Chart 103: Distribution of airports with private sector participation by region (2013)



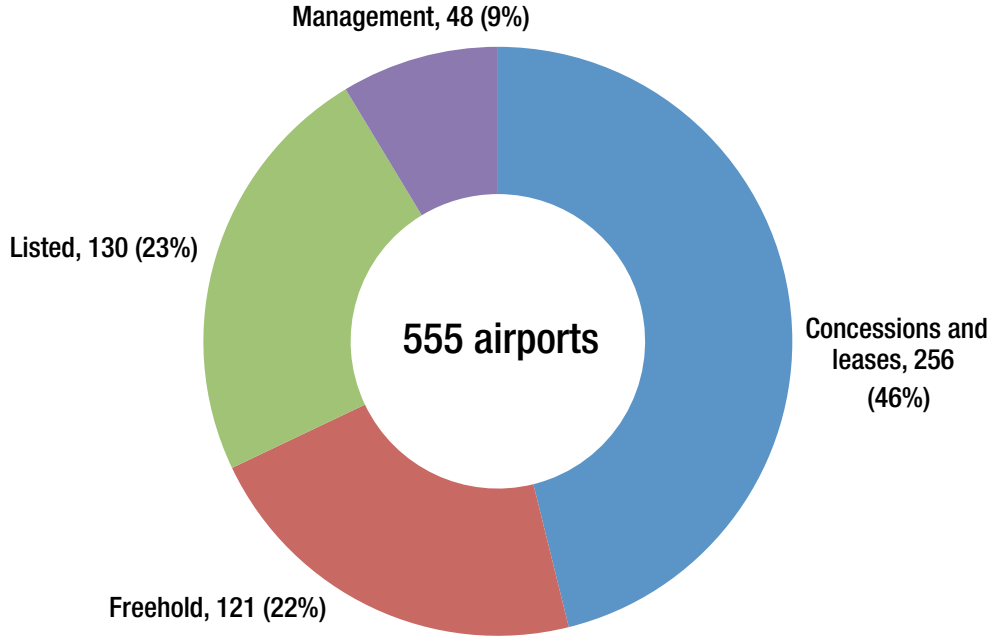
Source: ACI Inventory of privatized airports (2015)

Europe continues to be the region with the highest number of privatized airports (228), followed by Latin America-Caribbean (149) and Asia-Pacific (142)[1]. As for the distribution of airports by type of privatization, concession contracts continue to be the most common model (46%), followed by listed airports (23%), freeholds (22%) and management contracts (9%), as shown in Chart 104.

At the time of writing, there were 25 listed companies managing 130 airports. China has the most listed airport companies at six, and the United Kingdom has the most freehold airports at 34.

[1] In Europe, the count includes airports operated by AENA (only those that may handle commercial operations), a 51% publicly owned company that was listed in the first quarter of 2015. In Africa, nine commercial airports owned by Airports Company South Africa (ACSA) are excluded.

Chart 104: Distribution of airports by type of privatization (2013)



Source: ACI Inventory of privatized airports (2015)

In an economic climate where states are increasingly cutting government expenditures to reduce growing debts hanging over their economies, government financing and ownership of airports is not always a viable and sustainable option. However, incentives for private-sector participation help capital flow to the airport industry. From a financial perspective, airport operators perform better when they are free to grow and build both the aeronautical and non-aeronautical sides of their businesses independently. Based on the available evidence, private airports also tend to use resources more efficiently and create greater value for investors compared to airports with other ownership models. That said, there is no “one size fits all” approach for airports, irrespective of their ownership models and regulatory regimes. Each airport has a different set of challenges, opportunities and circumstances. In turn, this should influence how each airport is regulated.

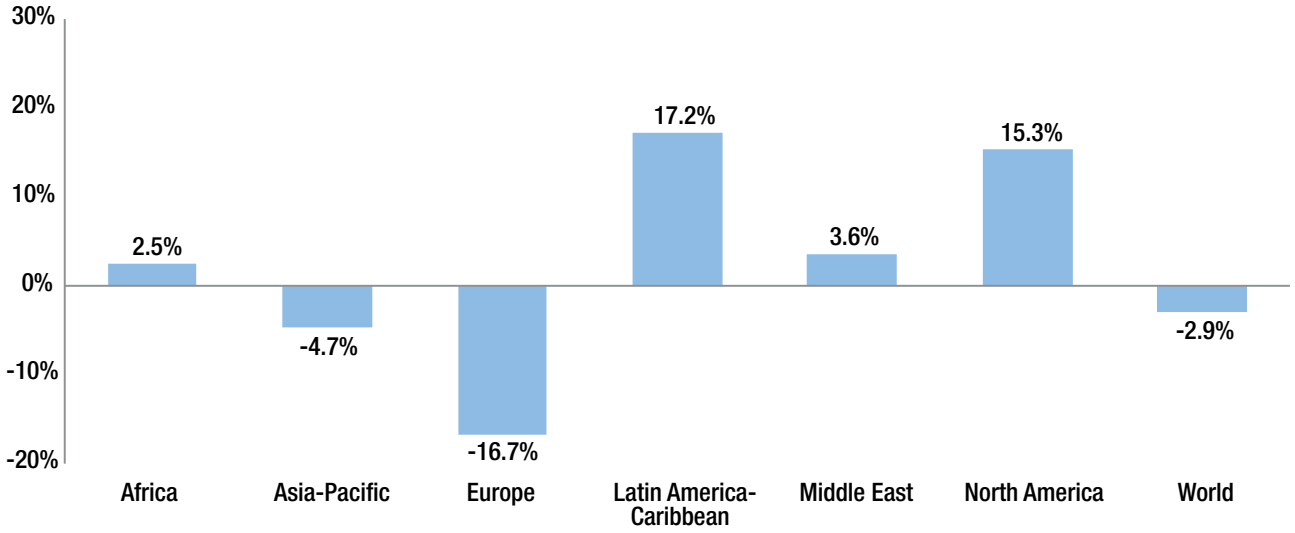
7. Airport capital expenditure

Airport capital expenditure (CAPEX) is the accounting term to denote outlays to acquire or upgrade productive assets (such as buildings, machinery and equipment, and vehicles) to increase the capacity or efficiency of airport facilities extending beyond a single accounting period. For existing airports, this includes everything from repairing a roof to the construction of a new terminal building or runway. For new airports, the capital expenditure required will depend on the type and size of infrastructure planned. Depending on an airport's ownership structure and method of financing for capital projects, an outlay for infrastructure is allocated for a specific time period and is made by an airport operator, a government or a combination of private and public-sector sources through PPPs.

7.1 Annual investments at existing airports

The ACI survey reports on airports open for commercial operations, which includes past and future annual investments used to acquire or upgrade physical assets, such as buying new equipment, extending or building a runway, expanding or building a new terminal and enlarging car parking facilities. The results suggest that between 2012 and 2013, investments in airport infrastructure for existing airports (i.e., the data does not include new constructions which are not yet open to commercial operations) dropped by 3% to US$37 billion[1]. Moreover, there were significant differences in the change in annual investments on a regional basis, ranging from a decrease of some 17% for airports in the European region to an increase of just over 17% for those in the Latin America-Caribbean region (Chart 105).

Chart 105: Year-over-year change in CAPEX (2012–2013)



Source: ACI Airport Economics Survey (2014)

[1] Global extrapolation based on over 1,900 commercial airports; a slight variation with respect to 2012 CAPEX is observed due to a methodological change in the global extrapolation.

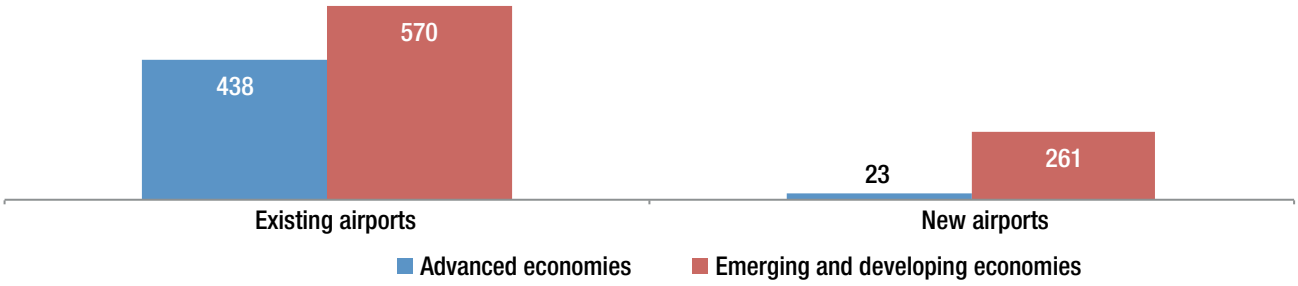
The decrease in airport CAPEX in Europe must be viewed against the economic and financial crisis being weathered by the Euro area and not necessarily against the lack of need for such investment. At the end of 2014, out of a total of 283 airports worldwide, IATA listed 72 European airports where there is potential for congestion during certain periods of the day, week or season and 99 airports where demand for airport infrastructure significantly exceeds airport capacity.

7.2 Advanced economies versus emerging and developing economies

The choice between either expanding existing airports or building new ones depends to a large extent on government policy and the long-term objectives in relation to the development of air transport as a major mode of transport and as a catalyst in facilitating local, regional or even national economic development. It is therefore not surprising to see large emerging economies such as Brazil[2], China[3] and India[4] making the development of airport infrastructure one of their government objectives. Major international and domestic airports in these countries have faced traffic congestion[5] and have been or are in the process of expanding facilities at existing airports or are planning to add new major facilities, such as a second airport, for the metropolitan areas concerned.

Advanced economies generally have a well-developed airport infrastructure. Their main problem is how to provide additional airport capacity to meet the ever increasing demand for air transport services. Difficulties in finding appropriate new sites where land is already at a premium, combined with local environmental concerns, have often discouraged the building of new airports in favour of continuing to expand existing ones whenever possible. Therefore, very few new airports are planned in Europe and North America where the favoured option is to build new runways and/or terminals at existing airports.

Chart 106: Number of large projects (2014–2020)



Source: adapted from the Centre for Asia Pacific Aviation (CAPA) (2015)

[2] In December 2012, Brazil announced a Regional Aviation Plan of BRL 7.3 billion (about US$3 billion) to be spent over the following five years to benefit 270 out of 639 local and regional airports, particularly those in the north and northeast of the country.

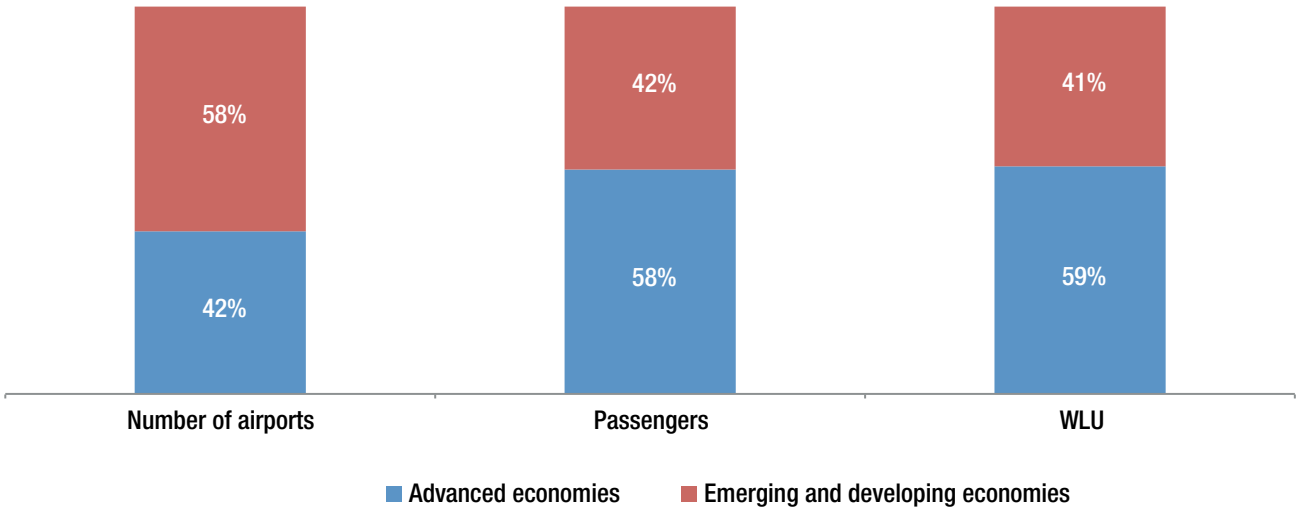
[3] As part of their 12th Five-year Plan (2010–2015), China planned to build 82 new airports by 2015 and expand 101 existing ones.

[4] In March 2014, the government of India indicated their intention to build 200 new low-cost, no-frill airports over the following 20 years.

[5] According to IATA, at the end of 2014, demand for airport infrastructure significantly exceeded airport capacity at 11 Chinese airports.

Chart 106 compares the number of airports with medium- and large-scale projects (over US$1 million) at existing airports and the number of new airports with completion dates between 2014 and 2020. The higher number of airports with large projects in emerging and developing economies in part reflects the urgent need for aviation infrastructure as crucial elements for socio-economic development and the political will to support such projects as compared with advanced economies, which tend to encounter important political and planning obstacles to development (Chart 107).

Chart 107: Distribution of airports and traffic (2013)



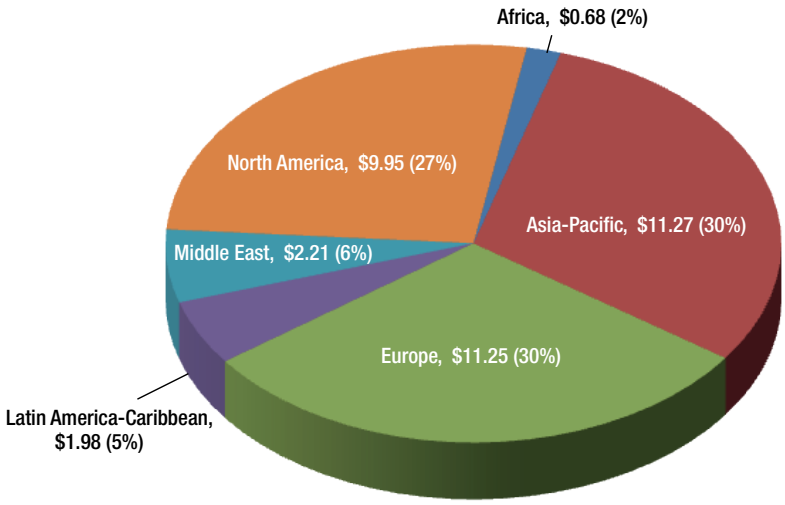
Source: ACI World Airport Traffic Database (2015)

The chart also shows that although in 2013 the airports in advanced economies only represented 40% of the total, they handled 60% of the traffic. However, it is expected that by 2031 the traffic at airports in emerging developing economies will be above 50% of the total.

7.3 Major regional investments at existing airports

The distribution of the reported annual CAPEX (in billions of US dollars) by region in 2013 is illustrated in Chart 108. The chart shows that although in 2013 capital investments at existing airports decreased in Europe, together with those in the Asia-Pacific region, they contributed the largest amount to global investments. These were closely followed by investments made at airports in North America.

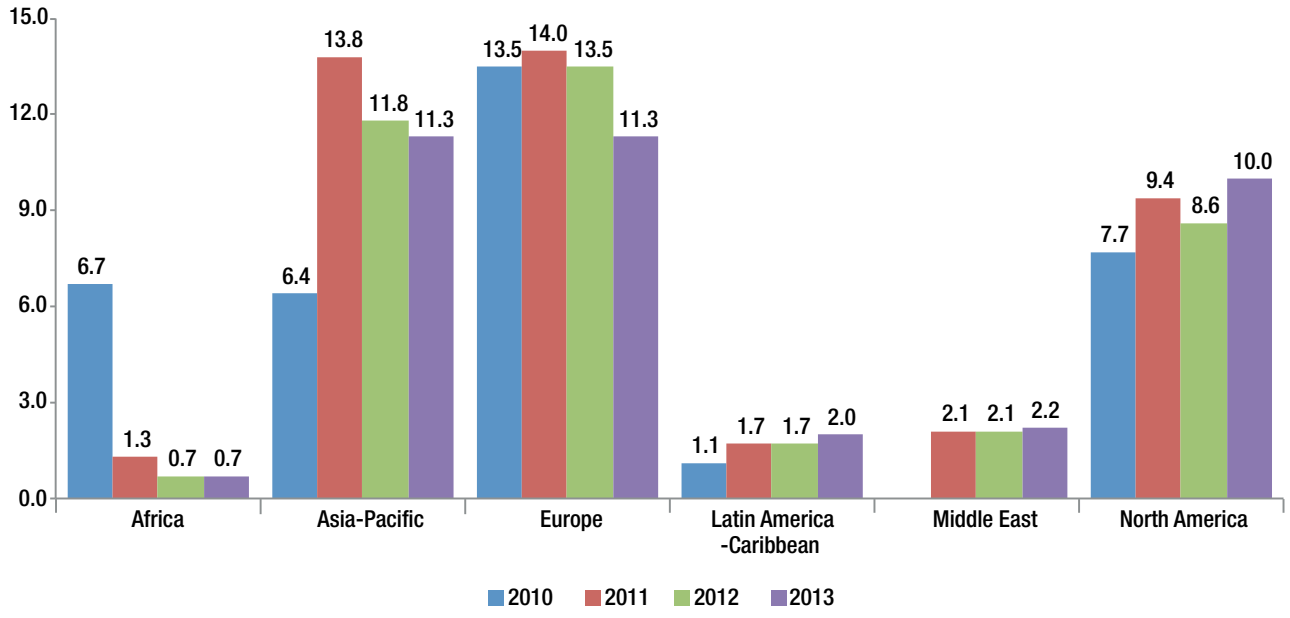
Chart 108: Regional CAPEX distribution (2013, billions US$)



Source: ACI Airport Economics Survey (2014)

Chart 109 shows the annual CAPEX by existing airport for the period 2010–2013. It shows the variation from one year to the next. The actual CAPEX not only depends on the need to expand or refurbish the available facilities in view of increasing demand but also on the availability of funds for airports in a particular region.

Chart 109: Annual CAPEX by region (2010–2013, billions US$)



Source: ACI Airport Economics Survey (2014)

While in 2013 the focus of the public had been mainly on the plans to build new airports in China and India and on the expansion plans for a number of airports in Brazil because that country was hosting the 2014 FIFA World Cup and the 2016 Olympics, major expansion plans were also afoot at main airports in other countries. In some cases, adding a new runway and terminal are significant projects and may often require a capital investment similar to that for a new airport. For example, it is quoted that the price tag for the new Terminal 2 at Mumbai Airport (BOM) (India) to be completed in 2015 is in excess of US$2.6 billion.

7.4 Capital investments by type in 2013

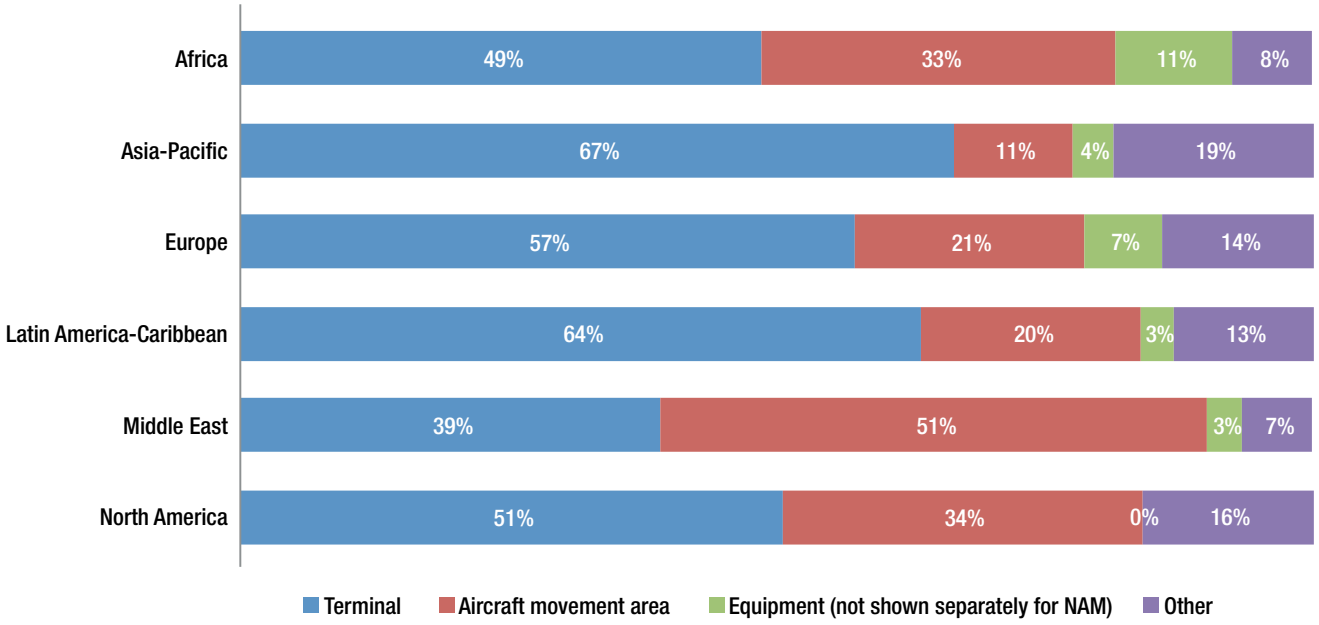
Airport master plans may cover a period of approximately 25 years to ensure that the design can meet future traffic demands. However, initial construction may only be sufficient to cover the expected traffic in the first five years of the project. Then as traffic increases the airport can expand to meet the additional demand. Therefore, major CAPEX such as those required to build a new runway or a new terminal only occur at discrete times and are only related to the traffic handled to the extent that it is about to reach or has exceeded the planned capacity.

This traditional pattern has changed somewhat with the construction of mega airports aimed at replacing or supplementing existing ones[7]. These airports with multiple runways and terminals are also built on a modular concept, but construction seems to be a continuous process. For example, DWC, which aims to become the world's largest airport, will not be able to replace DXB until after 2020 but opened for all cargo operations in 2012 and for some passenger flights in 2013 to relieve some of the capacity demand already placed on DXB.

Charts 110 and 111 show to what purpose airport CAPEX was put in 2013. Chart 110 shows that in most regions except the Middle East, most of the money went toward improving the terminals either by refurbishing or expanding them or toward building new ones. Airports in the Middle East appear to have spent a larger share on mending, extending or building new runways. In the case of North America, part of the other expenditures went toward expanding car park facilities.

[7] In addition to Dubai, new mega airports are being constructed or planned for Beijing, Doha and Istanbul.

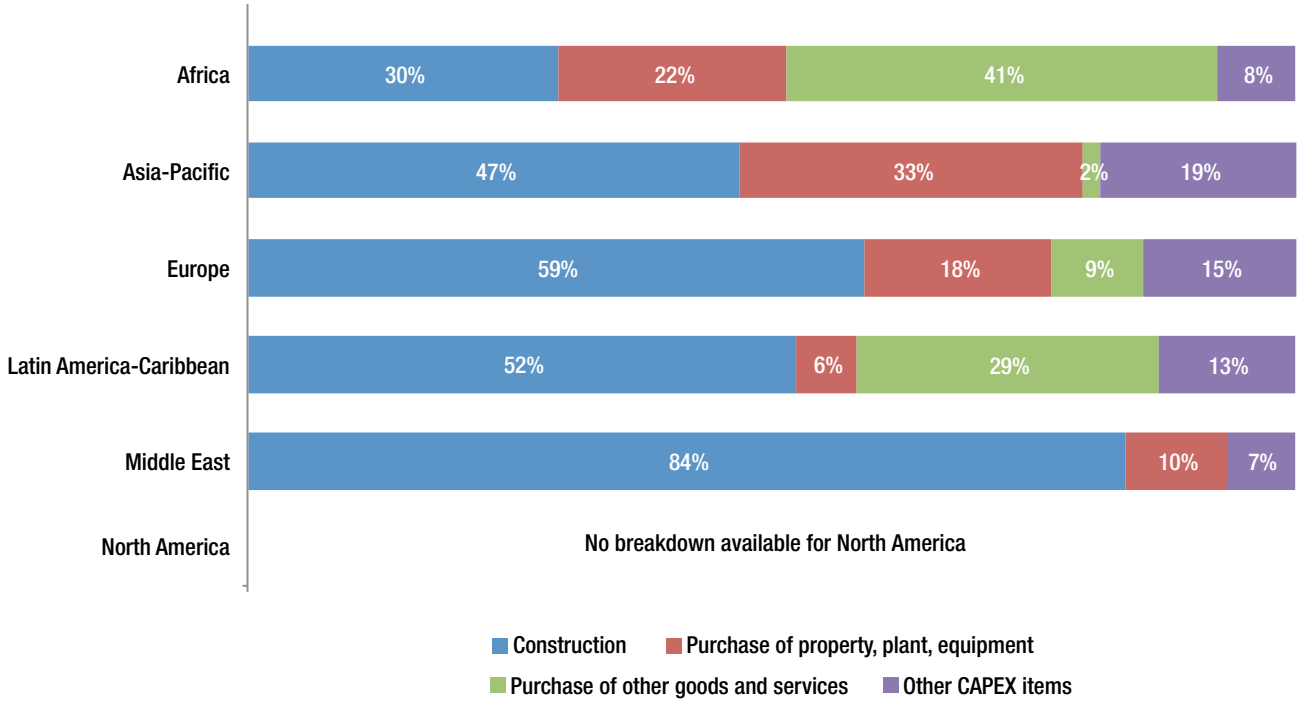
Chart 110: Breakdown of CAPEX by area (2013)



Source: ACI Airport Economics Survey (2014)

Chart 111 shows that, except for airports in Africa, in 2013 most other regions' CAPEX was used for consruction purposes to upgrade, expand or build new facilities at existing airports, such as lengthening runways, expanding existing terminal facilities or building additional terminals. For airports in Africa, some 60% of the CAPEX appears to have gone toward purchasing property that may be needed to expand existing facilities, plants, equipment and other goods and services.

Chart 111: Breakdown of CAPEX by type of expenditure (2013)



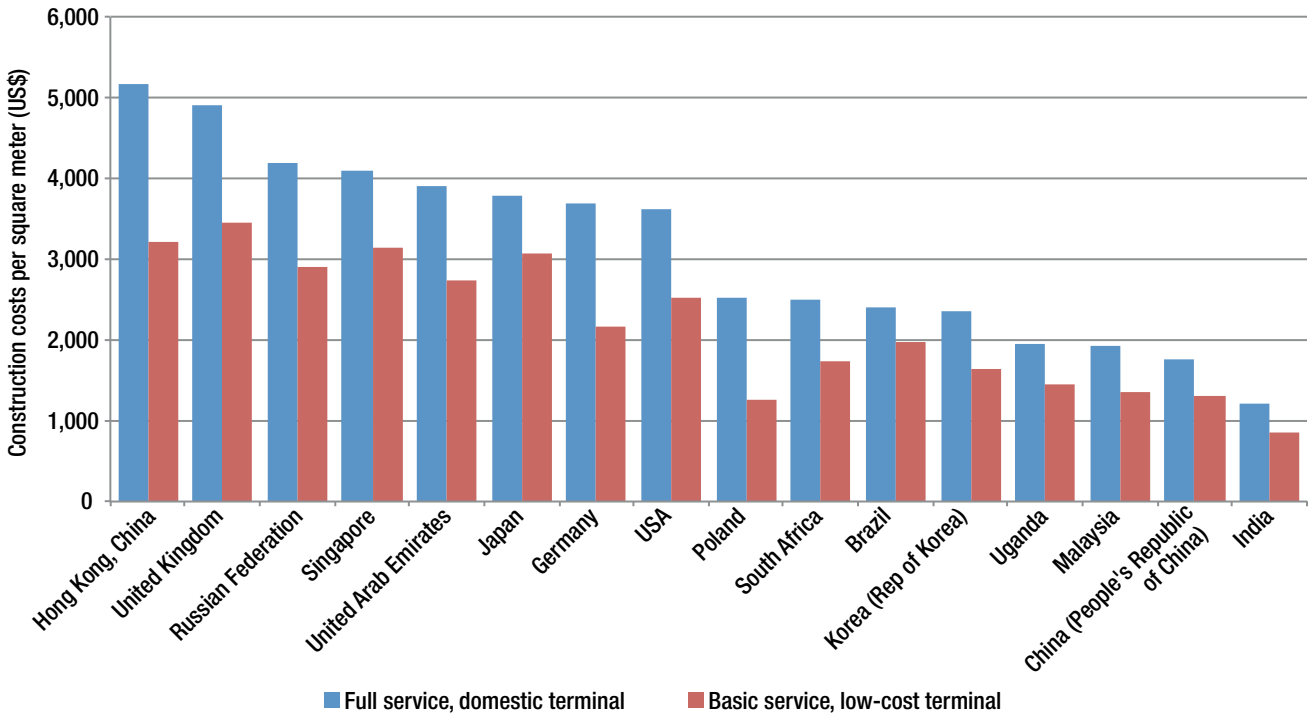
Source: ACI Airport Economics Survey (2014)

7.4.1 Construction costs

Construction costs feature prominently for airports in most regions; therefore, differences in the local construction industry and labour markets in different countries will have a significant impact on the overall CAPEX required. Chart 112 compares the building costs per square meter of internal area for a full-service domestic terminal and a low cost terminal for selected countries in 2013[9]. Costs between countries are subject to different interpretations, building methods and standards for costing, measurement and construction. Nevertheless, the figures in the chart provide an indication of the variation in costs and thus in capital investments required to be made by airports to complete a similar project.

[9]A brighter outlook - International construction cost survey 2013, Turner & Townsend.

Chart 112: Comparison of construction costs for selected countries (2013)

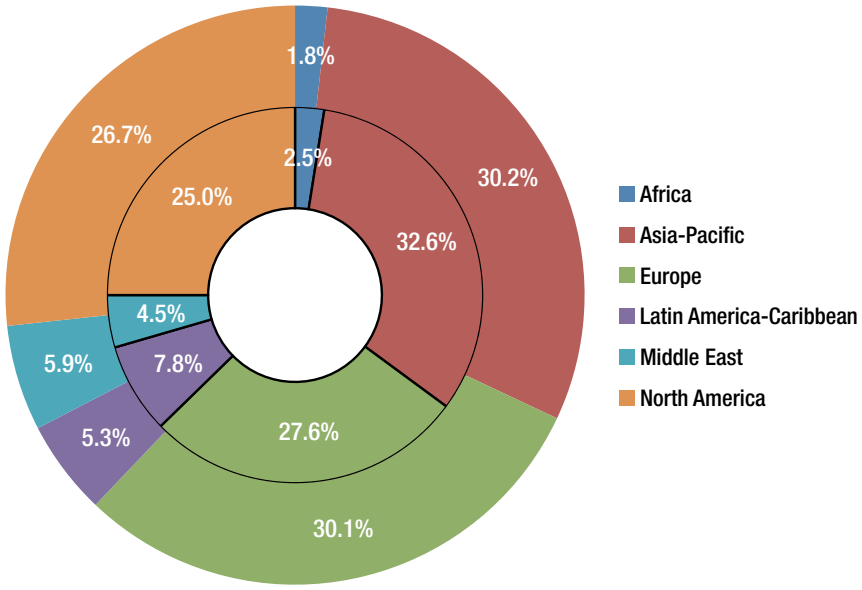


Source: adapted from Turner & Townsend (2013)

7.5 Capital expenditure per unit of output

The regional shares of investments shown in Chart 113 broadly reflect the regional traffic distribution (in terms of passenger numbers). However, a closer inspection of the chart shows that in relation to their share of traffic, in 2013 airports in the Middle East, North America and Europe contributed a higher proportion to the overall CAPEX estimated for that year. On the other hand, the proportion of the overall CAPEX contributed by the other three regions, Africa, Asia-Pacific and Latin America-Caribbean, was lower than their relative share of traffic. As seen in Chart 112 above, this in part can be attributed to the difference in construction costs among the countries in the various regions.

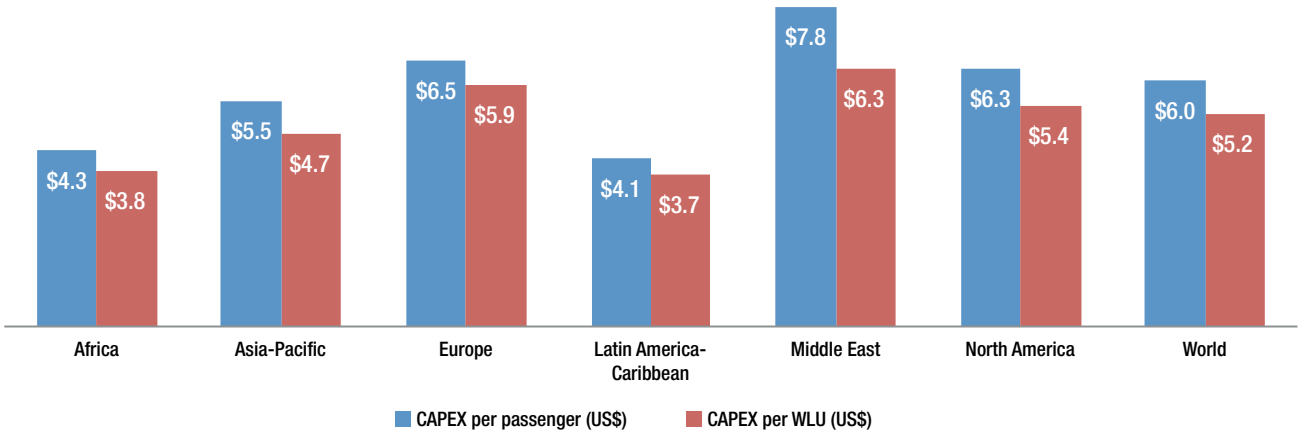
Chart 113: Distribution of CAPEX (outside) and passenger traffic (inside) by region (2013)



Source: ACI Airport Economics Survey (2014)

Differences across various regions may also be reflected in CAPEX on a per traffic unit basis. This measure gives a broad indication of the relative importance of the average investments made by the airports in each region. Chart 114 shows the average investments made by airports in each region in 2013 per unit of output (passenger and WLU) in terms of US dollars.

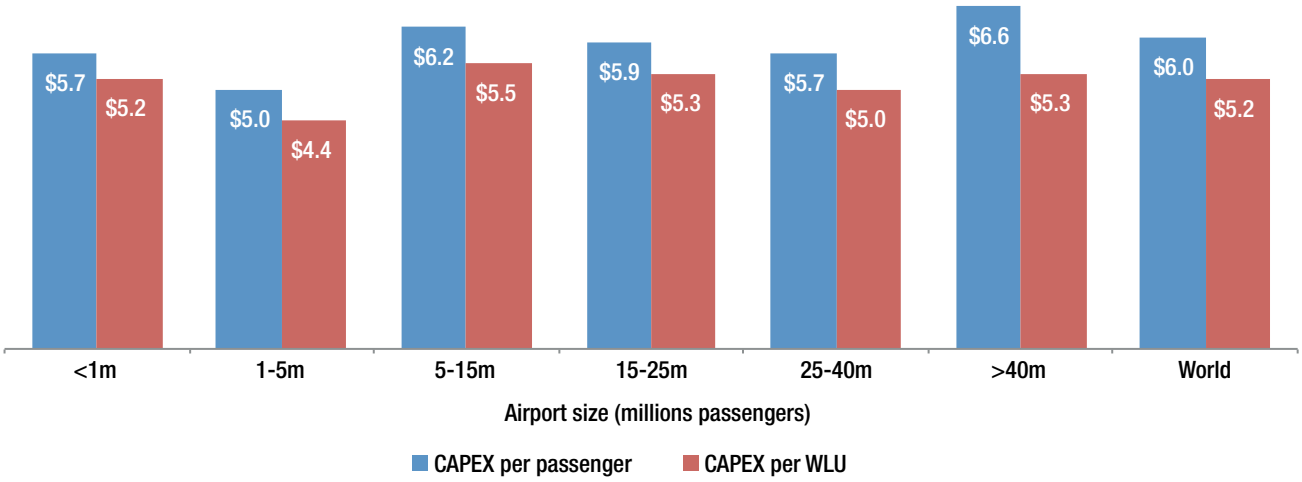
Chart 114: CAPEX per unit of output by region (2013)



Source: ACI Airport Economics Survey (2014)

Chart 115 shows the CAPEX per unit of output according to airport size. The chart shows that, on average, in 2013 there was a smaller amount of capital investment per unit of output at airports with less than five million passengers per year. However, for airports with annual traffic between 5 and 40 million passengers, the amount of average CAPEX per unit of output was remarkably similar. The largest amount is shown for that restricted club of airports (27 airports worldwide[10]) with annual traffic of over 40 million passengers.

Chart 115: CAPEX per unit of output by airport size (2013, US$)



Source: ACI Airport Economics Survey (2014)

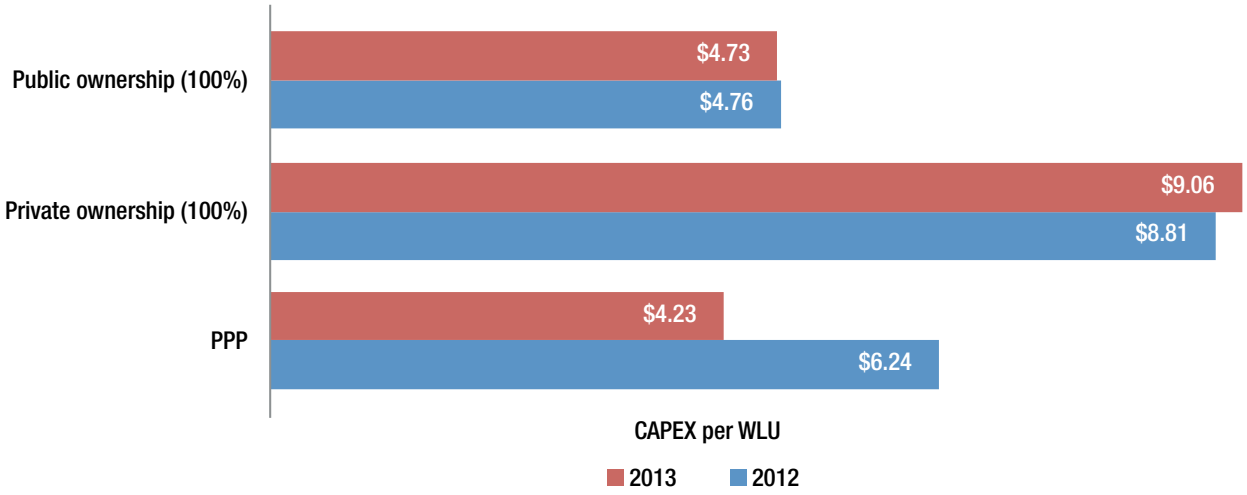
Depending on the projects being undertaken by the airports in each region in any one year, these figures can fluctuate quite significantly from one year to the next. In particular, during years when no major projects are undertaken, the average annual CAPEX per traffic unit by individual airports can be relatively low. Therefore, it is sufficient for a few major airports in a region to be involved in significant projects, such as building new runways or terminals, for the average CAPEX for that region to show a significant increase in that year compared with previous periods and with the average from other regions.

Most airports in the world are still publicly owned, either directly by the national administration, by local administrations or by autonomous airport authorities set up by the state or the municipalities concerned. However, in some countries, certain airports have been fully privatized or are jointly owned by PPPs. Chart 116[11] shows the relative CAPEX per traffic unit made in 2012 and 2013 according to airport ownership.

[10] Eleven in North America, 10 in Asia-Pacific, 5 in Europe and 1 in the Middle East

[11] Based on a sample of 700 airports

Chart 116: CAPEX per WLU by ownership model (2012–2013, US$)



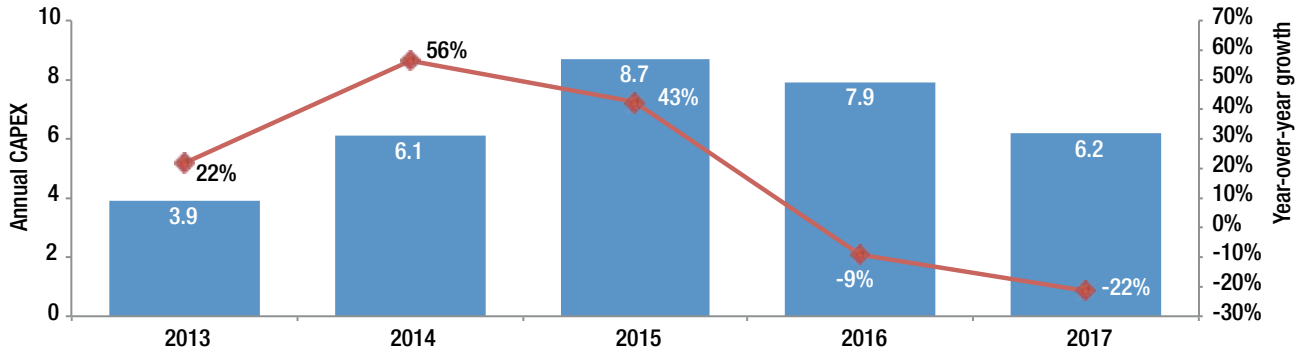
Source: ACI Airport Economics Survey (2014)

The chart shows that the CAPEX at airports under private ownership was significantly higher in 2012 and 2013 than that at those publicly owned or under PPPs. However, as indicated earlier, the average figures may be affected by a few major airports with significant investments in the years concerned, such as Sydney (SYD), Frankfurt (FRA), London-Heathrow (LHR) and London-Gatwick (LGW) in the case of privately owned airports.

7.6 CAPEX outlook in 2014–2017

Projects by existing airports can last from a few months to several years with periods in between where little capital investment may be required. The data above represents a snapshot of expenditures during 2012 and 2013. During this period, some airports had completed their projects, while others were in their construction phase or just starting/planning projects for the coming years.

Chart 117: Annual CAPEX and year-over-year growth (2012–2017, billions US$)

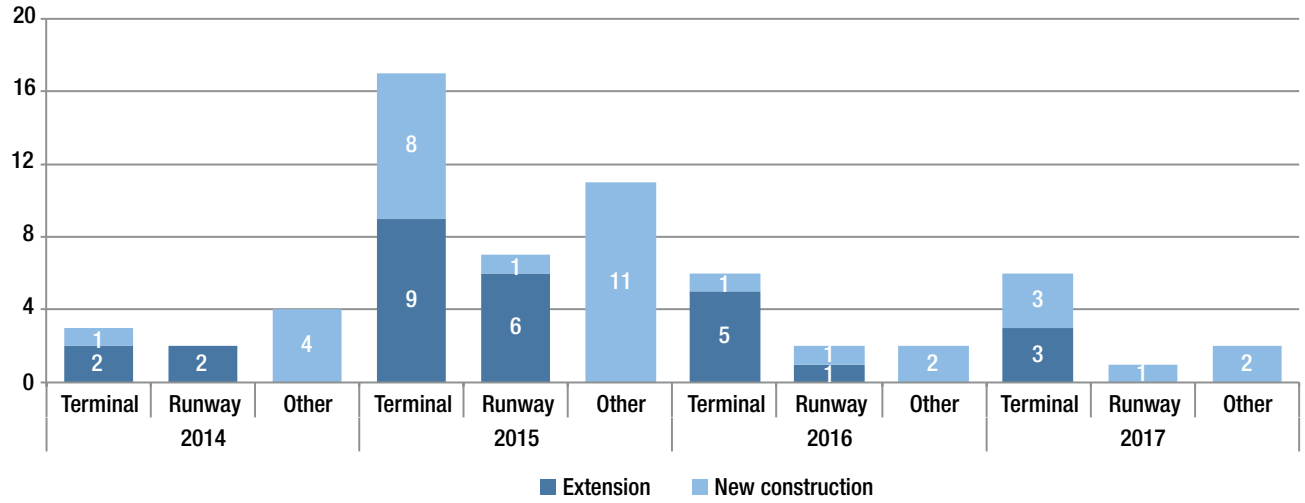


Source: ACI Airport Economics Survey (2014)

Chart 117 examines a sample of 100 airports varying in size and region with planned CAPEX between 2012 and 2017. The chart shows an expected significant increase in CAPEX in 2014 and 2015 and a slow reduction over the following two years ending in 2017 at about the same level as for 2014.

Chart 118 shows the construction activities for major projects (over US$1 million) with expected completion dates during the period 2014–2017[12]. These projects may have started one or more years before the date of the intended completion. Also, completion dates are often extended by several months if not years.

Chart 118: Number of global construction projects (2014–2017)



Source: adapted from CAPA (2015)

The chart shows projects where terminals, runways and related infrastructure at an existing airport are extended (runway) or enlarged (terminal), and those where new construction takes place. “Other” covers other construction activities, such as developing a cargo centre, building a new control tower, building a business centre, etc.

Some of the projects indicated above are aimed at addressing the congestion at existing airports. Forty-three out of the 103 airports in the sample are included in the updated list of airports with congestion problems that IATA published at the end of 2014. At 17 of these airports, congestion may potentially occur during some periods of the day, week or season. However, at 26 of them demand for airport infrastructure significantly exceeds the airport’s capacity. The IATA list deals mainly with the issue of slot allocation, which in part explains the emphasis on expanding or building new terminals.

[12] Projects obtained from information published by CAPA – Centre for Aviation.

8. Airport debt

8.1 Solvency

Measuring the relationship between an airport's balance sheet and income statement is a crucial task, both from an investor's point of view and in order to understand the allocative efficiency of resources in the airport's deployment of goods and services. An airport operator's proficiency in managing assets, liabilities, debt, income and expenses in an efficient manner remains an integral part of determining overall financial performance and profitability.

However, airports across the globe have differing objectives; profit maximization is not the sole objective for many publicly owned or government-owned airports. In many cases, cost recovery remains the sole objective. Privatized airports, on the other hand, tend to invest significantly in the development of non-aeronautical activities to enhance their revenue bases. Irrespective of their ownership models, airports also operate in complex regulatory environments that differ from one country to the next. All these factors affect an airport's capital structure and the resulting income generated from its activities.

An airport's ability to expand and finance its range of activities is restricted by an array of environmental, legal and economic circumstances that are sometimes beyond the control of the airport and its operators. This is predominantly true with respect to CAPEX on airport infrastructure and facilities. From an economic vantage point, an airport's revenue and user charges are sometimes insufficient to cover the associated cost of investing in large-scale infrastructure and facilities. Loans and the use of other debt instruments are among the options that might enable such an expansion. Private airports must rely mainly on capital markets by issuing equity and bonds or by applying for the necessary credit. Although state-owned airports can also access funds via these channels, they may also draw on government coffers to finance expansion.

Like other infrastructure-intensive industries, airports are usually highly leveraged, which is reflected in their debt-to-income ratios. Independent from an airport's ownership model and regulatory context, its outstanding debt in relation to its overall cash flow is a valuable indicator of financial health. Heavily indebted airports are often in a precarious situation, leaving them with little scope for further investments and upgrades in future infrastructure.

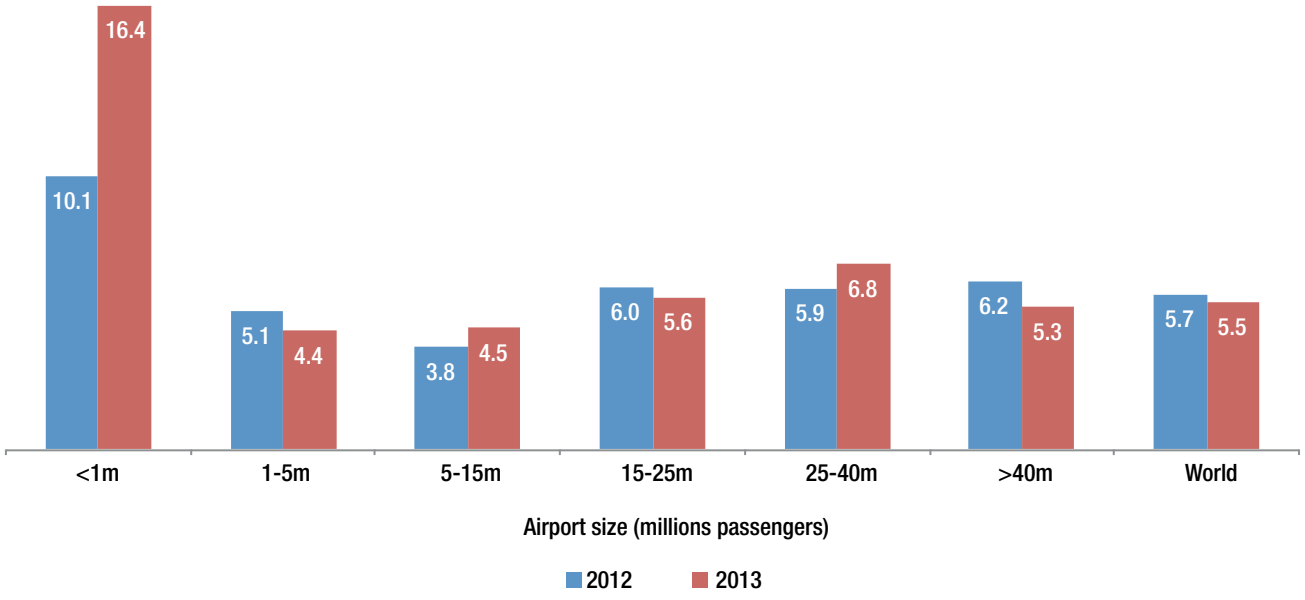
8.2 Debt-to-EBITDA ratio

An airport's EBITDA serves as a measure for investors and airport managers to assess the airport's ability to deal with its debt obligations. Regardless of the instruments chosen to finance airport operations, a higher debt-to-EBITDA ratio implies that an airport or operator is heavily leveraged and signals a warning that the airport might face difficulties in paying off its debts.

This is the case for many airports across the globe. They need to expand their operations to meet growing demand, but having high debt levels and operating deficits, they find that further investments are hindered.

Chart 119 provides a summary of debt-to-EBITDA ratios by airport size. Acceptable debt levels vary from one airport to the next due to ownership and financing structures. Nevertheless, a rule of thumb for the acceptable upper limit for corporations that have high capital costs, such as public utilities, is a debt-to-EBITDA ratio in the realm of 5:1–6:1. If this rule of thumb is applied to airports, anything significantly above this range would represent an element of risk, as the airport operator is less likely to relinquish the debt burden and take on the additional debt required to grow the business. On a global level, in 2013 the accumulated debt was five and one half times the earnings, a slight improvement over that estimated for 2012 (just under six times the earnings). In both cases, these values were within the acceptable rule-of-thumb range.

Chart 119: Debt-to-EBITDA ratio by airport size (2012–2013)



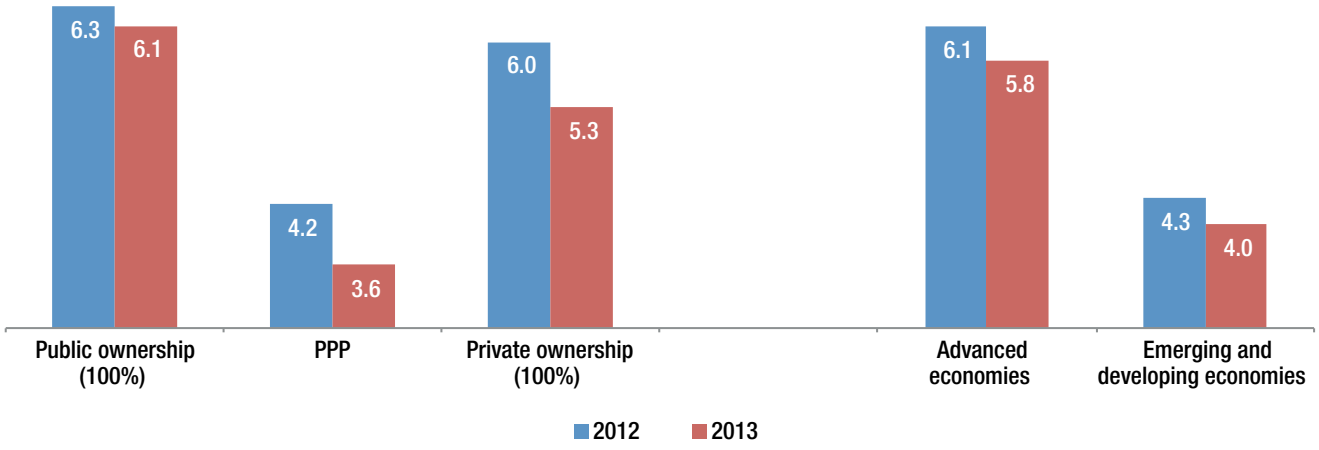
Source: ACI Airport Economics Survey (2014)

While the average industry debt level is on the border of what is regarded as acceptable, it should be noted that the rule of thumb may vary depending on an airport's context and cost of capital.

The chart shows a significant increase in the ratio in 2013 over 2012 for airports with less than one million passengers. During that period, there was only a small increase in the number of airports reporting net loss; however, the outstanding debt increased by well over 85%, causing the ratio for these airports as a group to double. Smaller airports tend to operate at a loss, mainly as a result of the absence of economies of scale in smaller markets. Many of these airports need additional government funds to finance operations. Conversely, airports with traffic between one and five million passengers had the lowest debt load as a group in 2013.

As mentioned, the rule of thumb may vary depending on an airport's context and cost of capital. For example, the ratio shown for airports with more than one million passengers is affected by the relatively high ratios for airports in North America. If one were to exclude them from the sample, the highest ratio shown for 2013 would be 5.55 for airports with traffic between 5 and 15 million passengers, while the ratio would be significantly lower for the other size groups. For airports over 40 million passengers where North American airports represent over 40% of the total traffic, excluding them drops the ratio for that size to 3.73 compared to 5.53 when they are included. The main reason for their high ratio is because the primary financing method in this region is issuing debt. Moreover, they have limited opportunities for income growth. On the other hand, relative to the overall investment needs, small airports get a bigger benefit from the FAA AIP grants and thus require little additional funding.

Chart 120: Debt-to-EBITDA ratio by ownership model and economic grouping (2012–2013)



Source: ACI Airport Economics Survey (2014)

Chart 120 shows the Debt-to-EBITDA ratio a) according to airport ownership and b) according to country economic classification (advanced or emerging markets and developing economies)[1]. The chart shows that the airports in PPPs have the lowest ratio while those that are publicly owned are above the 6:1 value indicated by the rule of thumb.

With regard to the economic groupings, airports in advanced economies show a ratio of about 6:1, significantly higher than the ratios shown by the group of airports in emerging and developing economies.

[1] As they are defined for the World Economic Outlook published by the IMF.

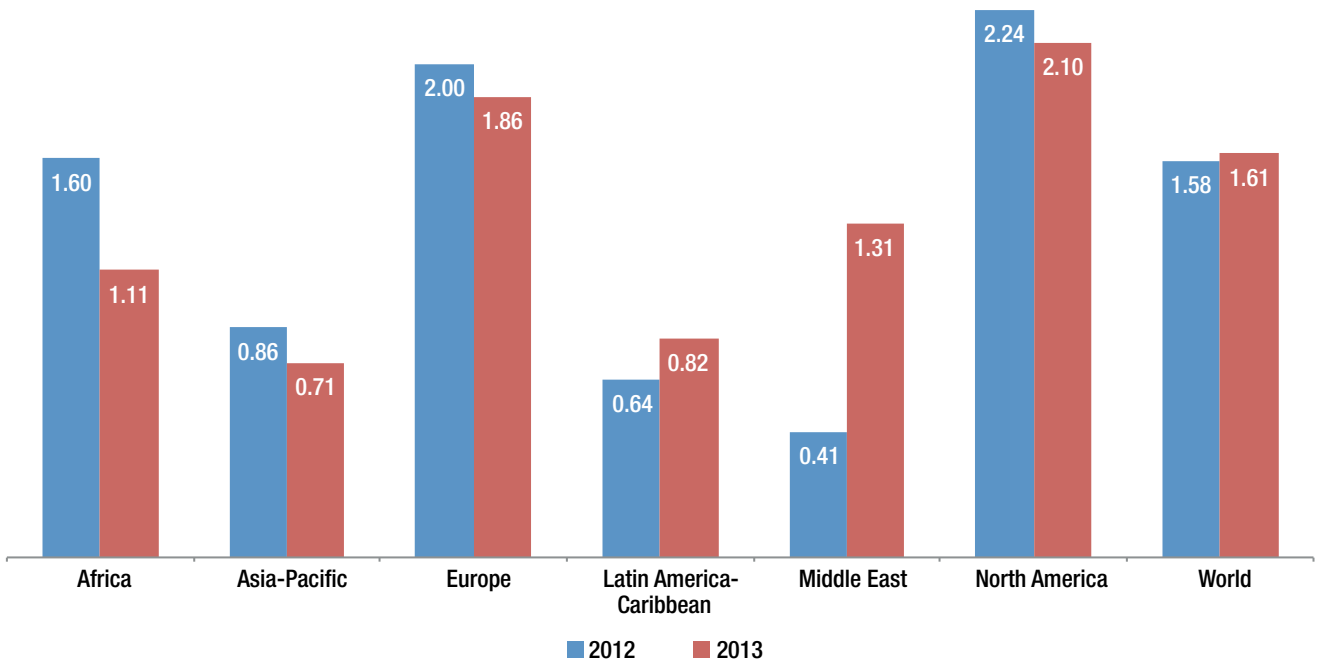
8.3 Debt-to-equity ratio

Another measure of financial risk and solvency is the debt-to-equity ratio. In this case, shareholder's equity refers to the total net assets of airports. As a rule of thumb, a ratio above 1.5:1 acts as a warning bell of excessive borrowing for utilities and other infrastructure-intensive industries. In 2013, the airport industry as a whole had shown an improvement over 2012, and at 1.49:1 it was just shy of this rule of thumb.

Again, the high relative debt levels for certain airport operators are largely attributable to their different models of financing, which are heavily reliant on an array of debt instruments. Chart 121 shows the debt-to-equity ratio by region. Because the models of financing differ from one region to the next, there is significant variance in the ratios across regions. While most regions saw a drop in debt-to-equity ratios, there was an increase in these ratios for the Middle East and Latin America-Caribbean from 2012 to 2013.

Alternatively, the ratio of debt to total assets for the industry is 0.48:1. This means that 48% of airport operators' assets are financed with debt.

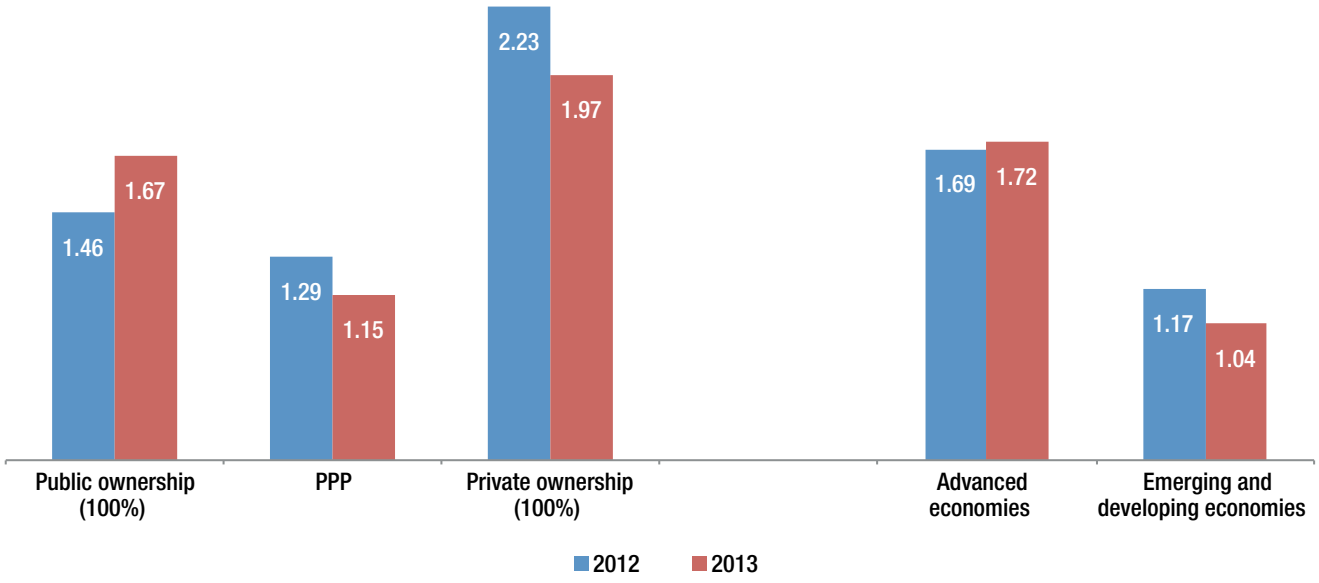
Chart 121: Debt-to-equity ratio by region (2012–2013)



Source: ACI Airport Economics Survey (2014)

Chart 122 compares the debt-to-equity ratio according to a) airport ownership and b) economic classification of the counties concerned. In terms of ownership, privately owned airports show the highest indebtedness relative to equity, well above the 1.5:1 ratio where one should start to be concerned. This must indicate a willingness by shareholders to temporarily exceed the limit indicated by the rule of thumb in expectation that in the long run the capital investments made in enhancing the commercial viability of the airport will achieve a higher level of profitability. As a group, airports under PPPs show the lowest debt-to-equity ratio. Compared with private and publicly owned airports, PPP airports enjoy the best of both worlds in terms of the financing tools at their disposal. Thus, because there are multiple modes of finance, debt levels relative to income and assets are comparably lower.

Chart 122: Debt-to-equity ratio by ownership model and economic grouping (2012–2013)



Source: ACI Airport Economics Survey (2014)

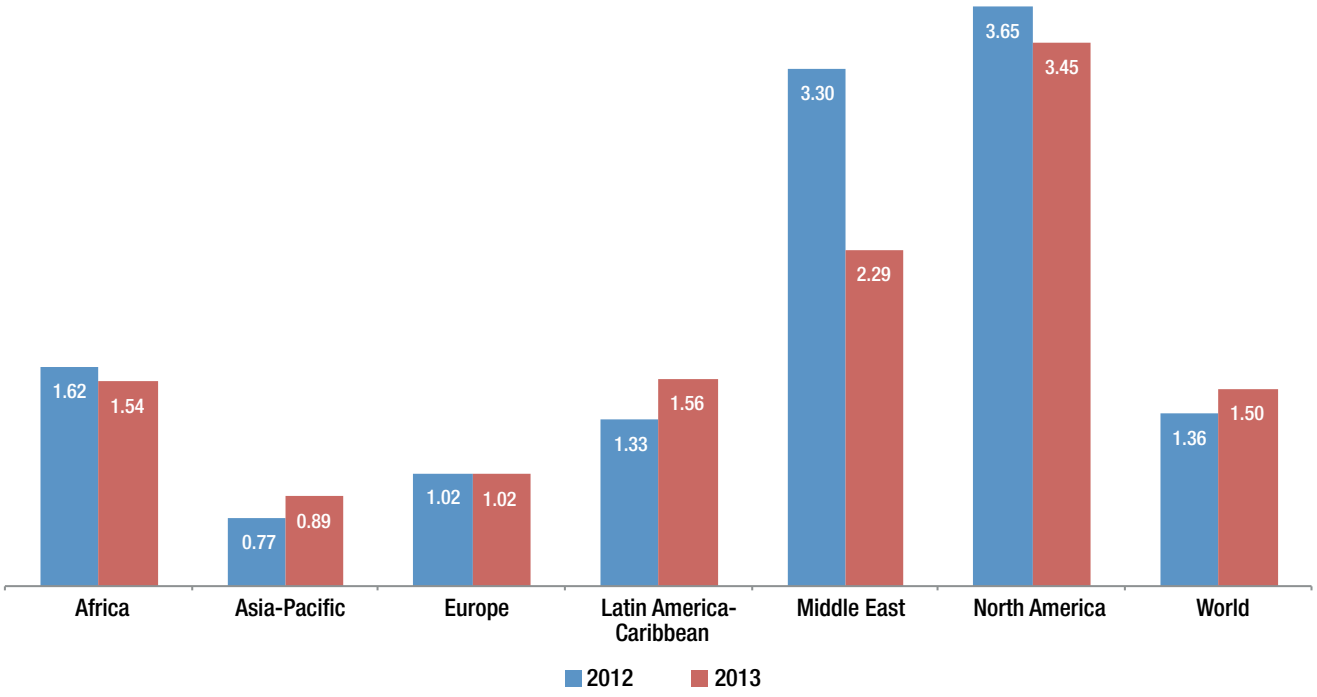
8.4 Liquidity

Liquidity ratios are used to assess a company's ability to meet its short-term obligations. In order for a company to remain solvent, it must be able to meet current liabilities. Working capital is a widely used measure to analyze a company's ability to convert assets into cash quickly. It is essentially the difference between current assets and current liabilities. Current assets refer to assets that are expected to be consumed or converted into cash in the near future, typically in one year or less. In contrast, current liabilities refer to short-term obligations, such as accounts payable, wages payable or accrued liabilities that are expected to be settled in the near future, typically in one year or less.

The current ratio expresses current assets in relation to current liabilities. A higher ratio, above 1:1, implies greater liquidity. However, a current ratio that exceeds 5:1 tends to have an excessive accumulation of funds either in cash or inventories. Of course, this measure varies by industry.

In 2013, the global current ratio for the airport industry was 1.5:1, which means that there was US$1.50 of current assets for every US$1 of short-term obligations (current liabilities). Coincidentally, on the aggregate, airports in North America have a high level of liquidity, with current assets more than twice those of the global average. Part of the reason for the high current ratio in North America is that airports in the United States are required to hold restricted assets for specific use or purpose (e.g., to pay relevant debt). Other regions, such as Asia-Pacific, showed some level of risk in that their current liabilities exceeded current assets (see Chart 123).

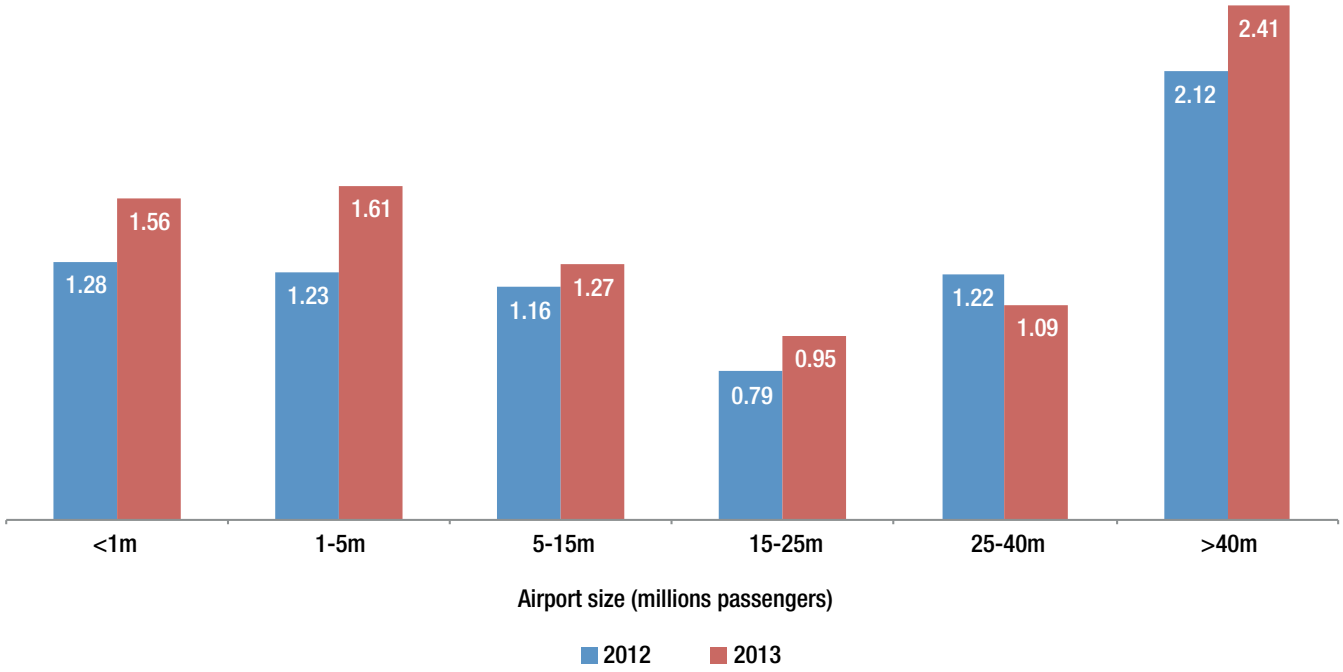
Chart 123: Current ratio by region (2012-2013)



Source: ACI Airport Economics Survey (2014)

When it comes to airport size (Chart 124), it was the medium-ranked airports with traffic between 15 and 25 million passengers that had the lowest current ratios in 2012 and 2013, while it was the largest airports (those with more than 40 million passengers) that showed the highest level of liquidity. Again, this reflects the fact that over 40% of the airports in this group are in the North American region, whereas they only represent just over 20% in the 15–25 million passengers airport group.

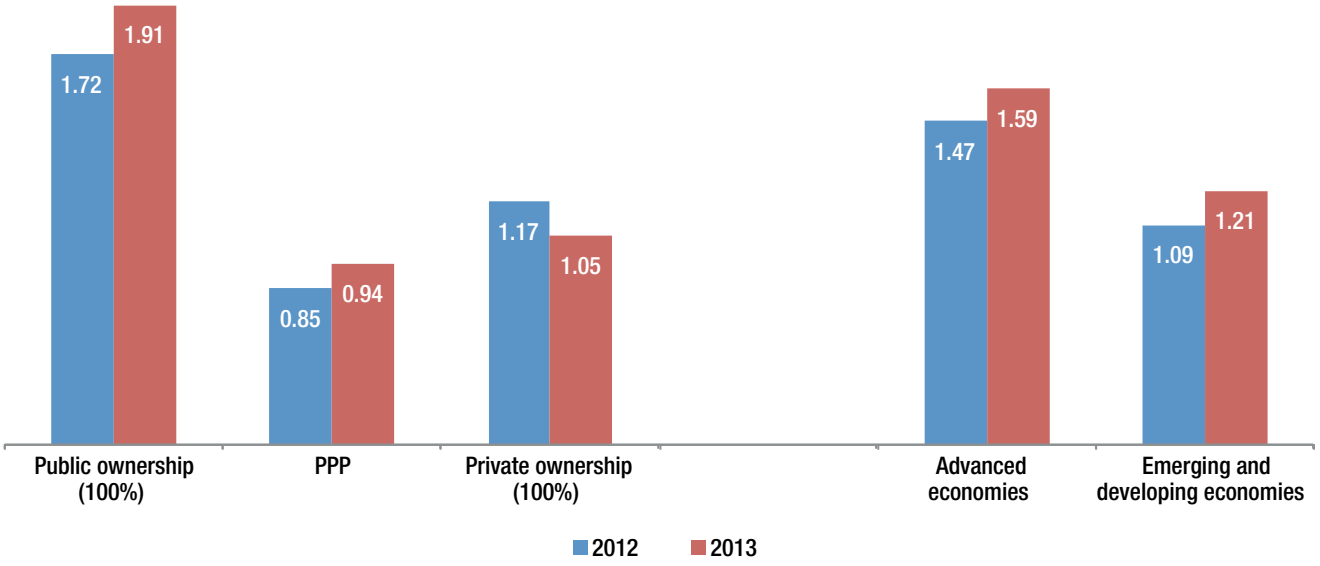
Chart 124: Current ratio by airport size (2012–2013)



Source: ACI Airport Economics Survey (2014)

Chart 125 compares the current ratio according to a) airport ownership and b) economic classification of the counties concerned. When compared by ownership, it is interesting to note that airports under PPPs that in 2013 exhibited the lowest debt-to-equity ratio also showed the lowest current ratio. In this case, it is this group of airports that may have given rise to some concern as they were below the 1:1 ratio, thus indicating that on average these airports could not meet their current liability obligations using current assets on the dates concerned.

Chart 125: Current ratio by ownership model and economic grouping (2012–2013)



Source: ACI Airport Economics Survey (2014)

The comparison by economic classification suggests that on average, airports in both groups satisfy the ratio requirements. The lower ratio shown for airports in emerging and developing economies reflects the fact that there are relatively more airports under PPPs in those countries.

9. Airport finance and privatization 2014 review

The 2013 review referred to a reduction in airport M&A transactions, particularly those involving secondary- and tertiary-level airports. That trend broadly continued into 2014, but the year was also notable for the arrival of a number of significant deals on the world stage. These deals mainly involved primary airports but in a handful of cases also involved large groups of regional airports.

As has been pointed out previously, the financing of airports is increasingly dominated by huge international funds. There is still great diversity amongst investors and operators, but a constant global shift towards ownership by funds is evident—infrastructure funds; pension funds; sovereign wealth funds; hedge funds and private equity.

Another trend that has been observed is a propensity for strategic investors to increasingly invest in infrastructure assets in *emerging markets*, where growth forecasts are significantly above those for the mature markets in Western Europe and North America.

Last year, we noted that airport valuations had crept back up towards 15/16 times EV/EBITDA. With there being only a few transactions in 2014 on which to base an observation, it does at least appear that those levels are being maintained.

9.1 Europe

United Kingdom

The interminable Airports Commission investigation into UK runway capacity, which aimed to "reach a conclusion" in summer 2015, has had some indirect effects on airport ownership.

For example, Australia's Industry Funds Management (IFM), took a 35% equity share in Manchester Airports Group that was related specifically to the takeover of London Stansted airport by MAG and the possibility that, under new ownership, Stansted might be selected as the location for additional runway capacity for Southeast England.

The last three ex-BAA (subsequently Heathrow Airport Holdings) airports that are not in London—Southampton, Glasgow and Aberdeen—were sold to a consortium comprising Ferrovial, which already had a stake in them, and a Macquarie infrastructure fund.

The Rigby Group acquired 80.1% of Norwich International Airport from majority shareholder Omniport for an undisclosed sum. Rigby Group has become the UK's staunchest supporter of small regional airports.

In September 2014, Macquarie's European Infrastructure Fund sold its 50% shareholding in Bristol Airport to its co-shareholder, Ontario Teachers' Pension Plan (OTPP).

9.1.1 Mainland Europe

Spain

AENA Aeropuertos includes 46 airports and is the largest airport system in the world by passenger numbers. It was wholly owned by ENAIRE, the public corporate entity designated by the state to provide air transit services in the en route and approach phases. The 2014/15 transaction entailed the government retaining 51% of AENA, with 21% of the equity going to three cornerstone consortia—which was pre-agreed—and an IPO on the remaining 28%. The cornerstone investors are Ferrovial Aeropuertos; Corporacion Financiera Alba; and the UK-based Children's Investment Fund. The IPO was suspended momentarily for administrative reasons and because of adverse market conditions but was reinstated by way of an IPO prospectus that was issued on 23 January 2015 with the intention to trade the stock from 11 February 2015. The valuation was thought to be around 8–10 times earnings, which is low compared to some recent transactions but still quite reasonable. In the event, and despite many lingering issues and last-minute twists and turns, the flotation and attendant share distribution to the cornerstone investors went ahead on 11 February 2015. The government set the share price at EUR58 per share, higher than previously expected, and valued AENA at EUR8.7 billion due to an overwhelming demand for the IPO. This makes the earnings multiple closer to 11.

The deal is considered successful, but there is still time for things to go wrong. There is another general election due in 2015. Political events in Greece (see below) may yet have some bearing on how the AENA privatization in Spain is received once the dust has settled.

Abertis, the world's largest toll road operator, hoped to draw a line under its multi-billion euro divestment programme by the end of 2014, when it aimed to have sold its last remaining airport assets.

Elsewhere in Spain, Ciudad Real Central Airport was put up for auction and remained so at the time of writing. Castellon Airport, which at one time looked as if it might never open, at least now has a proactive owner in Canada's SNC Lavalin. AENA may participate in a potential new tender to operate Murcia Corvera International Airport if bidding is re-launched.

France

The privatization of Toulouse-Blagnac Airport in France in December 2014 came as a surprise, but it was driven by political expediency. Toulouse was expected to go to French companies in consortia, but the 49.9% stake went instead to Hong Kong's Friedmann Pacific Asset Management in league with China's Shandong Hi-Speed Group. Eight other primary airports are expected to follow in 2015 or later.

Greece

A surprising number of investors were attracted to the privatization of regional airports in Greece despite the parlous (though improving) state of the EU-rescued Greek economy. However, the improvement could stall, courtesy of a 25 January general election in which a minor anti-austerity party took power. There is a risk of investor flight if the improvement in the Greek economy falters.

Altogether, 11 consortia expressed a non-binding interest in the regional-airport privatization, but the number subsequently fell to seven. The winner was Fraport/Slentel. Already the governing party (Syriza) is questioning the validity of the deal. The government also sought bids to finance, develop and operate a new airport at Kastelli, on the island of Crete.

In December 2014, the Hellenic Republic Asset Development Fund launched the privatization process for Athens International Airport by appointing an independent consultant to assess the value of the rights to operate the airport for 20 years.

Turkey

The government began an auction for the concession to operate Milas-Bodrum airport in March 2014, and in July the airport was transferred to TAV Airports, which will operate it until 2035.

9.1.2 Other privatization developments in Europe

Austria

Flughafen Wien (Vienna Airport) found itself in the middle of a hostile bid for a non-controlling minority stake in its equity by IFM's Global Infrastructure Fund. The deal was concluded on 21 December 2014.

Italy

The Italian government is likely to carry out a 49% sale of its state-run air navigation services provider ENAV in 2015 as part of wider privatization efforts. Italian airports were also traded throughout 2014, or at least attempts were made to trade them. They are popular, having significantly outperformed the growth of general economic activity in the country.

Amongst the actual or attempted transactions in 2014 were: Parma Airport; Lampedusa Airport; Forli Luigi Ridolfi Airport; Rimini Miramare Airport; Salerno Pontecagnano Airport; Grosseto Airport; Cuneo Levaldigi Airport; Verona Brescia/Montichiari Airport; Verona Villafranca Airport; Florence Airport; Pisa Airport and Genoa Airport.

F2i, Italy's largest infrastructure fund, said in May 2014 that it intended to sell off a 49% stake in F2i Aeroporti and was seeking a long-term equity partner to consolidate the market further. In February 2015, Ardian (AXA) and Crédit Agricole Assurances announced they would acquire a 49% stake in F2i Aeroporti. Aeroporto di Firenze SpA (AdF) and Societa Aeroporto Toscano (SAT), which have shares in the Pisa and Elba airports, were due to merge into a single entity, Tuscany Airports, by March 2015.

Poland

Early in 2014, the Polish government was reported to be creating a holding company to own and manage, inter alia, LOT Polish Airlines and the management firm of Warsaw Chopin Airport. Then,

in May, plans were announced to commercialize the entire Airports State Enterprise (PPL), which operates Chopin Airport. Separately, the Mazowieckie (Mazovian) Voivodship decided in September to invite potential investors to buy shares in the raised equity of Warsaw Modlin Airport.

Serbia

More than 10 companies expressed interest in taking part in the concession for Belgrade's Nikola Tesla Airport. These included Fraport, which acquired a 75.5% stake in Slovenia's Ljubljana Airport (see below) and Vinci, which failed in that bid.

Slovenia

The sale of the majority of the equity (70%) in Aerodrom Ljubljana involved more than 20 expressions of interest. On 24 October 2014 Fraport issued a notice of takeover and said it was seeking to purchase all the remaining shares in the airport as it attempted to extend its international reach even further.

9.2 Asia-Pacific

China

Lack of profitability remains a critical factor for China's airports. Of the country's approximately 200 working airports, only 50 are profitable.

As reported in 2013, big Western companies such as Fraport, AdP, Vinci and Copenhagen Airports, along with Singapore's Changi Airport International, have progressively minimized their presence and activities in China, which in the past have included hands-on management and investment.

CAAC stated that nine new airports were put into operation in 2014, bringing the nation's total airport count to 202. The number of airports that handled more than 10 million passengers per annum reached 24 during the year, while the number of airports handling more than 30 million passengers reached seven.

A Civil Aviation Investment Fund is expected to raise US$3.1 billion in its first phase of "social capital" fund raising, with 80% of the funds to come from the private sector. The fund is designed to help finance airport infrastructure development and other aspects of the aviation business. However, the foreign airport investment community looks set to remain on the periphery. Ownership in general is a murky area in China, and foreign ownership of Chinese assets in their entirety remains banned.

Work on the New Beijing Airport located in Daxing district commenced on 26 December 2014 and is scheduled for completion in 2019. The airport will be categorized as a large international hub airport with seven runways and (eventually) capacity to handle 100 million passengers per annum. The airport project is estimated to cost around CNY80 billion (US$13 billion), and it would appear the state intends to complete the project using its own resources.

Regulatory approval was also granted to build a CNY69.3 billion (US$11.2 billion) “New Chengdu” airport. It will have three runways capable of handling 40 million passengers and 700,000 tonnes of cargo per annum upon its completion in 2025.

Japan

The big Asian transaction in the first half of 2015 is in Japan, where the Kansai International and Itami airports in Osaka have been merged in anticipation of a 45-year concession to operate the two airports. A shortlist of bidders was due to be announced in February 2015, and selection of the winner was targeted for June. The transactions have attracted interest from a wide range of industrial and commercial concerns within Japan, many of which are new to airport investment.

India

In India, the Ministry of Civil Aviation expected to finalize a PPP model for the operation of another six AAI-operated airports in the country before the end of 2014. The PPP model was eventually rejected at the two largest airports, Chennai and Madras, in favour of management and operation contracts with unspecified private sector involvement, but the modernization of other airports was to continue along the PPP route.

The Goa Mopa BOOT (Build-own-operate-transfer) airport project anticipated environmental clearance by March 2015.

The Navi (new) Mumbai Airport project, a PPP between the AAI, the government of Maharashtra and yet-to-be-determined private sector partner(s), was progressing more slowly towards a conclusion. It was being hampered by environmental factors.

Indonesia

In the first quarter of 2014, the Ministry of Transport announced it intended to begin Phase 1 of a PPP drive by opening management bids for Bandar Lampung Radin Inten II, Komodo and Palu Mutiara airports as the first three of 10 to be operated by partnerships.

The biggest project facing the Indonesian aviation sector is a long-anticipated third airport primarily to relieve congestion at Jakarta’s Soekarno–Hatta International Airport. A draft design was presented in June 2014 for a new facility in northern Jakarta mainly to handle freight, owing to its proximity to seaports in the region. A row broke out between Lion Air and the Ministry of Defence as to who owned the city’s second airport, Halim Perdanakusuma, with the former coming out on top in the legal dispute, at least as of this writing.

Vietnam

Vietnam is calling for domestic investors to participate in airport PPPs, and the government has recently recommended the privatization of Airports Corporation of Vietnam (ACoV) in its entirety. ACoV will launch an IPO in the first quarter of 2015.

The biggest project there is the proposed Long Thanh airport, which is under discussion against a backdrop of concerns over the country's public debt issues. It would appear there is no immediate future for Long Thanh unless a big and committed foreign investor can be found.

The Philippines

Discussions about PPPs finally proved fruitful in the last quarter of 2014 as the government announced it would offer six airport projects for tender under a PPP in 2015 to help upgrade the country's infrastructure and attract more tourists. The airports featured are Davao, Iloilo, Bacolod, Puerto Princesa, new Bohol and Laguindingan. In April 2014, a consortium of GMR (India) and Megawide (Philippines) won a 25-year concession to upgrade The Philippines' second-busiest airport, Mactan-Cebu International.

Thailand

The possibility of Airports of Thailand (AoT) operating Krabi, Udon Thani and Ubon Ratchathani airports in addition to the six it already has emerged in talks in September 2014 between the Civil Aviation Department and the AoT chairman.

Myanmar

In November 2014, Japan's Mitsubishi Corporation, together with JALUX Incorporated and Myanmar's Yoma Development Group, signed a 30-year concessionaire contract with Myanmar's Department of Civil Aviation (DCA) to operate Mandalay International Airport, effective March 2015.

In October, the DCA selected a consortium led by South Korea's Yongnam Holdings, Singapore's Changi Airport Planners and Engineers (CAPE) and Japan's JGC Corporation (Yongnam-CAPE-JGC) to oversee the Hanthawaddy International Airport project.

Australia

It was finally decided that a second airport would be built to serve Sydney, but there are still more questions than answers, such as whether it should be a full-service reliever airport or one just for budget airlines. Also, who would pay for it? Sydney Airports, the operator of Kingsford Smith Airport, has the right of first refusal to operate the new airport.

As with Italy, Australia saw a considerable amount of airport privatization activity in 2014, most of it involving small secondary- and tertiary-level airports. They included Ballina Byron Airport; Lismore Airport; Port Macquarie Airport; Albury Airport; Merimbula Airport and Brisbane West Wellcamp Airport.

South Pacific

In December 2014 in the South Pacific region, Fiji's government outlined its plans to sell its stake in Airports Fiji Ltd in 2015 under a "partial divestment" programme outlined in the 2015 state budget.

9.3 West Asia and Russian Federation

Russian Federation

Despite Russia's economic adversities in 2014 and 2015, up to 30 airports are considered to be potential privatization targets.

In July 2014, the Russian Direct Investment Fund (RDIF) said the BRIC countries, acting in combination, would launch an infrastructure fund that would help foster the development of roads, airports, ports and other infrastructure projects in those nations. Even so, and as existing foreign operators can and do testify, ownership is an ambiguous area in Russia, as it is in China.

Current examples of privatization activity include the following.

Moscow:

The Economic Development Ministry developed a 49-year concession agreement for airports within the Moscow Aviation Hub. Concessions were to replace the current system of governance among Moscow's airports, with operators managing the operation of airfields and the government retaining ownership. Concessions would be offered on Moscow's Domodedovo, Sheremetyevo and Vnukovo airports.

The merger of Sheremetyevo and Vnukovo airports should be completed in 2015. The combined entity is expected to have a majority ownership (70%–75%) of three private investors on a 49-year lease, with the government expected to hold the remaining 25%–30%.

Separately, Sheremetyevo Airport was trying to offload its shares in Vladivostok International Airport and Terminal Vladivostok.

Outside Moscow:

There is, has been or may be privatization activity at airports outside Moscow, including Perm Bolshoye Savino Airport; Belgorod Airport; Yuzhny Airport (Rostov-on-Don); Leshukonskoye Airport (Arkhangelsk); Kostroma Airport; Makhachkala Uytash Airport; Kazan Airport; Saratov Airport, Irkutsk Airport and Simferopol International Airport in Crimea.

Kazakhstan

In October 2014, investors from China and Turkey were reported to be interested in constructing an airport to cater to the needs of the Kinderly resort on the Caspian Sea. Negotiations with the investors were to be completed by the end of 2014.

9.4 Latin America

While all eyes have been on Brazil during the past two or three years, privatization activity has dried up there for the time being, but there is plenty happening elsewhere on the continent.

Brazil

It now seems that the privatization of key airports will continue once Infraero has been restructured, and the government has been preparing concessions for three more airports in Manaus, Porto Alegre and Salvador. However, contradictory statements are frequently made by different government offices.

In December 2014, Brazil's government found it necessary to approve a credit line for Infraero because the state airport operator had been so financially hampered following the privatization of the country's five busiest airports and the closure of Natal Augusto Severo Airport in favour of the private Natal Aluízio Alves International Airport.

As the year progressed, the second series of airport concessions were finalized, involving Rio de Janeiro's Galeao International Airport and Belo Horizonte Trancredo Neves Airport. In each case, bids were far in excess of the government's original minimum bid price level: Belo Horizonte bids reached 253% of the minimum bid level and Rio de Janeiro bids reached 294% of the minimum level. In each case, Infraero retained 49% of the equity.

All of Brazil's private-sector airport concessionaires operating in conjunction with Infraero could now face unanticipated competition due to a proposed rule change. The government intends to overturn regulations that prevent most airports operated solely by the private sector from receiving commercial passenger flights. This change would allow companies to build new commercial airports from scratch. These private-sector newcomers—which are separate from existing concessionaires—will be involved in projects such as the forthcoming third airport for São Paulo, which will be 100% privately built and operated.

Chile

Chile is working through a concessions portfolio that includes Santiago's Comodoro Arturo Merino Benitez International Airport.

More than 30 companies pre-qualified to participate in the tender for the expansion and operation of Chile's capital city airport (which includes construction of a new 200,000 square-meter terminal). The group was subsequently shortlisted to 12.

The tender process was extended from September 2014 to February 2015 to allow more time for interested parties to prepare their bids. The Public Works Ministry believed that six firms would submit formal bids. Following the award, a transition process was expected before the new operator take over the concession in October 2015.

Colombia

In February 2014, Colombia's National Infrastructure Agency opened a bidding process for concessions to operate and upgrade four regional airports: Barranquilla, Neiva, Armenia and Popoayan. The upgrade mainly required the rehabilitation and expansion of runways and the expansion and improvement of terminal buildings. However, interest was low.

Peru

The construction and operation tender for Peru's Chinchero Cusco International Airport attracted interest from seven parties. The 40,000 square-meter facility will replace Cusco Velazco Astete Airport upon its completion by 2018 or 2019 and will have capacity for five million passengers per annum.

The award of a 40-year construction and operation concession was eventually signed by the concessionaire Kuntur Wasi in July 2014. Elsewhere in Peru, the Jauja, Huanuco and Jaen airport concessions will be granted in early 2016.

Paraguay

The privatization of Asunción's Silvio Pettirossi International Airport is among the new government's priorities to introduce more PPPs in the country. The concession would be for 30 years.

9.5 Mexico and the Caribbean

Mexico

Following many years of deliberations, the construction of a new airport for Mexico City was finally agreed in 2014. The new airport is expected to be complete by late 2018 or early 2019. The government insists it will remain in state hands upon completion, and the project will be financed with a combination of current cash flow and bonds.

Jamaica

In December 2014, it was announced that the Development Bank of Jamaica was seeking foreign investors to bid on the operating, finance, development and maintenance contract for Kingston's Norman Manley International Airport under a 25-year PPP agreement. Abertis was attempting to sell its 75% stake in Montego Bay's Sangster International Airport.

Saint Lucia

The International Finance Corporation was called in by the government of Saint Lucia and its Air and Sea Ports Authority (SLASPA) as lead adviser to oversee the PPP tender for Hewannorra Airport. The government and SLASPA plan to issue a 30-year concession tender.

9.6 North America

United States

US airport privatization activities stalled after the second failure of the proposed lease of Chicago Midway Airport several years ago, leaving only the single successful lease at San Juan, Puerto Rico, a pipeline of small transactions and some shifting of responsibility for airport operation between state, county and city authorities.

There has been continuing disappointment regarding the low interest in the FAA's Airport Privatization Pilot Program, which has been in existence since 1996 and which has recently been extended to permit 10 privatization "slots." Only one of these was occupied as of December 2014, another having been filled during 2015.

Most of the little activity remaining seems to be focused in and around the Midwestern US.

Despite the failure of the lease of Chicago Midway Airport, the city authorities are keen to progress the long discussed and anticipated third Chicago "South Suburban" airport at Peotone, Illinois. The Illinois Department of Transport held an "industry day" to explain the project and assess private-sector interest in the possible development of the airport as a PPP. In June 2014, the department purchased 288-acre Bult Field, an adjacent general aviation airport. The project has been discussed for nearly 40 years, and local sentiment reveals it is time either to build the airport or scrap the project.

In nearby Gary, Indiana, the airport closed a 40-year operation deal in January 2014 with Aviation Facilities Company (AVCO). AvPorts, an AVCO subsidiary, has a 10-year contract to manage the airport, with up to six possible five-year renewals.

Also in the US Midwest, the city of Detroit was reported to be considering the sale of Detroit Coleman A. Young International Airport in order to cover debts.

An attempt was made early in 2014 to privatize Toledo Express Airport in Ohio, but it fell foul of concerns about the implications this would have for FAA funding.

In California, the potential shift of ownership of Ontario International Airport in the "Inland Empire" to the east of Los Angeles from Los Angeles World Airports (LAWA) to Riverside and San Bernardino counties, which has been in process for four years now, edged a little closer. There is no immediate prospect of privatization, but that could yet emerge out of this complex transaction.

Elsewhere in the US, the company seeking to privatize Hendry County Airport in south-central Florida received FAA approval to take over management of the airport, effective 12 September 2014.

A New York-based private equity firm, Propeller Investments, is attempting to privatize two small general aviation airports in significant locations, Atlanta and Seattle, which each have only one commercial airport.

The airfield in Georgia is in Paulding County in the Atlanta suburbs, where Propeller Investments seeks to attract airline service to its Silver Comet Airport. Small as it is, the project is strongly opposed by a cabal of Delta Air Lines, Delta's pilots' union, Atlanta's mayor and some local residents. These parties say the county's real goal is to build a commercial hub and claim such a project would be unnecessary, wasteful and doomed to become a costly failure.

Propeller Investments has similar plans for Paine Field in Everett, a northern suburb of Seattle. Paine Field serves both general aviation and Boeing's main widebody final-assembly plant. The airfield's main runway is 9,010 feet long and routinely accommodates aircraft as large as the Boeing 747-8.

That is the extent of current airport privatization activity in the US. However, there will probably be opportunities in the construction and operation of new terminals at major airports such as the Central Terminal Building at New York's La Guardia Airport and the development of T4 at JFK airport if the emphasis shifts away from airlines owning and/or operating terminals at primary airports.

There is a noticeable budding desire throughout the US infrastructure community, public- and private-sector investors alike, for PPP projects to help solve the country's continuing failure to find the necessary funding to offer air travellers modern facilities.

Canada

In Toronto, Porter Airlines began a bidding process for the sale of a passenger terminal at Billy Bishop Toronto City Airport in December 2014.

9.7 Middle East

There is lots of actual, potential and recently completed construction activity—particularly in the Gulf region—but there remain very few privatization deals. The main exception is Saudi Arabia.

Saudi Arabia

Efforts to privatize King Fahd International Airport have intensified following a profitable year in 2013 after years of financial deficit. The airport's expansion project is expected to be finished by 2018.

In May 2014, the General Authority for Civil Aviation (GACA) revealed that the country's Riyadh King Khaled International Airport will be operated under a PPP. Other airports within the region will progressively be placed under a similar ownership programme.

Oman

The Ministry of Transport and Communications and other public and private bodies plan to develop short- and long-term national strategies for the country's transport sector, including airports. The strategies are expected to establish a public transport model for the country and identify areas for public and private sector involvement in transport development, including aviation.

Iran

Qom International Airport confirmed in October 2014 that Chinese investors had visited the airport to discuss investment prospects. Chinese state and private investors are looking at financing a number of projects in Iran in the airport and rail sectors. However, they have many problems to deal with. Years of sanctions have ensured that only three of the Iranian Airports Organisation's 51 airports are profitable.

9.8 Africa

Some economists believe Africa will be the world's next major destination for both business and tourism. However, safety, security and transportation costs still remain high on the agenda for aviation professionals in Africa, as do health issues such as the recent Ebola haemorrhagic fever outbreak in West Africa. The African continent only accounts for 2.85% of the global total of passengers transported and only 2% of global airport income despite of being the second-largest and second most populous continent.

Africa is not at the top of the list for infrastructure investment in general. On the other hand, there is no longer a massive difference between Africa and other world regions in terms of airport construction projects and investment. New infrastructure has to be paid for somehow and, as in the case of the USA, the ability of many African states to pay for it is limited.

Many of these projects are supported directly or indirectly by the World Bank and regional development banks.

Nigeria

In Lagos, Murtala Muhammed International Airport's MMA2 terminal has been operated under a PPP for several years now and the private-sector party, Bi-Courtney Aviation Services Limited, has been urging the Nigerian government to attract more private investment in the sector. A government agency wants to do that, but security issues are likely to prevent further privatization in the near future.

Kenya

There are two projects at Nairobi's Jomo Kenyatta International Airport in which the private sector may play a part, namely a second runway and a new terminal with capacity for 20 million passengers per annum.

South Africa

Despite heavy investment by ACSA prior to the 2010 soccer World Cup and subsequent airport investment, there is still suspicion in some quarters that ACSA will be heavily pressed by increasing passenger traffic and that there is consequently room for more privately operated airports.

There are a few privately run airports in the country, such as Lanseria between Johannesburg and Pretoria and Kruger Mpumalanga International in Kruger National Park.

The latest proposal is for a new private airport, also in Mpumalanga province, which would be situated near Delmas, about 40 km from Johannesburg's O.R. Tambo airport. Department of Transport approval for international status is needed prior to operations commencing.

Meanwhile, the City of Tshwane plans to sell Wonderboom National Airport in response to a study which concluded that the private sector would be better able to raise funds for the facility's development.

As for ACSA, as it comes under more pressure at home, it is aiming to secure new consulting and management contracts in Africa and other regions in the coming year.

The African continent is spawning investors of its own, such as Investec, which is jointly listed in South Africa and the UK, and Harith, which took control of Lanseria Airport in November 2011 in what is a groundbreaking PPP.

There is one recent development that may have an important bearing. The 1999 Yamoussoukro Decision/Agreement, which pledged to open up air transport markets within Africa to transnational competition, has still not been implemented in too many countries. In November 2014, Ethiopian Airlines said it hoped a decision to open up intra-African aviation routes will be fully implemented in 2015 following a meeting between heads of state that is expected to result in some progress.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
ABB South Africa Modderfontein, South Africa	• Led a team for the BOT project of a new passenger terminal at **Sharm el-Sheikh Airport** in Egypt. • Led a consortium which built **Kruger Mpumalanga International Airport** near Nelspruit in South Africa, which is owned and operated by ABB through its specialist airport management company, Primkop Airport Management (PAM); tried unsuccessfully to sell its 90% stake in PAM in spring 2004. Mbuyane community owns the remaining 10%. • Through ABB Equity Ventures, owned 15% of Oman Airports Management Company (OAMC), which manages the **Muscat** (Seeb International) and **Salalah** airports.
Abertis Airports, Spain Fax: +34 (93) 230 5001 http://www.tbiairports.aero/abertisGroup.php (Resulted from the merger in 2003 of Acesa and Áurea. The merger created one of the leading infrastructure groups in Europe by market capitalization and it now operates 32 airports. Airport business represents the third-largest source of revenue of the Abertis Group.)	• Owned 90% of the former TBI airports **Belfast International, Cardiff, London Luton** (all in the UK), **Orlando Sanford** (USA), **Stockholm Skavsta** (Sweden), **La Paz, Santa Cruz,** and **Cochabamba** (Bolivia, until February 2013), and **Barranquilla** (Colombia); AENA owned the remaining 10% (see ACDL below). The Welsh government bought back **Cardiff Airport** in 2013. • In mid-2013, ADC & HAS acquired Abertis' stakes in **Belfast International** and **Stockholm Skavsta** airports, plus its terminal concessions at **Orlando Sanford International** in Florida and the US management business of Abertis' TBI unit at **Hartsfield-Jackson Atlanta International** (management contracts for the 28-gate Concourse E) for EUR 284 million (US$ 374 million). TBI management contracts acquired under the deal include contracts at **Raleigh-Durham International**, NC; **Bob Hope Airport**, CA; and **Middle Georgia Regional Airport** in Macon, GA. Following the transaction, Abertis retained only **London Luton Airport** in Europe but sold it on 1 August 2013 to a joint venture of AENA and AXA (now called Ardian). • Abertis still owns and manages airports in **Bogotá** (Colombia), where it built one and manages and maintains two runways via the operator Codad, of which it owns 85%; and in the Caribbean and Latin America, where in 2007 Abertis acquired 100% of DCA. This is a holding company with stakes in 15 airports formerly owned by ACS in **Mexico** (through stakes in AMP and GAP); **Jamaica** (through a 74.5% stake in MBJ Airports Ltd); **Chile** (through a 14.77% stake in SCL); and **Colombia** (through a stake in Aerocali). • Abertis' stakes in Grupo Aeroportuario del Pacífico (GAP) in Mexico and the concession for **Sangster International Airport** at **Montego Bay** in Jamaica are held for sale. • Abertis provided consultancy services on projects at **Miami International Airport** and the future **Castellón–Costa Azahar Airport** in Spain.
ACDL (Airport Concessions & Development Ltd), Spain (Owned 90% Abertis; 10% AENA Internacional.)	• At the end of November 2004, launched a take-over bid for 100% of the shares in TBI, a British company that managed, in concession or as property, eight international airports. Three of them are in the United Kingdom (**London Luton, Cardiff** and **Belfast International**), one is in Sweden (**Stockholm Skavsta**), another is in the USA (**Orlando Sanford**), and three are in Bolivia (**La Paz, Santa Cruz** and **Cochabamba**, until February 2013). • ACDL also manages five other airports, wholly or partially, for governments and local authorities. Initially acquired a 92.88% stake in TBI plc and its airport portfolio in 2004 and acquired the remaining 7.12% through a permanent buy order in the open market at the same share price.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
ACSA, South Africa Fax: +27 (11) 453 9354 (Owned 75.78% by South Africa's Ministry of Transport, 20% by Aeroporti di Roma (now sold to the local Public Investment Corparation (PIC) and by private investors.)	• Managed **Pilanesberg International Airport** (since 1998) near Sun City under a 35-year concession, in addition to its own nine airports (including **Johannesburg**, **Cape Town**, and **Durban**); the Pilanesberg concession was handed back to the North West province in 2011. • Is a member of a consortium led by India's GVK Group to manage and develop **Mumbai's Chhatrapati Shivaji International** and **Bangalore's Kempegowda International** airports in India. Private investors own 74% and AAI owns 26% of a joint company. • Holds 10% of the Invepar-ACSA consortium, which includes the Brazilian Invepar (90%)—an association between construction company OAS and civil servant pension funds—and ACSA to operate **São Paulo's Guarulhos International Airport**. The concession was awarded in February 2012. • ACSA is looking at markets outside South Africa to generate more revenue from non-aeronautical activities, such as retail operations and property development. The company said on 30 August 2013 that it was pursuing viable business opportunities in Africa in collaboration with the government. It would use its technical airport management expertise to assist other major airports on the continent. ACSA has been involved in the refurbishment of airports in the **Democratic Republic of Congo** and **Benin**. It was also looking at **India** and **Brazil** to establish a new focus on opportunities in emerging markets. The company owns 10% of **Mumbai's** international Airport and it might look at obtaining equity in other airports.
ACV – now **Airport Consulting GmbH**, Austria (Until 2001, Airport Consulting Vienna (ACV) was 50% owned by Vienna Airport) www.a-c-v.aero **Airport Consulting Investments Ltd**, Cyprus (Equity investment arm of ACV)	• Founded in 1992, Airport Consulting Vienna GmbH was a subsidiary of **Vienna International Airport** until 2001. Now the company is privately owned and is one of the world's five leading international airport privatization consultancies. • ACV has been successfully involved in over 100 airport consulting projects and international airport projects and over 70 airport privatizations during the past 20 years either as an investor, a manager, an operator or know-how provider. ACV exerted its strength in transferring management know-how to several projects in regions such as the Ukraine, Russia and Turkey. This expertise was the key for Alfa to choose ACV from a large number of competitors in order to play a special role in preparing the offer and in organizing the management contract for **Moscow's Sheremetyevo International Airport**.
ADA - Administration of Airports Ltd, Macao, China	• The Sino-Portuguese joint venture of CNAC (Macau) Aviation Ltd (51%) and ANA Aeroportos de Portugal (49%) signed a 15-year service contract with CAM Sociedade do Aeroporto Internacional de **Macau** in 1994. In 2011, ANA sold its 49% stake in CAM (which holds the concession for **Macau International Airport**) and its operating subsidiary ADA to China National Aviation Corporation (CNAC).

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Airport Development Corporation (ADC), Toronto, Canada www.adccanada.com	• Held a 34% stake in the company that managed Terminal 2/B at **Budapest Ferenc Liszt International Airport** until 31 December 2001; since January 2002, by unilateral Hungarian government decree, the ownership and management of this project reverted back to the Hungarian state. • The Canadian government selected ADC to finance privately, design, develop, construct, own and operate **Toronto Pearson's Terminal 3**, representing the first privatization project of its kind in North America. T3 opened in 1991. • Together with Houston Airport System's HAS Development Corporation, holds a 34% stake in Corporación Quiport S.A., the company that managed **Quito's Mariscal Sucre International Airport** in Ecuador and built Quito's new airport, which has the same name and opened in February 2013. • Together with HASDC and Andrade Gutierrez (48.75% stake each) manages **San José's Juan Santamaria International Airport** in Costa Rica and holds a 45% stake in the Coriport consortium, which manages **Liberia's Daniel Oduber Quirós International Airport**, also in Costa Rica.
ADC & HAS Airports Worldwide, Houston, TX, USA www.adchas.com (ADC & HAS Airports Worldwide is a privately-held company whose sole business is investing in, developing and operating airports worldwide. A joint venture of Houston Airport System, Airport Development of Canada, and the Ontario Municipal Employees Retirement (OMERS), one of Canada's largest pension funds. Has offices in Costa Rica, Ecuador, Vietnam, Philippines and South Korea. ADC & HAS brings together the operational and technical resources of the Houston Airport System, the airport privatization experience of Airport Development Corporation and OMERS.	• Currently, ADC & HAS has equity participation and operations and management (O&M) contracts in the following airports: - **Mariscal Sucre International Airport**, **Quito**, Ecuador. Opened in February 2013, replacing the old airport of the same name located in a residential district; - **Juan Santamaria International Airport**, **San José,** Costa Rica – 48.75% stake; - **Daniel Oduber Quirós International Airport**, **Liberia,** Costa Rica – 45% stake; and - **Cheongju International Airport**, **Cheongju,** South Korea. • ADC & HAS will invest in, develop and operate airports globally, with a primary focus in the Americas and Asia, and opportunistically in the rest of the world. • In mid-2013, ADC & HAS acquired the Abertis stakes in **Belfast International** and **Stockholm Skavsta** airports, plus its terminal concessions at **Orlando Sanford International Airport** in Florida and the U.S. management business of Abertis's TBI unit at **Hartsfield-Jackson Atlanta International Airport** for EUR 284 million (US$ 374 million). • In 2013, ADC & HAS Airports Worldwide completed the acquisition of airport assets in Northern Ireland, Sweden and the U.S. from TBI Ltd for EUR 297 million. The transaction included the purchase of 100% of the shares in **Belfast International Airport**, 90.1% of the shares in **Stockholm Skavsta Airport** and 100% of the shares in the concession which operates at Florida's **Orlando Sanford International Airport**. Also included in the acquisition were 100% of the shares of TBI Airport Management, which has operations contracts for various airports including Concourse E and the Maynard Jackson International Terminal at **Hartsfield-Jackson Atlanta International Airport**, GA; **Bob Hope Airport**, Burbank, CA; **Middle Georgia Regional Airport** and **Macon Downtown Airport**, GA and Terminal 2 at **Raleigh–Durham International Airport**, NC.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
ADI – Airport Development & Investment (Holdings) Ltd	• An investment vehicle set up to acquire BAA; jointly owned by Spain's Ferrovial Infrastructures S.A., Canada's Caisse de Dépôt et de Placement du Quebec and the Singapore government's private equity investment arm GIC Special Investments Pte Ltd.
ADM Capital Inc., Canada (owned by ADM - Aéroports de Montréal) Fax: +1 (514) 394-7356	• Was a member of a consortium that oversaw the financing, construction and operation of the new terminal at **Budapest Ferenc Liszt International Airport**. • Won the concession for **Châlons Vatry Airport** in France as a member of the S.E.V.E. consortium formed with SNC-Lavalin of Canada, Keolis, Sogaris, Pingat, Iénair and the CCIs of Reims/Epernay, Chalons-en-Champagne and Troyes of France; holds 23.3% of S.E.V.E. (see there). • ADM decided in October 2000 to focus on its primary mission to manage and develop **Dorval** and **Mirabel**, its two international airports in **Montréal**. Its two subsidiaries, ADM International and ADM Capital, are not active any more as they are not pursuing new ventures, although they will honour their existing contracts.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
ADP Management, France Fax: +33 (1) 4975 3290 www.adpmanagement.com (Airport management holding company established in 1990, now wholly-owned by Aéroports de Paris; the former partner was Vinci, which has held an 8% stake in parent Aéroports de Paris since 2013.)	• Aéroports de Paris Management operates directly or provides consulting services to some 30 airports throughout the world. Parent ADP owns and operates 10 airfields and one heliport in the Paris region and holds 8% of the stock of the Schiphol Group (cross ownership, with Schiphol Group holding an equivalent stake in ADP). • ADP Management had a 34% stake in **Aéroports du Caméroun (ADC)**, which manages three international and four provincial airports in Cameroon; the stake has since been acquired by the government of Cameroon. • Held a 34% stake in **Aéroports du Madagascar (ADEMA)**, which manages 12 airports in Madagascar; the stake was sold. • Partner in **SOGEAC** (29% stake) which runs **Conakry International Airport** in **Guinea** under a five-year concession and **Kankan Airport**, also in Guinea. • Operated **Phnom Penh International Airport** and **Siem Reap International Airport** in **Cambodia** under a 25-year contract as a majority partner (60%) of CAMS, which also provides ground-handling services at the airports; the stake was sold to VINCI, but a technical assistance contract was retained. • Acquired a 25% stake in SAB S.A. (now Liege Airport S.A.), the operating company of **Liège Airport** in Belgium, specializing in air freight and charter flights. • Operating partner with a 25.5% stake in **Mexico's Grupo Centro Norte** airport privatization through **Operadora Mexicana de Aeropuertos (OMA)**, together with Empresas ICA (originally 74.5%, now 58.6%), managing a total of 13 airports. • Together with VINCI, acquired 10% of the shares of **Beijing Capital International Airport** (BCIA) when 35% of the latter's shares were floated on the Hong Kong stock exchange. VINCI sold its 3.4% share in 2006 and ADP Management sold its stake of 6.6% in the first quarter of 2007. • Managed and operated **Marsa Alam International Airport** in **Egypt** from October 2001 until 2009; provided management and technical assistance at five other airports (**Abu Simbel, Aswan, Hughada, Luxor** and **Sharm el-Sheikh**) until 2011. • Has a 10% interest in Airport Terminal Operations Ltd (ATOL), which will build and operate Terminal 2 at **Sir Seewoosagur Ramgoolam International Airport** (SSR International) in **Mauritius,** combined with a management contract. • Won a contract in 2006 to manage the new **Algiers Airport** passenger terminal. • Has a 9.5% stake in the AIG consortium which operates **Amman, Jordan's Queen Alia International Airport**.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Cont. ADP Management, France Fax: +33 (1) 4975 3290 www.adpmanagement.com (airport management holding company established in 1990, now wholly-owned by Aéroports de Paris; the former partner was Vinci, which holds an 8% stake in parent Aéroports de Paris since 2013) Aéroports de Paris Group is pursuing its strategy of adapting and modernising its terminal facilities and upgrading quality of services; the Group also intends to develop its retail and real-estate businesses. In 2012, Group revenue stood at EUR 2.640 billion and net income at EUR 341 million.	• Acquired a 5% stake in the Saudi company Matar, which operates the **Hajj Terminal** at **Jeddah's King Abdulaziz International Airport**. • Signed a contract on 11 March 2011 to acquire a 38% stake in Turkish airport operator **TAV Havalimanlari Holding AS** (TAVHL.IS) for US$ 874 million (EUR 667 million). Aéroports de Paris SA's Turkish unit will likely run Istanbul's **Atatürl Airport** until the end of its term in 2021. • TAV Airports, partnering with Aéroports de Paris (ADP) and Limak Holding, is among the companies that have expressed interest in operation rights to the planned third **Istanbul** airport. • An alliance of ADP Management, Bouygues Bâtiment International and Croatian construction company Viadukt was the preferred bidder to operate **Zagreb Airport** under a 30-year deal. This new contract further expands the ADP Management portfolio of 19 airport locations. • Together with GTM, a subsidiary of Suez Lyonnaise des Eaux, was the preferred joint bidder for up to 49% of the shares of a yet-to-be privatized **Soekarno-Hatta International Airport, Jakarta**.
Advent International, Boston, USA www.adventinternational.com (One of the most established and successful private equity investors in Latin America. Since it began operating in the region twelve years ago, the firm has invested in 37 companies with a combined enterprise value exceeding US$ 8 billion.)	• In a leveraged buyout, acquired 100% of Aeropuertos Dominicanos Siglo XXI SA (**Aerodom**), the Dominican Republic's major airport group and one of the largest airport operators in Central America and the Caribbean. It bought the company from the Hazoury Group, Vancouver Airport Services, and other local investors. The transaction price was not disclosed. Advent has established a new company, **Latin American Airport Holdings**, to hold its interest in Aerodom, as well as others of its existing airport businesses. • Owns Airport Shoppes, Puerto Rico's leading airport-restaurant group. • Other airport-related investments include Aeroboutiques**,** the largest duty-free operator in Mexico; Fumisa, the commercial operator of Mexico City's **Benito Juárez International Airport**; Aeroplazas, commercial developer of the **Puerto Vallarta** and **Guadalajara** airports in Mexico; and, also in Mexico, AMAIT, operator of **Toluca's Licenciado Adolfo López Mateos International Airport**. • Has major stakes in the travel retailers **Dufry South America** and **Hudson Group**. Hudson's food & beverage investments in Latin America include **Aerocomidas**, Mexico's leading airport-restaurant and bar operator; **Grupo RA**, the number one operator of restaurant concessions in Brazil's main airports; and **La Mansión**, a leading casual dining restaurant chain in Mexico that has expanded into airports. • Helped finance the takeover by Dufry of the privately owned Brasif, Brazil's leading travel retail operator, which was subsequently floated on Bovespa (DUFB11).

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
AECON Group Inc., Toronto, Canada www.aecon.com (Canada's largest publicly traded construction and infrastructure development company.)	• AECON Concessions owns 45.9% of the Quiport Consortium that builds and operates **Quito's** new **Mariscal Sucre International Airport**, completed in 2013. • As a construction firm, won a general contract to expand and renovate portions of **Montréal's Pierre Elliott Trudeau International Airport** (formerly Montréal-Dorval International Airport).
AENA Internacional (Aeropuertos Españoles y Navegación Aérea), Madrid, Spain Fax: +34 (91) 321 3001 www.aena.es (AENA operates 47 airports and two heliports in Spain and 26 others elsewhere; calls itself "largest airport operator in the world", handling some 250 million passengers a year. AENA Aeropuertos was to be part-privatized (49%), starting with the Madrid and Barcelona airports, but the new Rajoy government stopped the process in early 2012.)	• Owns 40% of Aeropuertos del Caribe S.A. (ACSA), which managed **Ernesto Cortissoz International Airport** in **Barranquilla,** Colombia until February 2012 under a 15-year concession awarded in 1997. • Was awarded a contract to manage **Alfonso Bonilla Aragón International Airport** in **Calí**, Colombia as partner of the Aerocali S.A. consortium, in which it holds a 33.34% share. • Handles the former Schiphol involvement in **Rafael Núñez International Airport** in **Cartagena,** Colombia through Sociedad Aeroportuaria de la Costa, S.A. (SACSA), in which it has a 38.08% holding as an operating partner. • Owns 5% of the Mexican-Spanish AMP consortium which acquired a 15% stake in **Grupo Aeroportuario del Pacífico** (GAP) package of 12 Pacific airports in Mexico. The operating company is called Aeropuertos Mexicanos del Pacifico, S.A. (AMP). The other partners are Unión Fenosa, Dragados Industrial, and Mexico's Ángeles Group (Inversores del Noroeste and Holdinmex). • Manages the new **Jardines del Rey Airport** on the island of **Cayo Coco** in **Cuba** under a five-year contract in partnership with ECASA. • Won a management contract for **Quatro de Fevereiro International Airport** in **Luanda**, **Angola**. • Was involved in the new **Samaná El Catey International Airport** at **Samaná** in the **Dominican Republic**. • Owns 10% of Airport Concessions & Developments (ACDL), which acquired TBI plc in late 2004 (see Abertis & ACDL). • Acquired **London Luton Airport** in 2013 in a consortium with Ardian (49%; ex-AXA Prtivate Equity), owning the remaining 51%. • AENA has expressed interest in the forthcoming operating concessions in the **Rio de Janeiro** and **Belo Horizonte** airports in Brazil.
Aer Arann, Ireland	Owns **Connemara Regional Airport** at Inverin, Connemara, **Ireland**.

Who owns and manages privatized airports?

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Company	Activities
Aeris Holding Costa Rica S.A., Alajuela/San José, Costa Rica	• Operates **Juan Santamaría Airport** in **San José**, **Costa Rica** under a concession until 2026. Alterra Partners operated the airport between 2001 and 2009. On 1 July 2009, the privately owned, Houston-based Canadian-U.S. company ADC & HAS and the Brazilian company Andrade Gutierrez Concessoes (AGC) – a subsidiary of the Andrade Gutierrez conglomerate – took over the operations and administration of Alterra Partners, as the previous operators and administrators (AGI, Bechtel, SRL) had mismanaged the airport and its construction and were in non-compliance of the concession contract. The name was changed to Aeris Holding Costa Rica, S.A. and the new operators/administrators of the concession installed a new management team with the objective of making it a world-class airport.
AERODOM (Aeropuertos Dominicanos SIGLO XXI), Santo Domingo, Dominican Republic	• The concessionaire chosen by the Government of the Dominican Republic to develop, operate and manage **six airports in the Dominican Republic** for a period of 30 years. The company is responsible for construction, modernization, operation and administration of **Las Americas** in Santo Domingo, **La Isabela** in North Santo Domingo, **Gregorio Luperón** in Puerto Plata, **Maria Montez** in Barahona and **Samaná El Catey** in the province of Samaná, as well as the domestic airport **Arroyo Barril**, also located on the Samaná peninsula. In 2008, Aerodom was acquired by Advent International (see there), one of the leading private equity firms in the world and one of the most successful private equity firms in Latin America.
Aeroporti di Roma SpA, Rome, Italy www.adr.it Was originally listedFax: +39 (6) 6595 3776 (Listed on the Milan stock exchange since 1997 and 95% owned by Leonardo Holding. The stake was reduced to 51.08% when Macquarie Airports acquired a 44.68% beneficial interest that it sold in mid-2007. Gemina S.p.A. then was the holding company of ADRAeroporti di Roma, with a shareholding of 95.76%; local authorities held 3% and others 1.2%. Now owned by Atlantia, the main shareholder of which is Sintonia SA, which directly owns 45.56% of Atlantia's issued capital. Sintonia is a holding company active in the infrastructure sector. www.sintoniaspa.com	Operator of • Owns and operates the **Rome airports, Fiumicino** and **Ciampino**. • Acquired the Alitalia stake (15%) in Aeroporti di Genova SpA (**Genoa Airport**) and a 16.6% stake in SACAL SpA (**Lamezia Terme International Airport**, Calabria); plans to sell its stake in Genoa Airport. • Won the tender for South African airports and owned 69% of ADR International Airports South Africa (Pty) Ltd, which in turn held 20% of ACSA (Airports Company South Africa Ltd), with an option to acquire another 10%. This stake was sold to the Public Investment Corporation (PIC), which apparently paid ZAR 1.67 billion for the 20% stake. • Was interested in managing airports elsewhere in **Italy** and in **Latin America**. • Owns 100% of ADR Engineering. • Owns 90.29% of ADR Handling SpA (ADR Engineering owns the other 9.71%). • Owned 20% of two catering companies, Sodecaer SpA and Ligabue Gourmet Roma SpA, which have been sold.

Who owns and manages privatized airports?

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Company	Activities
Aeroporti Holding S.r.l., Turin, Italy (Benetton Group) (Set up on 7 August 2003 by SAGAT SpA (60%), Sanpaolo IMI Private Equity SpA (30%) and Tecno Holding SpA (10%). The objective of AH is the creation of a network of regional airports through participation in forthcoming airport privatization processes.)	• Holds a 24% stake in **SAGAT Turin Airport SpA** together with Nuova Holding Subalpina SpA, SAB SpA, and Avia Partner (combined stake of 41.33%, 24.385% of which is held by Sintonia), Municipality of Turin (38.0%), Piedmont Region (8.0%), Province of Turin (5.0%), Chamber of Commerce of Turin (4.71%), Sicind of the Fiat Group (2.0%), and SEA SpA – Milan Airports (0.96%). • Has a 33.4% holding in **SAF SpA**, the company which manages **Florence Airport, Peretola**; Turin and Florence are part of a project which aims to construct a network of integrated Italian airports, with a strong capacity to offer modern services and high added value. • Acquired a 7.21% stake in **Bologna Guglielmo Marconi Airport's** operator **SAB**. • Owns 57.09% of **Autogrill**, the world leader in catering and retail services for travellers (motorway and airport catering).
Aeroports de Catalunya	• A unit of the Catalan regional government that manages **Lleida–Alguaire Airport** and **Pirineus** – **la Seu d'Urgel Airport**, which serves the Principality of Andorra.
Aeropuertos Argentina 2000 S.A. (AA2000), Buenos Aires, Argentina (Owned by Corporación América.)	• Has operated 33 airports in Argentina, starting in 1999, with US$ 600 million in planned investments over the concession period and also has the administration of the **Neuquén** and **Bahía Blanca** airports. See also Corporación América, the holding company for AA2000.
Aeropuertos del Peru (ADP), San Isidoro, Peru www.adp.com.pe	• Has operated **12 regional airports** in northern and central **Peru** since 2006 (**Tumbes, Talara, Piura, Cajamarca, Chiclayo, Chachapoyas, Tarapoto, Trujillo, Huaraz, Iquitos** , **Pisco**, and **Pucallpa**). • Will operate the new terminal currently under construction at **Pisco's Capitán FAP Renán Elías Olivera Airport**. • ADP is considering participating in upcoming concession processes in different countries, including **Brazil**, **Chile**, and **Colombia**.
Aerostar Airport Holdings LLC (AAH), Mexico City, Mexico (A joint venture between Mexico's ASUR and U.S. firm Highstar Capital Holdings.)	• Entered into a 40-year lease for **Luis Muñoz Marin International Airport** in **San Juan**, **Puerto Rico** in 2012. The U.S. FAA gave its final approval for the privatization on 27 February 2013. • AAH is 50%-owned by ASUR's Cancún Airport subsidiary and Highstar Capital, a New York-based independent fund manager.
Aerotas (Sociedad Concesionaria Aerotas S.A.), Chile (Owned by Inversiones Arrigoni (80.25%) and Ingenieria y Construcciones El Sifon (19.75%).)	• Was awarded a 15-year concession contract in October 2007 for **Diego Aracena International Airport**, **Iquique**, the capital of both Iquique Province and Tarapacá Region in **Chile**.

Who owns and manages privatized airports?

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Company	Activities
Aeroterm US, Inc. (USA) www.aeroterm.com (Headquartered in Montréal with regional offices in Annapolis, MD and Houston, TX. It is one of the largest air cargo warehouse specialists. The company's parent is **Realterm.**)	• Acquires, owns and develops airport properties (totalling 10 million square feet) at about 120 airports in the United States and in Canada. The company recently added warehouses at nine U.S. airports: **Dallas/Fort Worth International** and Houston's **George Bush Intercontinental** in Texas; **Kansas City International**, MO; **General Mitchell International** in Milwaukee; **Louis Armstrong New Orleans International**; **Norfolk International**, VA; **Pensacola International**, FL; **Philadelphia International**; and **Hancock International** in Syracuse, NY. The nine air cargo warehouses have a total of 75 tenants, including delivery companies such as FedEx, which sublet space from the owners. • Plans to build a new US$ 200 million 'Northeast Cargo Center' at **Chicago O'Hare International Airport**.
Aer Rianta International (ARI), Dublin, Ireland Fax: +353 (1) 844 5113 (Now Dublin Airport Authority.)	• The parent company Dublin Airport Authority owns and operates three Irish airports (**Dublin, Shannon** and **Cork**). • ARI held a 24.125% stake in **Birmingham International Airport Ltd** in the UK, an equal stake to Bridgepoint Capital (which was formerly NatWest Equity Partners/NatWest Ventures) through ARI/NatWest Ventures Ltd. Macquarie Airports Group Ltd held the Bridgepoint and ARI stakes temporarily, but sold them in 2007. • Holds a 40% stake in the Airport Partners GmbH joint venture with Hochtief at **Düsseldorf Airport** in Germany. • Owned 49% of the privatized **Hamburg Airport** company together with Hochtief, split 80% Hochtief and 20% Aer Rianta. The ARI stake was taken over by Hochtief in late 2006. • Holds 11% of the Hermes Airports consortium which develops and operates the **two Cyprus airports** (**Larnaca** and **Paphos**). • ARI has duty-free operating and management contracts at airports in **Bahrain**, Canada (**Montréal** and **Winnipeg**), Cyprus (**Larnaca** and **Paphos**), India (**Delhi**), **Kuwait**, Lebanon (**Beirut**), Pakistan (**Karachi**), Russia (**Moscow** and **Saint Petersburg**), Syria (**Damascus**), and Ukraine (**Kiev**), plus consultancy contracts.

Who owns and manages privatized airports?

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Company	Activities
AFCO - Aviation Facilities Co., Inc., McClean, VA, USA Fax: +1 (703) 902-2901 http://www.afcoinc.com (Developer and manager of airport infrastructure. Bought the trade name and seven U.S. airport management contracts from AvPORTS, a division of Macquarie Infrastructure Co. (Macquarie Aviation North America) in early 2009.)	• AFCO is a leading developer and manager of airport infrastructure in the United States, operating over 8 million square feet of on-airport cargo warehouse and apron space, fixed based operations, ground support equipment facilities, hangars and off-airport parking. AFCO has financed close to US$ 500 million of facilities and operations at 26 airports, including **Albany**, NY; **Austin**, TX; **Bakersfield**, CA; **Baltimore-Washington**, MD; **Chicago Midway**, IL; **Dallas/Fort Worth**, TX; **Dayton**, OH; **Detroit Metropolitan**, MI; **Hartford**, CT; **Houston Intercontinental**, TX; **Indianapolis**, IN; **Jackson**, MS; **Jacksonville**, FL; **Kansas City**, MO; **Los Angeles**, CA; **Louisville**, KY; **Orlando**, FL; **Peoria**, IL; **Philadelphia**, PA; **Pittsburgh**, PA; **Providence**, RI; **Reading**, PA; **Richmond**, VA; **Rickenbacker**, OH; **Seattle-Tacoma**, WA; and **Washington Dulles International**, VA. • In a joint venture, AFCO developed an apron and taxiway at **London Luton Airport** and is a minority owner of **Coventry Airport**, both in the UK AFCO's UK subsidiary CAFCOHL owns South West Regional Airports Ltd (SRAL), which now operates Coventry Airport. • AFCO is also the lead developer and a minority owner of the first privately funded commercial airport in U.S. history in **Branson, MO**, which opened in March 2009. The airport is operated by Branson Airport LLC. Significant progress was made in 2013 in negotiations toward reaching an agreement between the Gary/Chicago Airport's public-private partnership (P3) committee and AFCO to invest in the airport and the surrounding area.
AGUNSA - Agencias Universales S.A., Santiago, Chile www.agunsa.con	• A partner in the SCL Terminal Aéreo **Santiago** consortium, formed in 1997 together with Sabco Administrador de Fondos de Inversión S.A. of Chile (13%), Grupo Dragados of Spain (30% with FCC), and YVRAS holding (10%). Agunsa holds a 47.02% stake. • Held 35% of the MBJ Airports Ltd consortium which won a 30-year concession in 2003 to develop **Sangster International Airport** in **Montego Bay**, **Jamaica**. The consortium also included YVR Airport Services Ltd (15% initially, now 25.5%), Ashtrom Group Ltd (15%), and Dragados Concesiones de Infraestructuras S.A. (35%). YVRAS (now Vantage Airport Group) increased its stake in MBJ Airports Ltd from 15% to 25.5% in mid-2007. The current partner in the Sangster capital project now is Desarrollo de Concesiones Aeroportuarias S.L., Madrid (Abertis), which has a 74.5% stake. • Won a concession in March 2010 to develop and operate **Presidente Carlos Ibáñez International Airport**, which serves **Punta Arenas** in southern Chile, through its subsidiary Consorcio Aeroportuario de Magallanes S.A. • Won a 15-year concession in April 2011 to operate **El Loa Airport** in **Calama,** Chile in the Consorcio Aeroportuario de Calama S.A.S.C. • Is a partner in the consortium that operates the **San Andrés Island** and **Providencia Island** airports in Colombia.

Who owns and manages privatized airports?

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Company	Activities
AIF - Australian Infrastructure Fund Pty Ltd Melbourne, Australia (Controlled by Hastings Fund Management.)	• Holds stakes in seven Australian airports (**Melbourne, Perth, Gold Coast, Launceston, Darwin, Alice Springs,** and **Tenant Creek**) through Australia Pacific Airports Corp. and in **Auckland Airport** in New Zealand through Westralia Airports Corporation. • Bought a 49.1% stake in the **Townsville** and **Mount Isa** airports in the Australian state of Queensland for AUD 24 million, with its wholesale Queensland Infrastructure Fund owning another 25%. AIF already owns a 15% stake in **Coolangatta Airport**, which serves the Gold Coast resort area.
AIG Financial Products Corp. (AIG-FP), USA (A wholly owned subsidiary of American International Group, Inc. (AIG); FP = Financial Products.)	• Together with Global Infrastructure Partners (GIP), the infrastructure joint venture between Credit Suisse and GE Infrastructure, AIF-FP acquired **London City Airport** in autumn 2006 from Airport Management and Investment Ltd (which was owned by Dermot Desmond). AIG-FP owned 50% of LCY and sold its stake in 2008 to GIP as a result of the financial crisis.
Air India, India	Holds a 5% stake in **Cochin International Airport Ltd** in India.
Airis Corp., USA Fax: +1 (404) 874-6545 (The world's largest private developer of aviation facilities.)	• Operates a US$ 100 million two-building cargo facility at **New York's John F. Kennedy International Airport** for the Port Authority of New York & New Jersey; a mixed-use facility (offices/cargo) for LanChile at **Miami International Airport**; the International Air Cargo Center at **Newark Liberty International Airport** for six major airlines; and facilities at **Los Angeles International Airport**.
Airport Authority of Hong Kong, Hong Kong	• Is to take a 35% share in **Hangzhou Xiaoshan International Airport**, China's tenth-largest airport, for CNY 1.99 billion (US$ 240 million). Hangzhou Airport is the main hub for flights into the eastern province of Zhejiang.

Who owns and manages privatized airports?

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Company	Activities
Airport Group International, Inc. (AGI), USA Fax: +1 (818) 409 7979 (AGI was jointly owned by Lockheed Martin (38.7%) and Soros Capital (28.4%). Strategic investors in AGI included GE Capital Services (9.4%), the DFS Group (3.5%), SunAmerica and United Infrastructure, a joint venture of Bechtel and Kiewit (4.7%). TBI plc in the UK acquired AGI on 20 September 1999 by paying US$ 45.4 million in cash and US$ 98 million in new TBI shares. **In late 2004, TBI plc completed the sale of AGI, its airport services business in the USA, to BBA Group.**) *TBI stands for Thomas Bailey Investments; the company was started by brothers Peter and Stanley Thomas.*	• Managed 29 airports, including Burbank, CA's **Bob Hope Airport** (since 1978); **Albany County Airport**, NY; **Rickenbacker International Airport**, Columbus, OH; **Stewart International**, Newburgh, NY (sold to the State of New York in 2007); the International Terminal (Concourse E) at **Hartsfield-Jackson Atlanta International Airport**, GA; and under a five-year contract the Trillium Terminal at **Lester B. Pearson International Airport**, Toronto, Canada (which AGI had owned and sold back to the government in early 1997). Lost the Albany contract to AvPorts in mid-2005. • Won a contract for three airports in Bolivia and formed SABSA (Servicios de Aeropuertos Bolivianos) to manage, operate, and maintain **Cochabamba, Santa Cruz** and **La Paz' El Alto International** airports for a period of 25 years. The three airports were nationalized in February 2013 by Bolivia's leftist government. • Owned a stake in **Haikou Meilan International Airport** on Hainan Island in China; **Perth Airport** in Australia (through Airstralia Development Group, of which AGI owned 16%); **Darwin, Alice Springs** and **Tennant Creek** airports in Australia through Airport Development Group (now Northern Territory Airports), of which AGI owned 49%; and **Hobart International Airport** in Tasmania, Australia, through HIAPL. • With a 25% share, is a member in a consortium that won a 30-year concession for **London Luton Airport.** This also included Bechtel Enterprises (10%), Barclays Private Equity (32.5%) and Barclays UK Infrastructure Fund (32.5%). TBI owned 100% of the Luton Airport company after acquiring Alterra Partners' 28.6% in 2004. • Won a 20-year concession to manage **Juan Santamaría International Airport** serving **San José** in Costa Rica together with local partners. • Was the preferred bidder for the new **Ciudad Real Central Airport** near Madrid in **Spain**. The airport closed in April 2012 after operating for three years. **NOTE:** All AGI activities were taken over by TBI plc, but the AGI name was still used. TBI was acquired by ACDL (see there) in 2004.
Airport Management & Aeronautical Industries Inc., Turkey Fax: +90 (216) 585 5114	• Built and operates the new **Sabiha Gökçen International Airport** in **Istanbul** as part of the Advanced Technology Industrial Park (ATIP) project developed by the Ministry of Defence's Under Secretariat of Defence Industries.
Airport Management and Investment Ltd, Gibraltar (Owned by Dermot Desmond.)	• Owned and operated **London City Airport** until it was sold in autumn 2006 to AIG-FP and GIP (see there); also see IIU.
Airstralia Development Group Pty Ltd (ADG), Perth, Australia	• Operates **Perth Airport** through a wholly owned subsidiary, Perth Airport Pty Ltd. The shareholders of ADG are Utilities of Australia Pty Ltd ATF Utilities Trust of Australia (UTA), 38.26%; Hastings Funds Management Ltd AREF, 29.74%; Utilities of Australia Pty Ltd ATF Perth Airport Property Fund (PAPF), 17.34%; Hastings Funds Management Ltd ATF TIF, 4.27%; Westscheme Pty Ltd as trustee of Westscheme (WS), 5.00%; Citicorp Nominees Pty Ltd as custodian for Officers Superannuation Fund,3.17%; Sunsuper, 2.23%.
Air Wales, UK	• Acquired **Swansea Airport** in Wales from Martin and Louisa Morgan.

Who owns and manages privatized airports?

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Company	Activities
Akfen Holding Co. Ankara, Turkey www.akfen.com.tr (Owns 26.12% of TAV Airports Holding Co.; plans to sell 18%.)	• TAV (see there) was established in 1997 as a Tepe-Akfen airport construction partnership and was awarded the **Istanbul Atatürk Airport** terminal tender, paving the way for Akfen's leadership in the sector. Istanbul Atatürk Airport is among the very first examples of the 'Build-Operate-Transfer' model in airport operations projects throughout the world.
Albanian-American Enterprise Fund (AAEF) (An organization founded by the U.S. administration to support private enterprise in Albania.)	• Owns 21.3% of the Tirana Airport Partners consortium in Albania led by Hochtief AirPort (47% stake) and including Deutsche Investitions- und Entwicklungsgesellschaft (DEG; 31.7%). • Has won a 20-year concession to develop and operate **Tirana International Airport** Nënë Tereza.
Alfa Group Consortium, Moscow, Russia	• A1, the investment vehicle of Alfa Group, which is owned by Russian tycoon Mikhail Fridman, has applied to Vnesheconombank (VEB) for a loan to buy **Moscow's Domodedovo International Airport**.
Alinda Capital Partners , Greenwich, CT, USA (The world's largest independent infrastructure firm, with over US$ 7.4 billion in equity commitments.)	• Acquired a 5.88% stake in **BAA Ltd** in October 2011 from Ferrovial for GBP 282 million to reduce the Spanish company's interest below 50% (to 49.99%) so that BAA's debt would no longer be included in Ferrovial's balance sheet. Meanwhile, in November 2012, Ferrovial's indirect stake in Heathrow fell to 33.65%.
Alpar AG, Switzerland (Alpar-Flug- und Flugplatzgesellschaft AG) Fax: +41 (31) 960 2201	• Has owned and operated **Bern Airport** since 1985. The largest single shareholder in Alpar is Swiss International Air Lines, with a 23% stake; others include Bern canton and local municipalities (11%), companies in the Bern region (27%), private individuals (18%), other airlines (3%), and special-interest associations (2%).
Altenrhein Realco AG, Switzerland	• The airport company operating **St. Gallen-Altenrhein Airport** has been sold by Altenrhein Realco AG, owned by the Dutch Strikwerda Group, to the Zürich tycoon Dr Dieter Bührle. He plans to sell shares to investors in Switzerland, Vorarlberg in Austria, and Liechtenstein.
Alterra Partners, UK Fax: +44 (20) 7651 7990 or 7991 (Bechtel and SCAE/Singapore each owned 50%.)	• Through Bechtel Enterprises, had shareholder interests in **London Luton Airport** (28.6%), which it sold to UK-based airport operator TBI plc in 2004; Singapore Changi Airport Enterprise (SCAE) also decided to sell its share of London Luton Airport to TBI as part of plans to pursue new investment opportunities in Asia, particularly China and India; TBI was in turn taken over by ACDL (see there). • **Alterra Partners Costa Rica** won a 20-year management and development concession for **San José's Juan Santamaría International Airport** in **Costa Rica**, together with a group of companies including Bechtel Enterprises, AGI, Cormar, Agencia Datsun, Singapore Changi Airport Enterprise, and Edica Ltda. Alterra held 85% of the consortium. The contract was awarded to Aeris Holding Costa Rica when Alterra Partners ended the contract. • Held a 57.25% interest in a 30-year concession to operate and develop **Jorge Chávez International Airport** in **Lima, Peru** with partner Fraport AG holding (which held 42.75%). A local contractor Cosapi S.A. held 14.50% initially and sold out to Alterra; the Alterra stake was acquired by Fraport, which now holds 70.01%. • Signed a 30-year concession agreement in late 2002 to develop **Hato International Airport in Curaçao, Netherlands Antilles** together with consortium partners Trabajos Industriales y Mecanicos from Venezuela, and Janssen de Jong Caribbean from the Netherlands Antilles. Held a 51% stake in the consortium, which it sold to A-Port S.A. (see there).

Who owns and manages privatized airports?

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Company	Activities
AMB Property Corporation, USA	• AMB is a leading owner and operator of industrial real estate with a focus on high-speed distribution buildings at the biggest airports in North America, Europe and Asia. As of 30 June 2003, AMB owned, managed and had renovation and development projects totalling 96.5 million square feet (9.0 million square metres) and 1005 buildings in 30 markets. In the USA, AMB has 22.9 million square feet of on-airport and near-airport distribution centre space owned, managed and under development at 15 big U.S. airports, including **Los Angeles**, **San Francisco**, **Seattle-Tacoma**, **Dallas/Fort Worth**, **Chicago O'Hare**, **JFK**, **Washington Dulles**, **Miami** and **Atlanta**. AMB's on-tarmac properties total 2.3 million square feet at 12 U.S. international airports. AMB acquired 37 facilities (360,000 square meters) at seven U.S. airports from IAC in October 2003.
AMP Capital, Sydney, Australia www.ampcapital.com.au	• Has held a 25% stake in APAC Ltd (Australia Pacific Airports Consortium), the operator of Australia's **Melbourne** and **Lauceston** airports, since 1997. • Acquired the 49% stake in **Newcastle International Airport Ltd** in the UK previously held by Copenhagen Airports A/S.
Ángeles Group, Mexico (Grupo Ángeles, 100% Mexican-owned)	• Leading partner of the consortium which won a concession for the Grupo Aeroportuario del Pacifico (GAP) package of **Pacific airports in Mexico**, the other partners being AENA Internacional, Unión Fenosa, and Dragados. The operating company is called Aeropuertos Mexicanos del Pacifico, S.A.
Andrade Guiterrez Concessions (AG Concessões), São Paulo, Brazil (A wholly owned subsidiary of Andrade Gutierrez Constructores, the largest private business conglomerates in Latin America.)	• Shareholder of the Corporación Quiport and Aeris consortia. • Corporación Quiport S.A., owned by Aecon Group Inc./Canada (45.5%), AG Concessões/Brazil (45.5%), and Houston Airport System Development Corporation/USA (9%); built and operates **Quito's** new **Mariscal Sucre International Airport** under a 35-year concession from February 2013. • In a consortium with ADC and HASDC operates **San José's Juan Santamaria Airport** in **Costa Rica**; holds a 47.5% stake in the Aeris consortium.
APAC Ltd (Australia Pacific Airports Consortium) Melbourne, Australia	• Owns and operates **Melbourne Airport** and has 90% of **Launceston Airport**. • APAC Ltd is a privately held corporation owned by institutional investors, predominantly superannuation/pension funds, managed or represented by the following five entities: AMP Capital (25%), Deutsche Asset Management (RREEF Infrastructure) (17.5%), Future Fund (16.8%), Hastings Funds Management (20%), and Industry Funds Management (20.7%). • APAC was originally owned by four shareholders: AMP, Australia's largest insurance and financial services company (41%), REEF Infrastructure/ex- Deutsche Asset Management (26%), Hastings Funds Managements (13%) and BAA (19.8%); BAA sold its stake.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
A-Port S.A., São Paulo, Brazil (A Brazilian-Swiss-Chilean joint venture set up in 2007 to develop, build and operate airports and airport-related infrastructure in Latin America. The majority shareholder (80%) is the Brazilian firm Camargo Corrêa Group. Flughafen Zürich AG holds a 15% stake and the Chilean company IDC S.A. the remaining 5%.)	• Acquired Alterra Curaçao Holding Ltd in 2009, thereby gaining a 51% stake in **Hato International Airport** in **Curaçao**, Netherlands Antilles. The licence for operating the airport runs until 2033. • Is a shareholder in the airport concessions in **Puerto Montt** (33.34%), **La Serena** (80%) and **Calama** (100%) in **Chile**. Additionally, A-port Operaciones S.A. has an O&M contract for all the three airports. • Submitted the best bid to operate **Cerro Moreno International Airport** near **Antofagasta** in northern Chile and won the concession in 2011. • Has a TSA contract with the **El Dorado International Airport** concessionaire in **Bogotá**, Colombia. • Is the main shareholder of the **Estacionamento do Aeroporto de Congonhas** concessionaire, in **São Paulo**, Brazil.
A-Port Chile S.A. (A local subsidiary of A-Port S.A. owned by IDC and Flughafen Zürich AG.)	• Aeropuerto La Florida, comprised of A-Port Chile (80%) and Gestión e Ingeniería IDC (20%) currently operates **La Florida Airport** serving **La Serena** in Chile. The concession expires in 2013. • Has a concession to operate the **Antofagasta** (since 2011) and **Puerto Montt** (since 2007) airports in Chile. • Won a concession to operate **Diego Aracena International Airport** in **Iquique,** Chile for four years from January 2013.
A-Port Operaciones S.A., Santiago de Chile (Operating arm of the A-Port consortium, owned by Flughafen Zürich AG (62%) and IDC (38%).)	• All A-Port shareholdings and management contracts in Latin America were incorporated into the joint venture in 2008. A-Port S.A. has assets in **Chile**, **Colombia**, **Honduras** and **Curaçao**. • Provided technical assistance at **El Dorado International Airport** serving **Bogotá** in Colombia and at **four airports in Honduras** (see InterAirports S.A.); • Lost the concession for **El Loa Airport** in **Calama**, Chile to Agunsa.
Ardian (ex-AXA Private Equity), Paris/France (independent private investment company formed in 1996)	Acquired a 49% stake in London-Luton Airport from the TBI group, owned 90% by Abertis and 10% by AENA, in 2013 in a joint vebture with AENA, which holds 51%.
Arkia Israeli Airlines, Israel	• Owns and operates the civilian part of **Ovda Airport**, 60 km north of **Eilat**.
ASECNA, Dakar, Senegal (L'Agence pour la Sécurité de la Navigation aérienne en Afrique et à Madagascar.) www.asecna.aero	• Through ASECNA SERVICES, is a shareholder in four airport operating companies: – **Aéroport de Libreville**, Gabon; – **Aéroports de Mauritanie**, Mauritania (10%); – **Aéroport International d'Abidjan**, Ivory Coast; and – **Aéroports du Cameroun S.A.**, Cameroon (20%).
Ashtrom Group, Tel Aviv, Israel (Ashtrom International Ltd. is a subsidiary of Ashtrom Group for overseas activities.)	• The Ashtrom Group, which was established in 1963, is Israel's leading private development and manufacturing concern. Ashtrom is involved in a wide range of construction and related activities locally and abroad, including residential, commercial, industrial and institutional projects. These have included a concession for upgrading work at **Sangster International Airport** in **Montego Bay**, Jamaica, where Ashtrom has partnered with Dradados, Agunsa and YVRAS.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Astaldi SpA, Rome, Italy www.astaldi.it	• In April 2011, the Astaldi Group acquired, through its subsidiary Astaldi Conces-sioni, a 92.85% stake of Mondial, the company holding the concession for the inter-national terminal of **Milas-Bodrum Airport** in southwestern Turkey. The concession project involves the design, construction and subsequent management of the air-port's international terminal. The concession period ends in 2015, because Astaldi did not participate in a new tender.
ATCO Airports Ltd, Canada (A 50:50 joint venture of ATCO Frontec Corp. and Winnipeg Airport Services Corp.)	• Has operated **Edmonton City Centre Airport,** AB since January 2000; operates the airports at **Castlegar**, BC; **North Bay**, ON; **Iqaluit**, NU; **Moose Jaw**, SK; and **St. Andrews**, MB, all in Canada. • Provides security services at **Winnipeg Airport,** MN, in Canada. • Operates **Lismore Airport** in Australia, together with Ambidji.
Atlantia SpA, Rome, Italy	Operator of the Rome airport system and of 5,000 km of toll motorways in Italy, Brazil, Chile, India and Poland.
Australian Infrastructure Fund (AIX), Australia (Hastings Funds Management is the responsible entity for Australian Infrastructure Fund.)	• Airports represent 45% of AIX's total investments. The company's airport holdings include Airport Development Group – NT Airports (**Darwin, Alice Springs a**nd **Tennant Creek** Airports in the Northern Territory) – 28.2%; Airstralia Development Group Pty Ltd, which owns **Perth Airport** – 29.7%; Queensland Airports Ltd (**Gold Coast, Townsville, Mount Isa**); North Queensland Airports (**Cairns, Mackay**); and Australia Pacific Airports Corporation (APAC, **Melbourne and Launceston**, Tasmania) – 20.0%. • In May 2002, AIX bought back the former Ansett-operated terminal at **Melbourne Airport** from Ansett Administrators. • Holds a 6.6% stake in **Athens International Airport Eleftherios Venezelos**.
AviAlliance GmbH (Ex-Hochtief AirPort)	• Hochtief AirPort has operated since 27 September 2013 under the new name of **AviAlliance**. The renaming marks a fresh start for the company, which was sold by the Hochtief Group in September 2013. The new owner of AviAlliance GmbH is **PSP Investments**, a subsidiary of Canada's Public Sector Pension Investment Board (PSP Investments) in Canada. AviAlliance currently holds shares in the airports of **Athens**, Greece; **Budapest**, Hungary; **Düsseldorf and Hamburg**, Germany; and **Tirana**, Albania. The stake in Sydney Airport, Australia, was previously acquired by PSP Investments (see there) as a direct shareholding. Holger Linkweiler, Managing Director of AviAlliance, said: "We are delighted that with PSP Investments we have a new owner with a long-term orientation with whom we – as AviAlliance – can realize new projects in the airport privatization market."
AvPORTS, USA Tel: +1 (410) 962-7091 (Ex-Johnson Controls. AvPORTS was a division of Macquarie Aviation North America. Sold to AFCO (see there) in early 2009.)	• Manages and develops **Teterboro Airport** in New Jersey under contract to PANY&NJ and manages **Atlantic City International Airport,** NJ; **Republic Airport**, NY; **Tweed New Haven Airport**, CT; **Westchester County Airport**, NY; and the **East 34th Street Heliport** in **New York City**. • Manages the fixed base operation (FBO) AvCenter at **Greater Pittsburgh International Airport**; Johnson Controls AvCenter at **Louisville International Airport** in Kentucky; and **Albany International Airport**, NY (since mid-2005).
AXA Private Equity, Paris (An infrastructure fund, now called **Ardian**; see there).)	• Acquired a 49% stake in **London Luton Airport** from the TBI group, owned 90% by Abertis and 10% by AENA, in 2013 in a joint vebture with AENA, which holds 51%.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
BAA Ltd, UK, **BAA International** (Wholly owned by BAA Ltd.) Fax: +44 (171) 932 6699 **BAA USA, Inc.** Fax: +1 (703) 708-7991 (The British Airports Authority was part of the British Aviation Ministry from 1946 to 1966, and then became an independent agency owned by the Government. In 1987, the British Airports Authority was privatized to form BAA plc and temporarily was active at 20 airports worldwide. The company was taken over by a Ferrovial-led consortium (Airport Development and Investment– ADI – Ltd) in June 2006 and registered as BAA Ltd. Ferrovial has sold the non-UK airport stakes, as well as stakes in BAA. Its indirect stake in Heathrow has fallen to 33.65%. **The name BAA officially was dropped on 12 November 2012** and the relevant airport name will take its place.)	• Owns and operates seven UK airports. • Through **BAA USA**, managed the entire airport system at **Indianapolis, IN** in the U.S. since 1995 (10-year contract); and the concessions at **Greater Pittsburgh International Airport**, as well as in Terminals B, D/E at **Boston Logan** and at **Baltimore/Washington** (via a 10-year contract awarded in March 2004). • Similar contracts for **Harrisburg International Airport** and the **Capital City Airport** reliever airport in Pennsylvania were cancelled. • Held a 65% stake in **GESAC**, the Naples/Italy airport company; sold the stake in 2010 to an Italian investor, F2i (see there). • Owns 19.8% of **APAC** (Australia Pacific Airports Corporation) which runs **Melbourne Airport** and **Launceston Airport** under a 50-year lease; the stake is to be sold by Ferrovial. • In early 2001, a BAA plc-led consortium also including the Australian Infrastructure Fund (Hastings) and the Utilities Trust of Australia took over TBI's Australian airport holdings, with the exception of Hobart. Together, they took a 16.1% stake in **Perth Airport** and a 19.9% stake in **Northern Territory Airports** (**Darwin, Alice Springs, Tennant Creek**). BAA's share in the deal was 15% in Perth and 10% in Northern Territory Airports. • In early November 2007, Ferrovial completed the sale of BAA's interests in six Australian airports for AUD 775 million to an Australian entity managed by Hastings Fund Management. • Owned 25% of OAMC, which managed the **Muscat** and **Salalah** airports for a short time until the contract was cancelled. • Acquired **Budapest Ferenc Liszt Airport** in December 2005 and sold it again to Hochtief AirPort in spring 2007. • Before being taken over by Ferrovial, BAA was seeking international opportunities to use its expertise and experience gained in operating the UK's leading airports. BAA was interested in **Indonesian**, **Latin American**, and **Italian** airports. It signed a contract with CIR Holding of Italy's De Benedetti group to acquire and develop of Italian airports and entered a joint venture in **China** to manage airports.
Babcock & Brown Sydney, Australia	• Acquired **Black Forest Airport** in **Lahr,** Germany and **Plzeň-Líň Airport** in the Czech Republic from PlaneStation, which went into voluntary administration on 26 July 2005; the Lahr municipal government plans to acquire the Black Forest Airport operating concession, managed in the past by Black Forest Airport Lahr GmbH, a subsidiary of Babcock & Brown.
Baden Airpark GmbH, Germany Fax: +49 (7229) 662 109	• Owns **Baden Airpark,** an ex-Canadian air base in the upper Rhine valley now serving **Karlsruhe** and **Baden-Baden**. Baden Airpark GmbH is jointly owned by Flughafen Stuttgart GmbH (64%) and Baden-Airpark Beteiligungsgesellschaft mbH (36%), a group of local authorities located around the airport.
BAE Systems plc, UK Fax: +44 (1252) 383 000	• Owns the site of the former **Bristol Filton Airport** near Bristol, UK. On 14 April 2011, BAE Systems announced that the airfield would close at the end of 2012. A local non-party-political pressure group called the 'Save Filton Airfield' campaign was formed to oppose the plans, but the airfield closed for flight operations.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Bahwan Trading Co., Oman	• Owns 35% of OAMC (Oman Airports Management Company), which manages **Seeb International Airport**, which serves **Muscat**; and **Salalah Airport**.
Balfour Beatty, UK www.balfourbeatty.com	• On 5 January 2007, Devon County Council sold **Exeter International Airport** for £60 million to Regional and City Airports (Exeter) Ltd (RCA) in a deal described as good news for the airport's future and the county economy. • Has owned 95% of **Blackpool International Airport** since May 2008.
Bangkok Airways, Thailand Fax: +66 (2) 265 5500	• Operates **Samui International Airport**, **Sukhothai Airport**, and **Trat Airport** in Thailand under 20-year lease agreements; plans to expand its business from a regional carrier to become an airport operator in neighbouring countries, e.g., in **Laos** (at **Luang Prabang** and **Khong Island**) and southern **Myanmar**.
Barclays Capital, UK (The investment division of the Barclays Group.)	• The Barclays Group held a 65% stake in the consortium which acquired a 30-year concession to operate **London Luton Airport** from the Luton Borough Council. Barclays Private Equity holds 32.5%, Barclays UK Infrastructure Fund 32.5%; other consortium members were AGI and Bechtel Enterprises. The Barclays stake was taken over by TBI plc and Bechtel Enterprises.
Basic Element Group LLC (BasEl Aero), Moscow, Russia www.basel.ru (Founded in 2007 as an airport management company belonging to Basic Elements Aviation Sector. BasEl is a holding company owned by Russian billionaire Oleg Deripaska. Through its affiliates, BasEl owns significant stakes in and manages dozens of companies operating in market sectors including energy, manufacturing, financial services, construction, aviation, agriculture and others.)	• Currently, manages airports in southern Russia: in **Sochi, Krasnodar, Anapa,** and **Gelendzhik**. BasEl Aero's main objectives include the reconstruction and renovation of the entire infrastructure of the airports, and the introduction of modern technologies to service passengers, cargo and aircraft. • In late 2011, Basic Element Group, LLC Sberbank Investments, a subsidiary of Sberbank, and Changi Airports International (CAI) signed a memorandum of understanding (MoU) to form a joint venture to invest in and develop **airports in Russia**. The agreement was signed on 22 June 2012. BasEl will hold 50% plus one share, CAI 30%, and LLC Sberbank Investments 20% minus one share in the joint venture. The total value of the assets exceeds US$ 500 million. • The joint venture may become the largest airport operator in Russia after beginning talks to buy five regional airports, including the airports serving Russia's westernmost exclave of **Kaliningrad**; **Ufa** in the Volga region; **Perm** in West Siberia; and **Krasnoyarsk** and **Irkutsk** in East Siberia.
Bayindir Holding A.S., Istanbul, Turkey www.bayindir.com	• Built and operated under a BOT contract a new terminal at **Antalya Airport** in Turkey (the terminal opened in 1998), under an eight-year concession agreement in a joint venture with Fraport AG (see there). See also ICF Airports.
Bechtel Enterprises International Ltd & Bechtel Civil, USA	• Through Alterra (see there) held a 28.6% stake in **London Luton Airport**, which TBI acquired in 2004. • Held a stake in Alterra Partners Costa Rica, which has managed **Juan Santamaria International Airport**, which serves **San José** in Costa Rica. • Through Alterra, held a stake in a consortium that was awarded a 30-year concession to develop and operate **Lima's Jorge Chavez International Airport** in Peru along with consortium partner Fraport AG, which acquired the stake.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Benetton Group, Italy (Edizione Srl is Benetton's investment arm.)	• Through its Sintonia infrastructure vehicle (see there), owns a stake in Leonardo Holding, which in turn owns Aeroporti di Roma, the operator of the **Rome** airports. • Through Sintonia, owns a stake in Aeroporti Holding S.r.l. (see there). • Edizione owns Autogrill Group, a travel retail and food & beverage specialist.
Bharat Petroleum, India	• Holds a minority stake in **Cochin International Airport Ltd** in India.
BIAC (Brussels International Airport Company), Belgium	• Operates the **Brussels Airport** terminals; was owned 62.1% by Macquarie until 2011. Won a contract from the regional Flemish Government to manage **Ostend Airport** temporarily.
Blue Aero, Bacau, Romania (Owned by Romania's Infra Group.)	• Was set up in 2009 to modernize, manage and operate **George Enescu International Airport** in **Bacău**, for 34 years. • Plans to build and operate the new **Bucharest South International Airport**.
Bologna Airport (SAB), Italy	• Owns about 60% of SEAF, the operator of **Forlì Airport** in Italy.
Bordeaux CCI/Airport, France Fax: +33 (5) 5634 2301	• Was a partner in SALT (Société Aéroportuaire de Lomé-Tokoin), the operator of **Lomé-Tokoin Airport** in Togo; this is now owned 65% by the Government of Togo and 35% by the Togo Chamber of Commerce & Industry. • Is a partner in SAM (Société des **Aéroports de Mauritanie**), holding 5%; other shareholders are Air Mauritanie, ASECNA, Air Afrique, and the Government of Mauritania, each holding 10%. The remainder is held by private investors, including TotalFinaElf and banks.
Bouygues Bâtiment International, France www.bouygues-construction.com	• Bouygues is a member of the Hermes Airports consortium which built and now operates the terminals at two Cyprus airports, **Larnaca and Paphos**, holding 22%. • An alliance of Aéroports de Paris Management, Bouygues Bâtiment International and Croatian construction company Viadukt has been named by Croatia's government as preferred bidder to operate **Zagreb Airport** under a 30-year deal.
Bridgepoint Capital Ltd, London, UK (Formerly NatWest Equity Partners/ NatWest Ventures.) www.bridgepoint.eu	• Held a 48.25% stake in Birmingham Airport Holdings Ltd in the UK together with Aer Rianta International (ex-ARI/NWV Ltd); exchanged contracts with Macquarie Airports Group Ltd, which acquired a 24.125% shareholding in Birmingham Airport Holdings Ltd and sold it again in 2007. • Acquired **Leeds Bradford International Airport** in the UK in 2007 for GBP 214 million from five West Yorkshire councils.
British Airways, UK	• Owned the **Plymouth** and **Newquay** airports through Brymon Airways. The airports were sold to Sutton Harbour Holdings plc (see there).
Brussels Airport, Belgium	• Brussels Airport and the City of Albena formed a consortium to apply for a 35-year concession to operate the airports serving **Varna** and **Bourgas** in Bulgaria. The project failed.
Budapest Ferihegy International Airport Operating Plc., Hungary	• Manages the **Siófok-Kiliti-Ságvár** general airfield 120 km from Budapest. The airfield serves Siófok, the largest town on the shores of Lake Balaton.
CAAS, Singapore +65 545 6222	• Owns and operates the **Singapore** airports; interested in managing foreign airports via Singapore Changi Airport Enterprise (SCAE; see there).
CAFCOHL, UK	• AFCO's UK subsidiary owns South West Regional Airports Ltd (SRAL), which now operates **Coventry Airport**. Also see AFCO.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
CAISA, Uruguay (Consorcio Aeropuertos Internacionales S.A.)	• The CAISA Consortium has a 20-year concession agreement with Uruguay's Government to develop, manage, and operate **Capitan Corbeta CA Curbelo International Airport** near **Punta del Este**. Partners in CAISA in 1991 were Uruguay's Compañía Oriental de Transporte S.A.; Argentina's London Supply S.A.C.I.F.I.; Norlit S.A. and Incot S.A. of Uruguay; and PAXPORT Laguna Inc. of Canada. The World Bank subsidiary International Finance Corp joined in 1995. Corporación América, which will administrate the airport until 2019, bought CAISA in December 2007.
Cape Clear Aviation, Ireland and Hungary	• Cape Clear Aviation rented **Hévíz-Balaton Airport** for 99 years from 2003. Fly Balaton is co-owned by the municipalities of Sármellék and neighboring Zalavár.
Capital Airport Group, Australia	• Owns and operates **Canberra Airport** in Australia.
Capital Airports Holding Co (CAH), Beijing, China	• CAH was founded in December 2002 as a unit of the **Civil Aviation Administration of China**, by combining Beijing Capital Airport Holding Company, Beijing Capital International Airport Co., Ltd., Tianjin Binhai International Airport, China Airport Construction Corporation, Jinfei Economic Development Co., Ltd. and Civil Aviation Engineering Consulting Company of China. • **CAH has almost 40 wholly owned or partially held airports**, including Beijing Capital International Airport (BCIA), Tianjin Binhai International Airport, Nanchang International Airport, Wuhan Tianhe Airport, Chongqing Jiangbei Airport, Guiyang Longdongbao International Airport, Changchun Longjia Airport, Hohhot Baita International Airport and Harbin Taiping International Airport. Beijing Capital International Airport is the leading airport in China and the busiest in Asia. The company was successfully listed on the Hong Kong Stock Exchange in 1999.
Cardig Aero Service (CAS), Indonesia www.cardig.com (A holding company focusing on logistics, aviation and aviation support through JAS Airport Services, JAS Engineering and Cardig International In-Flight Catering.)	• CAS operates **three airports** in cooperation with Indonesia's state airport operators PT Angkasa Pura I and PT Angkasa Pura II. According to CAS President Director Nurhadijono Nurjadin, the cooperation would be signed in early 2012: "We hope this expansion contributes between 20% and 30% in total revenue, although we will recognize the contribution after running the project for at least five years." • The company's aviation services include ground handling, technical ramp handling, cargo handling and in-flight catering and embrace the **entire Indonesian archipelago**.
Carlyle Group, Washington D.C., USA www.carlyle.com	• Led a consortium that bid for **Edinburgh Airport**. Sir Angus Grossart, a veteran Edinburgh investment banker, advised Carlyle. • The private equity group has interests in several aerospace companies.
Catullo SpA (Società Aeroporto Valerio Catullo SpA), Italy	• Operates **Verona Villafranca Airport** and **Brescia Airport Gabriele D'Annunzio** in northern Italy.
Changi Airport Group (CAG), Singapore	• Co-developers Changi Airport Group (CAG) and CapitaMallsAsia (CMA) have struck a joint-venture agreement via their respective wholly owned subsidiaries, Jewel Changi Airport Holding and CMA Singapore Investments, and will set up a private trust, a trustee-manager and a property manager as the JV entities. 'Project Jewel', is a mixed-use development at Changi Airport, which will cost SGD 1.47 billion, including land costs, and is scheduled to open by end-2018. CAG will hold the majority stake of 51%, while CMA will hold the balance (49%). Project Jewel will be constructed on the existing 3.5-hectare carpark site in front of Terminal 1 and will include airport operations, retail and leisure offerings as well as hotel space. The site has a lease term of 60 years, expiring in 2073, with CAG as the lessor.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Changi Airports International Pte Ltd (CAI), Singapore www.cai.sg (CAI is wholly owned by the Civil Aviation Authority of Singapore and focuses on three categories of business activities – airport planning and development, airport management and terminal retail business management, as well as investments in a range of airport assets.)	• Signed a general agreement to form a joint venture company with **Sheremetyevo International Airport** Joint Stock Company of Moscow to manage and operate a new 520 000-square foot passenger terminal (Terminal 1), which is currently under construction at Sheremetyevo**.** Interested in managing up to 10 **Russian airports** in a joint venture with Sheremetyevo. • Signed a joint-venture agreement on 22 June 2012 with Basic Element Group LLC (BasEl; holding 61%) and Sberbank Investments (19%) to form a joint venture to invest in and develop **airports in Russia**. The CAI share in the JV is 30%. Airports already operated by BasEL are **Sochi**, **Krasnodar**, **Anapa** and **Gelendzhik**. • Has an 8.34% stake in **Gemina SpA**, the operator of the Rome airports, through Worldwide United (Singapore) Pte Ltd. • Holds a 26% interest in **Bengal Aerotropolis Project Ltd**, which plans to develop a greenfield airport and airport city at **Durgapur** in India's West Bengal state. • Previously, CAI was involved in providing technical assistance to **Mumbai** airport and **Nagpur's** cargo hub project. CAI plans to acquire a stake in India's **GVK**. • Is bidding jointly with Tata Real Estate to develop **three airports in the Indian state of Karnataka.** CAI also drafted an improvement plan for India's **Mumbai International Airport.** • Signed six-year, SGD 65 million contract in November 2008 to help operate **King Fahd International Airport** in **Dammam**, Saudi Arabia. • CAI (49%) and China's Shenzhen Airport Group (51%) have entered into a partnership to develop a portfolio of **up to 50 regional airports across China**. Under the joint venture, both parties will jointly identify and invest in medium-sized Chinese airports (handling 3-5 million passengers a year) with strong growth fundamentals. Both companies are also to participate in the management of the airport operations with the view of improving service quality, efficiency and returns. • Signed a binding agreement to acquire 29% of **Nanjing-Lukou International Airport** in Jiangsu Province for about CNY 900 million. • CAI acquired a 8% stake in Gemina S.p.A., the holding company of **Aeroporti di Roma** (AdR), which owns the concession to operate Italy's largest airport group, comprising **Fiumicino-Leonardo da Vinci Airport** and **Ciampino-Giovan Battista Pastine Airport**, both serving the capital city of Rome. This investment marks a major step forward in the company's strategy to expand overseas as it enters the well-established European aviation market. • CAI's strong portfolio of airport consultancy projects in China includes the development of airport management and retail programmes at **Chengdu Shuangliu International Airport** and **Qingdao Liuting International Airport.** • Secured a deal to draw up a master plan for the development of **King Hussein International Airport** in **Aqaba, Jordan.**

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
China Investment Corporation (CIC), Beijing, China www.china-inv.cn (China's sovereign wealth fund.)	• On 1 November 2012, through wholly owned subsidiary Stable Investment Corporation, CIC International Co., Ltd acquired a 10% stake of **Heathrow Airport Holdings Ltd**, previously known as BAA Ltd. Heathrow Airport Holdings Ltd is majority-owned by the Spanish infrastructure group Ferrovial (see there), whose stake dropped to 39.37%.
China West Airport Group, Xi'an, China www.westaport.com	• As the second-largest airport group operating across Chinese provinces, the Group is subordinate to the Peoples Government of Shaanxi Province. After the airport localization reform in 2003, **Xi'an Xianyang International Airport** took over four regional airports (**Yulin**, **Yan'an**, **Hanzhong** and **Ankang**) to establish the Shaanxi Airport Management Group. In 2004 and 2006, the Group achieved joint reorganization respectively with Ningxia Airport Company and Qinghai Airport Company, and it was renamed as China West Airport Group. • In June 2007, the Group took over **Gansu Tianshui Airport** and in November 2008, **Ningxia Zhongwei Xiangshan Airport**. At present, the group manages **12 airports** in four provinces (Shaanxi, Gansu, Ningxia and Qinghai). These include three provincial capital airports (**Xi'an Xianyang International Airport**, **Yinchuan Hedong Airport** and **Xining Caojiapu Airport**) and nine regional airports: **Yulin**, **Yan'an**, **Hanzhong** and **Ankang** in Shaanxi, **Guyuan** and **Zhongwei** in Ningxia, **Golmud** and **Yushu** in Qinghai, and **Tianshui** in Gansu. • The number of airports managed by the group and its aviation business volume respectively account for 75% and 85% of the entire totals for **China's Northwest Territory**. The group has built a strategic network with one primary, two wings and nine pivots. The director of National Civil Aviation Administration, Li Jia Xiang, regarded the group's development model as a new one for development and reform of Chinese airports, one providing a useful example for airport managements. • The group has 10 holding (joint stock) companies covering the fields of advertising, construction, transportation, hotel, real estate, information technology and other areas. Two of these companies have annual revenues of more than CNY 100 million and profits of more than CNY 10 million. Its non-aviation revenue accounts for more than 50% of the group's total revenue.
Churchill Airports Worldwide LLP (CAW), Tunbridge Wells, UK www.churchillairports.com (Churchill Airports is a boutique vehicle that works with airport investors and owners to create value from airport investments and acquisitions.)	• Established in early 2005 by its three principal directors. These are Paul Lush, Al Romeu and Clive Condie, drawn from the core senior managers of Alterra Partners, the Singapore Changi Airport–Bechtel airport joint venture. Paul has been a director of Luton Airport and Costa Rica's international airport; Al has been the chairman of Lima's Jorge Chavez International Airport (a partnership with Fraport) and CEO of the San José airport in Costa Rica and chairman of Curaçao Airport; and Clive has been a director of Luton, Lima and Curaçao Airports, as well as holding senior management positions at Manchester Airport and elsewhere in the aviation industry. Collectively, Churchill Airports' directors have been directly responsible for the safe, secure, and profitable operation of airports with more than 16 million passengers per year (in aggregate) in multiple jurisdictions. • Together with Balfour Beatty Capital, acquired **Blackpool International Airport** in the UK In 2008, together with Babcock & Brown, acquired **Plzeň-Líně Airport** in the Czech Republic and **Black Forest Airport** at **Lahr** in southwest Germany. • Churchill is currently in the final stages of negotiating acquisitions and operating contracts for a number of other commercial airports.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
City Hopper Airports Group, UK Fax: +44 (1384) 221 328 www.cityhopperairports.com	• Operates **Wolverhampton Halfpenny Green Airport** in the UK. • With MAR Properties Ltd, acquired **Blackpool International Airport** in 2004. • Has operated **Biella-Cerrione Airport** in northern Italy since 1 September 2004 under a 25-year concession agreement.
Comarco Services, Inc., USA Fax: +1 (714) 796-1802	• Manages 12 small-carrier and general-aviation airports in the United States, including five in **Los Angeles County**.
Companhia de Concessões Rodoviárias (CCR), São Paulo, Brazil CCR is owned by, Camargo Corrêa (17.0%), Andrade Gutierrez (17.0%), Soares Penido (17.22%) and Free Float (48.78%).	Operates private interstate highway concessions, airports, and metro system in Brazil and other countries. A private consortium with CCR, Flughafen München GmbH, and Flughafen Zürich AG, in which Flughafen Zürich AG participates with 24%, has been awarded with the concession for the International Airport of Confins in Belo Horizonte, Brazil. The private consortium will hold 51% of the local airport company whereas 49% remain with the state-owned and former operator Infraero.
Connaught Airport Development Co. Ltd, Ireland Fax: +353 (94) 67 994	• Operates **Ireland West Airport Knock** in County Mayo in Ireland. The airport was privately financed and built.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Copenhagen Airports International A/S, Copenhagen, Denmark Fax: +45 (32) 313 100 (Parent Copenhagen Airports A/S has been a private company since 1994; Maquarie Airports acquired an 11.3% stake in 2005 and sold again in 2011. Part of CPH's strategy since 2007 has been to focus its activities on the development and operation of the airports in Copenhagen. This is described in its 'World Class Hub' strategy, presented on 1 March 2012. The divestment of NIAL is part of the realization of this strategy.)	• Operates **Copenhagen Airport** and **Roskilde Airport** in Copenhagen. • Was a partner in the Tribasa consortium (which won a 50-year concession contract for **nine airports in Mexico's southeastern Yucatan region**) through its 36.5% equity stake in ITA S.A. (Inversiones y Tecnicas Aeroportuarias S.A. de C.V., or ITA). ITA held 15% of Grupo Aeroportuario del Sureste S.A. (ASUR) and a 2.5% direct equity interest in ASUR. ITA is now 63.5% owned by Mexican businessman Fernando Chico Pardo, and 36.5% by Copenhagen Airports. • In May 2001, acquired a 49% stake in **Newcastle International Airport** in the UK (NIAL Holdings Plc) through CPH Newcastle Ltd, a wholly owned subsidiary holding company. The remaining 51% stake of the airport is owned by seven local authorities (LA7): Durham County Council, Gateshead MBC, City of Newcastle, North Tyneside MBC, Northumberland County Council, South Tyneside MBC and City of Sunderland. CPH has agreed to sell its 49% interest in the share capital of NIAL Group Ltd, the parent company of Newcastle International Airport, to a fund managed by AMP Capital Investors Ltd. The remaining 51% interest in the share capital of NIAL remains owned by the seven municipalities. The divestment of CPH's interest in NIAL was approved by LA7 in October 2012. • Temporarily bought a 36.7% share in Rygge Sivile Lufthavn A/S in Norway and together with the Norwegian conglomerate Orkla built a civil air terminal at the Rygge military airfield 60 km south of Oslo to create **Moss Airport, Rygge**. • Signed an agreement with **Hainan Meilan Airport Company Ltd** in China to buy 20% of that company's shares at a price to be determined, but not to exceed HKD 515 million. • Was selected as the preferred bidder for the Black Sea airports (**Burgas** and **Varna**) in Bulgaria in April 2005, but the deal fell through. • Provides consulting services on a number of projects, which have included collaboration with Cowi-Larsen on expansions in **Oman** and for ASUR, which operates nine airports in **Mexico**.
Coriport S.A., Costa Rica	• Is the concessionaire for the airport development project at **Liberia's Daniel Oduber Quiros International Airport** in the province of Guanacaste in Costa Rica. A consortium will take over the airport operating concession; it includes MMM Aviation Group, Cocobolo Inversiones, Emperador Pez Espada, Brad and Ted Corporation, and Houston Airport System (HAS). ADC (see there) and HAS Management Costa Rica S.A. will operate the airport for 20 years.
Corporación Aeroportuaria del Este, Dominican Republic	• Operates **Punta Cana International Airport** in the Dominican Republic.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Corporación América S.A., (CASA), Buenos Aires, Argentina www.corporacionamerica.aero (CASA is the holding company of AA2000; it is owned by Eduardo Eurnekian (63%), SEA SpA (28%), Siemest (8%), and Riva (1%). CASA successfully develops extremely diverse companies in highly competitive markets and in different parts of the world. It now manages 49 airports, cargo terminals and heliports in Argentina (35), Uruguay (two), Peru (five), Ecuador (two), Brazil (two), Italy (two) and Armenia (one).)	• Operates **33 airports in Argentina** (see Aeropuertos Argentinas 2000). • As a member of the CerealSur consortium (now 'Puerta del Sur'), comprising Italy's SEA SpA, American International of the USA, and Argentina's Corporación América Sudamericana, each holding 33%), won the 30-year concession to manage and develop **Montevideo's Carrasco International Airport** and **Punta del Este's Laguna del Sauce International Airport**, both in Uruguay. • Won a 30-year concession to run **Zwartnots International Airport** in **Yerevan,** Armenia. • Was the winning bidder for a 15-year concession to develop and operate **José Joaquín de Olmedo International Airport** in **Guayaquil**, Ecuador as a partner in the TAGSA consortium. • Operates the new **Galápagos Islands Airport** and plans to convert it into a 'green' airport (Aeropuerto Ecológico Galápagos). • A partner in Aeropuertos Andinos del Peru, jointly owned by Corporacion América (CASA) and Andino Investment Holdings of Peru, which will develop six airports in southern **Peru** (**Arequipa**, **Juliaca**, **Puerto Maldonado**, **Tacna**, **Ayacucho**, and **Andahuaylas)**. • Has small shareholdings in **Vincenzo Florio Airport Trapani-Birgi** and **Crotone Airport** in **Italy**; is a private shareholder of Airgest plc, the company which manages the Trapani-Birgi airport, which is in western Sicily. • Won the concession for **Greater Natal International Airport** near Natal, Brazil in a joint venture with Brazil's Infravix/Engevix (each has 50%) in August 2011. • Won the concession for **Brasília–Presidente Juscelino Kubitschek International Airport** in a 50/50 joint venture with Infravix/Engevix in February 2012.
Cosapi S.A. Ingeniería y Construcción, Peru Fax: +51 (1) 224 8665	• A local partner which held 14.5% in a consortium that was awarded a 30-year concession to develop and operate **Lima's Jorge Chavez International Airport** in Peru along with consortium partner Alterra Partners/Bechtel Enterprises International Ltd (42.75%) and Fraport AG (42.75%);. Sold its stake to Alterra.
Desarrollo de Concesiones Aeroportuarias S.A (DCA), Madrid, Spain (Founded in 2004; since 2008 a subsidiary of Abertis Group.)	• DCA is a Latin American airport operator with interests in **15 airports in Mexico** (including the **Guadalajara** and **Tijuana** airports), as well as airports in Jamaica (**Montego Bay**), Chile (**Santiago**) and Colombia (**Bogotá**).

Who owns and manages privatized airports?

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Company	Activities
Dragados y Construcciones S.A. (Grupo Dragados), Madrid, Spain Fax: +34 (91) 279 2168 www.dragados.com	• Owns 29% of the Mexican-Spanish consortium which acquired a 15% stake in the Grupo Aeroportuario del Pacifico (GAP) package of **Pacific airports in Mexico**, the other partners being AENA, Unión Fenosa, and the Angeles Group (Inversora del Noroeste and Holdinmex). The operating company is called Aeropuertos Mexicanos del Pacifico, S.A. • A member of the consortium which operates the international terminal at **Santiago** de Chile's **Arturo Benitez International Airport**. • Manages the second runway at **Bogotá's El Dorado International Airport**. • Together with YVRAS, Agunsa, and Ashtrom (an Israel-based construction company that has been working in Jamaica for over 30 years), won a 30-year contract to develop, manage and operate **Sangster International Airport, Montego Bay,** Jamaica.
Düsseldorf Airport Flughafen Düsseldorf GmbH (FDG), Germany Fax: +49 (211) 421 2205	• The majority shareholder (70.03%) in Flughafen Mönchengladbach GmbH (**Mönchengladbach Airport**), which it runs as **Düsseldorf Express Airport**. • **Düsseldorf Airport** itself is part-privatized: The City of Düsseldorf owns 50% but the other 50% was sold to private investor Air Partners GmbH in 1997. Hochtief AirPort GmbH owns 60% and Aer Rianta International 40% of Air Partners GmbH.
East Line Group, Moscow, Russia	• Owns **Moscow Domodedovo Airport**, which is managed by DME Ltd. Plans to sell 20% to 30% of the stock in a move to prevent re-nationalization of the airport under the government's plans to unify the three Moscow airports.

Who owns and manages privatized airports?

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Company	Activities
Egis Group, **Projects/Egis Avia**, Saint-Quentin-en-Yvelines, France www.egis-group.com (A 75%/25% owned subsidiary of the French Caisse des Dépôts and Iosis Partenaires (executive and employee shareholding). Egis Projects is a consulting and engineering group working in the fields of transport, urban development, construction, industry, water, environment and energy. In the road and airport fields, the group is also involved in project financing, turnkey-contract projects and facility operation. In 2007 it acquired Sofreavia, which became Egis Avia, providing aviation services and products around the world. Egis Avia operates 12 international airports and provides turnkey solutions to others.) Acquired Sofreavia in 2007 which became Egis Avia, providing aviation services and products around the world. It operates 12 international airports and provides turnkey solutions to others. **Egis Airport Operation** is a subsidiary of the Egis group with capital owned both by Egis Avia (70%) and Egis Projects (30%), set up in 2011 to manage the Egis group's airport concessions	• Egis Projects was a member of the Hermes Airports consortium which built and operates the terminals at two Cyprus airports, **Larnaca** and **Paphos**. • On 14 December 2009, the Congo Brazzaville Government signed a 25-year concession contract with Egis for the development, operation and maintenance of the **Brazzaville, Pointe-Noire,** and **Ollombo international airports**. In 2008, Lufhansa Consulting had managed the tender process for the concession to operate these airports. Egis Avia (through its subsidiary SEGAP, jointly owned with the Marseille Provence Chamber of Commerce) and Egis Projects will be the majority shareholders and reference technical partners of the concessionaire AERCO (Aéroports de la République du Congo). Egis and its partners will operate **Brazzaville's Maya-Maya International Airport** (BIA), which had traffic of 800,000 passengers and 75,000 tonnes of freight in 2008. In coming months, BIA will be refurbished with new infrastructure and equipment, including an Airbus A380-compatible runway, taxiways, parking stands and a 50,000-square metre modern terminal. They will also operate **Pointe-Noire's A.A. Neto International Airport,** which had 2008 traffic of 650,000 passengers and 85,000 tonnes of freight; and the new **Ollombo International Airport** in Northern Congo. The initial investment programme will include the building of the airport perimeter fences and the renewal of the freight zones. Egis will provide experienced managers through a technical assistance agreement to AERCO, which will run the airport. • Through this contract, Egis is strengthening its position in airport management; it also has contracts in **Abidjan** in the Ivory Coast and **Libreville** in Gabon. • In March 2010, the French Government signed a 30-year concession contract with **Aéroport de Tahiti**, an EGIS subsidiary, for the development, operation and maintenance of Tahiti's **Fa'a'ā International Airport** and five-year renewable operating contracts for the **Raiatea**, **Rangiroa**, and **Bora Bora** airports. Holds interests in Segap (Aeria Aéroport d'Abidjan; ADL Aéroport de Libreville), Aerco (Aéroports du Congo), ADT (Aéroports de Tahiti), and Caog (Aéroports de Chypre) – Details above Holds 10% of the Aeroportos Brasil consortium, established by the Brazilian Triunfo Participações e Investimentos (45%), UTC Participações (45%) and the French Egis Airport Operation for a 30-year concession to operate **São Paulo's Viracopos** Airport in Brazil, awarded in February 2012. Won the concessions to manage and develop **Oostende-Bruges** and **Antwerp** airports in Belgium in July 2013.
Engevix, Alameda Araguaia, Brazil (Engevix played a large role in the modernization of the Brazilian Airport System, taking part in 15 projects in the country's most important airports.)	• The Inframérica group was awarded a concession to operate **Brasília–Presidente Juscelino Kubitschek International Airport** in February 2012. The consortium, comprised of Brazil's Grupo Engevix/Infravix and Argentina's Corporación America, also won a concession in 2011 to operate **São Gonçalo do Amarante International Airport** (also called Greater Natal International Airport) in Rio Grande do Norte's state capital Natal.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Erinaceous Group plc, UK	• Acquired **Shoreham Airport**, also known as Brighton City Airport, in the UK in July 2006 under a 150-year lease.
F2i Sgr S.p.A., Milan, Italy (F2i stands for Italian Funds for Infrastructures.)	• Acquired a 70% stake in the **Naples International Airport** operator GESAC in December 2010. • The fund management company is dedicated to long-term investments (maximum 15 years) in the infrastructure sector.
FAA, USA	• Owns **Atlantic City Airport**, **NJ,** managed by AmPorts (ex-Johnson Controls).
FAC Federal Airports Corporation Sydney, Australia	• Operated **21 Australian airports**, all of which were sold; provided management assistance at **SSR International Airport**, Mauritius through AMS (Airport Management Services Ltd).
Favori LLC, Turkey (consortium of Turkish construction firms Çetin Group and Kozuva with US$ 3million capital)	Was handed over the management of Mogadishu's Adan Adde Airport on 15 September 2013. Favori is expected to renovate the airport and install equipment within eight months. Favori LLC replaced UAE-based SKA Air and Logistics which had been running Mogadishu Airport for nearly three years.
FCC Agua y Entorno Urbano, Spain Fax: +34 (91) 383 6461 (A handling company, now called Flightcare.)	• Partner in the SCL Terminal Aéreo **Santiago** consortium, formed together with Agencias Universales S.A. (Agunsa; 47%) and Sabco Administrador de Fondos de Inversión S.A. of Chile (13%), Grupo Dragados of Spain (30% with FCC), with YVRAS holding 10%. • Acquired the ground-handling activities of Sabena at **Brussels Airport**.

Who owns and manages privatized airports?

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Company	Activities
Ferrovial Aeropuertos S.A., Spain Fax: +34 (91) 555 1241 (A subsidiary of Ferrovial Infraestructuras, S.A., formerly **Cintra** (Concesiones de Infraestructuras de Transporte, S.A.; toll-road unit of the Madrid-based Grupo Ferrovial, S.A.). Ferrovial is one of the world's leading private-sector developers of transport infrastructure, with committed investment in concession companies' equity totalling more than EUR 2.2 billion. This activity is carried on through the development and management of toll roads and parking lots (through Cintra) and airport management.)	• Since 1998, has owned 24.5% of the Tribasa consortium which won the concession for Mexico's nine southeastern airports – **Aeropuertos Sureste ASUR** (**Cancún**, **Cozumel**, **Huatulco**, **Mérida**, **Minatitlán**, **Oaxaca**, **Tapachula**, **Veracruz**, and **Villahermosa**). The three other partners are Copenhagen Airports A/S, Grupo Tribasa (Mexican contractors), and GTM of France. • Winner of **Antofagasta, Chile's Cerro Moreno International Airport** management concession and also a concession to operate **Niagara Falls Airport** in **New York State, USA**. • Acquired a 51% stake in **Bristol International Airport** from FirstGroup together with Macquarie in 1997; the airport was purchased by Macquarie Bank and Cintra in January 2001; Macquarie's stake was spun off as part of MAp Airports in 2009. • Provided 19.6% of the equity of the Southern Cross Airports Corporation Holdings Ltd (SCACH), led by Australia's investment bank Macquarie Bank Ltd, which acquired **Sydney Airport Corporation** in 2002. Ferrovial sold its stake. • Acquired all shares of **Belfast City Airport**, Northern Ireland, from Bombardier Services (UK) Ltd; in 2008, sold shares representing 100% of Belfast City Airport Ltd (BCA) to ABN Amro Global Infrastructure Fund, with the participation of Faros Infrastructure Partners LLC. • The Devon County Council named South West Airports Corp., a company owned by Macquarie Airports Group and Ferrovial, as the preferred bidder to buy a stake in the **Exeter International Airport** company. • In August 2006, **BAA Ltd** was acquired for GBP 10.1 billion by Airport Development & Investment Ltd (ADI). This is a wholly owned subsidiary of FGP Topco Ltd, in which, as of 6 June 2008, Grupo Ferrovial, SA (Ferrovial) held 55.87% of the ordinary shares. The other two shareholders in FGP Topco Ltd are Britannia Airport Partners LP (26.47%), which is managed by Caisse de Dépôt et Placement du Québec; and Baker Street Investment Pte Ltd (17.65%), a subsidiary of GIC Special Investments Pte Ltd. In 2011 Ferrovial sold a 5.88% stake in BAA Ltd to U.S. investment fund Alinda Capital Partners to reduce its stake to less than 50% (49.99%), so that BAA's debt would no longer be included in its balance sheet. • Qatar Holding LLC has agreed terms with Ferrovial S.A. and other existing investors to acquire a 20% indirect shareholding in BAA Ltd. The deal involves a 10.62% stake from Ferrovial, stakes of 5.63% of FGP Topco from Britannia Airport Partners and 3.75% from GIC. • On 1 November 2012, through wholly owned subsidiary Stable Investment Corporation, China's CIC International Co., Ltd acquired a 10% stake of Heathrow Airport Holdings Ltd, previously known as BAA Ltd. After the CIC and Qatar Holdings deals, the diluted stake of Ferrovial now is 33.65%. • In August 2006, BAA was de-listed from the London Stock Exchange; Ferrovial started to sell non-UK airports in its portfolio (e.g., Budapest – see there). The UK Competition Commission required BAA to sell its **London Gatwick**, **Edinburgh** and **London Stansted** airports.
FirstGroup, UK	• Owned 51% of Bristol International Airport (now known as **Bristol Airport**); sold its stake to Cintra/Ferrovial and Macquarie.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Flughafen Zürich AG, International Business Development (IBD), Zürich, Switzerland Fax: +41 (43) 816 4721 (IBD currently is involved in ten11 airports worldwide.in six countries. For branding purposes, the name 'Unique' was used until 2010)	• Privatized in April 2000; operates **Zürich Airport**. • In 2001, a newly established unit (now called International Business Development – IBD) acquired a 17% stake in Bangalore International Airport Ltd (BIAL), a consortium that has since built and is operating the new **Kempegowda International Airport** in India under a 30-year concession. Private promoters currently hold a 74% stake (GVK 43%, Siemens Projects Ventures 26%, and Flughafen Zürich 5%) in BIAL, while government agencies hold the remaining 26% (Karnataka State Industrial Investment and Development Corporation 13% and Airport Authority of India 13%). GVK Power and Infrastructure plans to acquire majority control. It agreed to buy the stake from Germany's Siemens, which earlier had led a construction consortium. • In a joint venture with IDC S.A. in Chile (see there), called Unique Airports Latin America (UALA), operates three airports in **Chile** (**Calama**, **La Serena** and **Puerto Montt**) and **four airports in Honduras.** • Has a 20-year management contract to run **Santiago Mariño Caribbean International Airport** on **Isla Margarita** in Venezuela in a joint venture with IDC. • The OPAIN consortium led by IDC (see there) has been awarded a 20-year concession to operate **El Dorado International Airport** in **Bogotá,** Colombia; the Swiss airport operator has a technical assistance contract but is not planning to participate financially in Bogotá's US$ 650 million expansion scheme. • The A-Port consortium of Brazil's Camargo Corrêa (80%), Unique (15%) and IDC (5%) acquired a concession to operate **Hato International Airport** on the island of **Curaçao** in the Netherlands Antilles. A private consortium with the Brazilian Companhia de Concessões Rodoviárias (CCR), Flughafen München GmbH, and Flughafen Zürich AG, in which Flughafen Zürich AG participates with 24%, has been awarded the 30-year concession for the International Airport of Confins in **Belo Horizonte, Brazil**. Flughafen Zürich AG's strategy focuses on management contracts in collaboration with strong local partners in emerging markets such as South and Central America, Eastern Europe, Central Asia or South East Asia. • The new management services will bring Flughafen Zürich AG's airport management revenues to CHF 1 to 2 million per year.

Who owns and manages privatized airports?

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Company	Activities
Fraport AG, Frankfurt, Germany Fax: +49 (69) 690 55441 www.fraport.com (Operator of Frankfurt Airport and active at 18 other airports around the world.)	• Acquired a 20% stake in **Flughafen Hannover GmbH**, with Nord/LB holding 10% and the remaining 70% owned equally by the State of Lower Saxony and the City of Hannover. Fraport currently owns 30% of FHG. • Acquired a 24.5% stake in **Xi'an Xianyang International Airport** in northwest China through Fraport Asia Ltd, in a joint venture with China West Airport Group. The JV will invest CNY 1.018 billion in the new company, holding 50.9% equity. Fraport AG and China Aviation Airport Investment Co. Ltd have stakes of 24.5% each, through investing CNY 490 million. China West Airport Group Aviation Logistics (Xi'an) Co. Ltd, a unit of China West Airport Group, will put in CNY 2 million for a 0.1% stake. Thus China West Group will have a controlling 51% stake. Holds 50% of **Shanghai Frankfurt Airport Consulting Service** Co. Ltd. • Signed a memorandum of understanding with **Qingdao Liuting International Airport** and with **Kunming Changshui International Airport** in 2008. • Holds a 51% stake in Fraport IC İçtaş Antalya Airport Terminal Investment and Management Inc.; from 1998, operated the new terminal at **Antalya Airport** in Turkey under an 8-year concession agreement, in a joint venture with Bayindir Holding. With management of the second international terminal, Fraport IC is now the sole operator of both of Antalya's international terminals, as well as the domestic and VIP terminals. Another milestone in the 17-year concession agreement with the Turkish airport authority is the construction of a new domestic terminal, which opened in 2010. The concession agreement for all terminals runs until 2024. • Holds a 10% stake in **Delhi International Airport** Ltd (DIAL) which is modernizing India's main gateway; GMR holds a 54% stake, AAI 26%, and MAHB 10%. Fraport considers selling its stake prior to the end of its role as an operator in Delhi in May 2013. • Held 42.75% in the Lima Airport Partners SRL (LAP) consortium that was awarded a 30-year concession to develop and operate **Lima's Jorge Chavez International Airport** in Peru along with consortium partner Bechtel Enterprises International Ltd/Alterra (57.25%); acquired the Alterra and Bechtel stakes in 2007 and now owns 70.01% of LAP; the other shareholders are International Finance Corporation (IFC) with 19.99% and AC Capitales Safi of Peru (Fondo de Inversión en Infrastructura, Servicios Públicos y Recursos Naturales) with 10.0 percent. Under the 30-year airport concession (with a 10-year option to extend) Fraport assumed the contractual role of airport manager and is responsible for operations, security, planning, maintenance and other activities. • Since 2006 is the lead partner (60% share) in the Fraport Twin Star Airport Management AD consortium with BM Star of Bulgaria which operates and develops the Black Sea airports **Varna and Burgas**. • Won a contract to manage **Cairo International Airport.** • Owns Fraport Ground Services Austria GmbH which provides handling services at **Vienna Airport** in Austria. • Owns 100% of Fraport Saudi Arabia fofr Airport Management & Development Company Services Ltd (FSA) which provides management and development services at the **Jeddah and Riyadh** airports in Saudi Arabia.

Who owns and manages privatized airports?

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Company	Activities
Cont. Fraport AG, Frankfurt, Germany Fax: +49 (69) 690 55441 www.fraport.com (Operator of Frankfurt Airport and active at 18 other airports around the world.)	• Owns Daport S.A. which provides consulting services for **Dakar**'s Sédar Senghor International Airport; in the future management and operation of Aéroport International Blaise Diagne which is currently under construction. • Is a partners in Northern Capital Gateway Ltd (NCG), the operator and developer of **Pulkovo Airport in Saint Petersburg**, Russia; Fraport holds a 35.5% stake in the consortium; its partners are VTB Bank (with 57.5%), Russia's second largest financial institution; and Copelouzos Group (7%), a Greek business and investment conglomerate. • Fraport is interested in acquiring stakes in Turkey's Izmir Airport and in Spain's Madrid and Barcelona airports.
GAP (Grupo Aeroportuario del Pacífico, S.A.B. de C.V.), Guadelajara, Mexico **(Grupo México, a copper mining company, owns 25.7% and plans to acquire 100% of GAP's share capital.)**	• Operates **12 airports throughout Mexico's Pacific region**, including those serving the major cities of **Guadalajara** and **Tijuana**, the four tourist destinations of **Puerto Vallarta**, **Los Cabos**, **La Paz** and **Manzanillo**, and six mid-sized cities: **Hermosillo**, **Guanajuato**, **Morelia**, **Aguascalientes**, **Mexicali** and **Los Mochis**. In February 2006, GAP's shares were listed on the New York Stock Exchange under the ticker symbol 'PAC' and on the Mexican Stock Exchange under the symbol 'GAP'. • Shareholders include Controladora Mexicana de Aeropuertos (CMA), made up of Mexican investors, and Aeropuertos Mexicanos del Pacifico (AMP), which includes Spanish partners Aena Internacional and DCA; Grupo México already owns 30.2% of the A shares. • Holding 33.33% of the capital, DCA is one of the three shareholders of Aeropuertos Mexicanos del Pacífico (AMP), together with Aena Internacional – partner of Abertis in TBI – and the Mexican company CMA. AMP in turn is the majority shareholder and strategic partner of GAP, with a stake of 17% (the remaining 83% is listed on the Mexico and New York stock markets). It holds a management contract with GAP that gives it special rights, such as the appointment of certain members of the management team – among them the managing director – and representation of four members on the board of directors (from a total of 11).

Who owns and manages privatized airports?

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Company	Activities
Gemina S.p.A, Italy (Generale Mobiliare Interessenze Azionarie) (Shareholders (>2% stake): Investimenti Infrastrutture SpA (25.21%), Silvano Toti Holding SpA (12.8%), Mediobanca SpA (12.53%), Worldwide United (Singapore) Pte Ltd (8.34%), Sintonia S.A. (9.48%), Fondiaria-SAI SpA (4.17%), Unicredit SpA (3.4%), UBS AG (3.2%), Assicurazioni Generali SpA (3.05%), Norges Bank - Central Bank of Norway (2.04%).)	• Owned a controlling stake in **Aeroporti di Roma** when AdR was privatized; acquired the Macquarie stake in AdR in 2007 and now owns 95.76% of AdR. • Owns 100% of Leonardo S.r.l., which holds the remaining stake in AdR. A merger of Gemina and Leonardo is planned, giving Gemina SpA 100% control of AdR. • From 2000, Gemina focused its activities on directing and controlling its subsidiaries. In the same period, Gemina took part in the privatization of AdR and developed its core business in the area of airport infrastructure. In the meantime, Gemina divested its shareholdings in other subsidiaries and today holds 95.76% of AdR's share capital, the most important asset of the Gemina group.
General Electric, USA (Together with Credit Suisse, a joint founding investor in Global Infrastructure Partners (GIP, see there), each committing US$ 500 million in investment capital.)	• GIP operates on an arm's length basis from Credit Suisse and General Electric. • Acquired 100% of **London City Airport** jointly with AIG Financial Products (AIG-FP) in late 2006. In October 2008, GIP acquired the 50% ownership in London City Airport that it did not already own and now owns a 75% interest. • As partner of the GIP-led consortium, acquired **London Gatwick Airport** (see below).
Global Infrastructure Partners (GIP), New York & London www.global-infra.com (An infrastructure joint venture between Credit Suisse and General Electric, operating globally from offices in the Unites States, in England, and Australia; independent fund that invests in infrastructure assets worldwide.)	• Together with AIF-FP (see AIG), acquired **London City Airport** in autumn 2006 from Airport Management and Investment Ltd (owned by Dermot Desmond); GIP owned 50% of LCY until AIG sold its 50% stake to GIP in 2008 as a result of the financial crisis; GIP now holds a 75% stake. • A GIP-led consortium bought **London Gatwick Airport** for GBP 1.51 billion (US$ 2.4 billion) in October 2009 from BAA Ltd through Ivy Bidco Ltd, registered in England and established for the purpose of making the acquisition. GIP has since sold a 12% minority stake to South Korea's National Pension Service and a 15% stake to the Abu Dhabi Investment Authority (ADIA). GIP now holds 42% in Gatwick. • On 23 April 2012, GIP reached agreement with BAA Airports Ltd to acquire **Edinburgh Airport**. GIP paid a cash consideration of GBP 807.2 million to BAA and acquired the airport through a GIP-led consortium in May 2012.
GlobeGround Berlin GmbH (ex-B.L.A.S. GmbH), Germany Fax: +49 (30) 381 6517	• Provides ground handling services at the two **Berlin** airports and – temporarily – through a subsidiary at **Niederrhein Airport** in Germany. • Built, operates and owns a cargo terminal at **Riga International Airport** in Latvia.

Who owns and manages privatized airports?

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Company	Activities
GMR Infrastructure Ltd, Bangalore, India (GMR Group is one of the fastest growing infrastructure organizations in India. It is involved in airports, power and roads.)	• With partners Airport Authority of India (26%), Fraport (10%), Malaysia Airports Bhd (10%), and infrastructure firm IDFC (10%) owns 74% of Delhi International Airport Ltd, the company that is upgrading Delhi's **Indira Gandhi International Airport**; the GMR share is 54%. Fraport considered selling its stake before June 2013. DIAL opened Delhi's new US$ 2.6 billion Terminal 3 in June 2010. • Owns 63% of the company that is upgrading **Hyderabad International Airport** (HIAL) as a partner in the GMR-HIAL joint venture company. Malaysian Airports Holding Bhd holds 11%, AAI 13%, and the Andhra Pradesh government another 13%. The JV is developing an international-grade airport spread over 5,500 acres in **Shamshabad**, about 25 km from Hyderabad city. • Has won the contract to develop **Sabiha Gökçen International Airport** in **Istanbul** in 2008 in a joint venture with Turkey's Limak and Malaysia Airports Holding Bhd; GMR sold its 40% stake in the consortium for about EUR 225 million to Malaysia Airports (MAHB) in November 2013, as it raises funds to reduce its debt in the face of slower economic growth. • In 2010, won the bid to build, operate, modernize and expand **Malé International Airport** (MIA) in the Maldives through its joint venture with MAHB under a 25-year concession; the GMR stake in GMR Malé International Airport Ltd is 77%. The joint-venture contract was terminated by the new Maldives government in November 2012. Legal proceedings are under way. • GMR has formed a new business development unit focused on opportunities in the airport sector and is looking at bidding for airport development opportunities overseas, according to Subbarao Amarthaluru, group chief financial officer.
Groupe GTM, France (Owned by VINCI since 2000; see VINCI Airports.)	• Together with ADP, was a joint bidder for up to 49% of the shares of a yet-to-be privatized **Soekarno-Hatta International Airport** in **Jakarta**, Indonesia.
Grupo Puntacana, Punta Cana, Dominican Republic	• Set up in 1969 to build and operate **Punta Cana International Airport**. Dominican businessman and hotelier Frank R. Rainieri and the late Theodore W. Kheel, a prominent New York attorney and labour mediator, created a partnership to construct a resort, an airport and a real-estate community. In 1997, Julio Iglesias and Oscar de la Renta joined the group as co-investors and have made Puntacana Resort & Club their home.
Guangdong Airport Management Corp. (GAMC), Guangzhou, China (Large-scale, state-run air transport service enterprise under the administration of the Guangdong Provincial Government.)	• Manages **Guangzhou Baiyun International Airport, Shantou Airport, Zhanjiang Airport,** and **Meixian Airport** – all in China's Guangdong province. • GAMC will, based on the Pan Pearl River Delta co-operation, build **Guangzhou Baiyun International Airport** into a comprehensive hub in the Asia-Pacific area. • Singapore's ST Aerospace created a joint venture with GAMC in 2010 to set up a commercial aircraft heavy maintenance facility in Guangzhou. The JV is called ST Aerospace (Guangzhou) Aviation Services Company Ltd, abbreviated as STAG.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
GVK Group, Hyderabad, India www.gvk.com (GVK is a leading Indian conglomerate with presence across the energy, resources, airports, transportation, hospitality and life sciences sectors. Changi International Airports Holding is interested in acquiring a stake in GVK.)	• Acquired the 17% stake of Larson & Toubro in Bangalore International Airport Ltd in 2009. Now owns 43% of Bangalore International Airport Ltd (BIAL), which develops and manages Bengaluru Airport (now calledBangalore's **Kempegowda** Int.) in India**International Airport**; the private sector owns 74% and the public sector (AAI and Karnataka State) 26% of BIAL. GVK plans to acquire majority control and agreed to buy the stake of Germany's Siemens, which had earlier led a construction consortium. GVK Group is planning to sell a part of its 43% stake in the profitable Bangalore Airport to strategic investors or sovereign wealth funds to reduce its heavy debt load. • Owns 50.5% of **Mumbai's Chatrapati Shivaji International Airport** (CSIA) jointly with ACSA, South Africa and the AAI; GVK/ACSA own 74%, AAI 26% of the joint venture which develops and manages the airport. • Holds the first right of refusal to develop the planned international airport at **Navi Mumbai**, for which bids were to be invited in 2012. The sale of an equity stake in the business would help GVK secure a partner with good financial background ahead of the **Navi Mumbai International Airport** bid. • The GVK Group is also currently developing an airport in **Yogyakarta**, a special administrative district in Central Java, under the terms of a memorandum of understanding concluded with the government of Indonesia. • In November 2012, GVK Power & Infrastructure Ltd entered into an agreement for the operation, management and development of commercial facilities at **Ngurah Rai International Airport** serving **Denpasar** in **Bali**, Indonesia. • Pursues other international opportunities in the airport sector.
Hainan Airlines, China	See **HNA Airport Holding (Group)**.
Hermes Airports Ltd, Larnaca, Cyprus	• Built and operates the terminals at the **Larnaca** and **Paphos** airports in Cyprus. Partners in Hermes Airports Ltd are: Aer Rianta International (Middle East) WLL (11%), Bouygues Bâtiment International (22%), Chambre de Commerce et d'Industrie de Nice Cote d'Azur (2%), Cyprus Trading Corporation Public Ltd (11.34), Charilaos Apostolides Public Ltd(5.665%), ESA (20%), Hellenic Mining Public Company Ltd (11.33%), Iacovou Brothers (Constructions) Ltd (5.665%), and YVR Airport Services Ltd (11%).
Highlands & Islands Airports Ltd (HIAL), Inverness Airport, UK (Public corporation, wholly owned by the Scottish Ministers and sponsored by the Scottish Executive through the Transport Group of the Enterprise, Transport and Lifelong Learning Department)	• The company operates and manages 11 airports in the Scottish Highlands and Islands at **Barra, Benbecula, Campbeltown, Dundee, Inverness, Islay, Kirkwall, Tiree, Wick, Stornoway,** and **Sumburgh**. It facilitates access to, from and around the region for a range of people in pursuit of business, health, welfare, leisure and social objectives.

Who owns and manages privatized airports?

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Company	Activities
Highstar Capital Holdungs, New York, USA www.highstarcapital.com (An independent, owner-operated infrastructure investment fund manager.)	• Owns 25% of **London City Airport** together with Global Infrastructure Partners (75%). • Acquired a 50% stake in **Luis Muñoz Marin International Airport**, **San Juan**, Puerto Rico in 2012 with operating rights for 40 years. The other partner is Mexican airport operator ASUR.
Hindustan Aeronautics Ltd (HAL), Bangalore, India	• Owns and operates a **company airfield** which was used as **Bangalore's** airport until the city's new, privatized Kempegowda International Airport opened.
HNA Airport Holding (Group) Co Ltd, Haikou, Hainan province, China Fourth biggest airport operator in China, operating 12 airports. Pacific Alliance Asia Opportunity Fund Ltd (PAX) and ARC Capital Holdings Ltd (ARCH) signed an agreement to co-lead a US$200 million investment to acquire a 49% equity stake in HNA Airport Group)	• Owns 68% of **Haikou Meilan International Airport Company**, which it manages; the other shareholders are or were: American Aviation LDC (George Soros; 14.8%), Central Administration of China Civil Aviation Industry, Hainan International Trust & Investment Co. Ltd, China Aviation Fuel Co. Ltd, Hainan Aviation Holding Group, and China Southern Airlines; Copenhagen Airport A/S acquired a 20% stake. Major current shareholders include Haikou Meilan International Ltd; Copenhagen Airport A/S; Hainan Airline joint-stock limited company and HNA Group Ltd. • Group member airports are **Haikou Meilan International Airport**, **Sanya Phoenix International Airport**, **Yichang Sanxia Airport**, Gansu Airport Group (**Lanzou**, **Dunhuang**, **Jiayuguan** and **Qingyang**), **Weifang Nanyuan Airport**, **Dongying Yong'an Airport**, **Manzhouli Xijiao Airport**, **Anqing Airport** and **Lianyungang Airport**. • The HNA Group is in talks to acquire stakes in other Chinese airports, e.g., in **Fuzhou Changle International Airport** and in airports in **Guizhou** and **Shanxi** provinces. • Signed a contract for development and operation of **Karamay Airport** in China's **Xinjiang** autonomous region. • The HNA Group seems to be interested in acquiring one or more of the Hochtief-owned airports.

Who owns and manages privatized airports?

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Company	Activities
Hochtief AirPort GmbH (HTA), Germany (**now AviAlliance**) Fax: +49 (202) 824 1838 (Was a wholly owned subsidiary of Hochtief AG. From mid-2008, Hochtief AirPort GmbH – together with HOCHTIEF PPP Solutions –formed part of the corporate division Hochtief Concessions. **In September 2013, Hochtief sold its airport interests.** Hochtief AirPort is now operating under the **new name AviAlliance.** The renaming marks a fresh start for the company following its sale. The new owner of AviAlliance GmbH is PSP Investments, a subsidiary of the Public Sector Pension Investment Board in Canada) **Hochtief AirPort Capital GmbH & Co. KgaA (HTAC)** (Owned by Hastings Funds Management (50%), Caisse de Dépôt et Placement du Québec (40%) and KfW IPEX-Bank (10%))	• Hochtief AirPort (now **AviAlliance**) is one of the leading airport investors and managers in the world and is involved in the airports of **Athens**, **Budapest**, **Düsseldorf**, **Hamburg**, **Sydney** and **Tirana**, Hochtief said. The airports handle approximately 95 million passengers annually. • HTA owns 26.7%, HTAC 13.3% of Athens International Airport S.A., the operator of the new **Athens International Airport Eleftherios Venezelos** at Spata. • Purchased a 50% stake in the **Düsseldorf Airport** company FDG together with Aer Rianta of Ireland. Their joint-venture company Airport Partners GmbH is owned 60% by Hochtief and 40% by Aer Rianta International plc, giving Hochtief a 30% stake (HTA 20%, HTAC 10%). • FDG in turn owns 70.03% of **Flughafen Mönchengladbach GmbH**. • HTA owns 34.8%, HTAC 14.2% of the privatized **Hamburg Airport** joint-venture company after Hochtief acquired the stake of Aer Rianta. The joint venture is called Hamburg Airport Partners GmbH and originally was owned 80% by Hochtief, 20% by Aer Rianta International plc; the City of Hamburg holds 51%. • Hochtief Concessions and HTAC own 12.11% of the **Southern Cross consortium**, led by Australia's investment bank Macquarie Bank Ltd, which acquired **Sydney Airport Corporation** via Southern Cross Airports Corporation Holdings Ltd (SCACH) in 2002. • Leads the Tirana Airport Partners consortium in Albania, which has won a 20-year concession to develop and operate **Tirana International Airport Nënë Tereza**. The consortium, which is headed by Hochtief AirPort (with a 47% stake), includes Deutsche Investitions- und Entwicklungsgesellschaft (DEG; 31.7%) and the Albanian American Enterprise Fund (AAEF; 21.3%). • Acquired **Budapest Ferenc Liszt International Airport** from BAA Ltd (now owned by Ferrovial) on 9 May 2007 when BAA agreed to sell Budapest Airport Zrt to Airport Holding Kft, a consortium led by Hochtief AirPort GmbH, for GBP 1.309 billion (EUR 1.9 billion. The purchasing consortium consisted of Hochtief AirPort (49.666%), Caisse de Dépôt et Placement du Québec, Montreal (23.167%), GIC Special Investments, Singapore (23.167%) and KfW IPEX-Bank, Frankfurt (4%). Under the current ownership, HTA and Hochtief Concessions hold 49.666% of the voting shares in the airport company. Caisse de Dépôt et Placement du Québec (Canada) and Malton (Singapore), a subsidiary of GIC, each hold 18.167%, Goldman Sachs Infrastructure Partners (USA) holds 10% and KfW IPEX-Bank (Germany) holds 4%. As the Hungarian state retains a 25% stake (plus one vote), HTA and HTAC effectively own 37.25% of the airport company. • In 2013, Hochtief agreed to sell its airport management business Hochtief AirPort to Canadian pension fund **PSP Investments** for EUR 1.1 billion (US$ 1.4 billion). In a statement, it said that it "entered into a sale and purchase agreement with a subsidiary of Public Sector Pension Investment Board, Canada (PSP Investments) for the sale of all shares in Hochtief AirPort GmbH." After receiving approval by the competition authorities, Hochtief closed the sale on 27 September 2013.

Who owns and manages privatized airports?

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Company	Activities
Hong Kong Airport Authority, Hong Kong	• Hong Kong – Zhuhai Airport Management Co. Ltd (HKZAM) is a joint venture of the Zhuhai Government (the state-owned Assets Supervision and Administration Commission of Zhuhai Municipal People's Government) and Hong Kong International Airport (China) Co. Ltd., a fully owned company of Hong Kong Airport Authority. It is currently managing **Zhuhai Jinwan Airport** in **Guangdong**, China. HKZAM has managed Zhuhai Jinwan Airport in Southern China since 1 October 2006 and is Mainland China's first foreign-owned airport management company.
Houston Airport System (HAS), Houston, TX, USA (HAS Development Corporation – HASDC; non-profit corporation)	• HAS operates three airports in the United States that handle an aggregate capacity of nearly 50 million passengers annually, making it North America's fourth-largest airport operator. It operates **George Bush Intercontinental Airport**, **William P. Hobby Airport** and **Ellington Airport** in Houston. • ADC & HAS Management, a joint venture of ADC Canada, Toronto and the Houston Airport System, has an operating contract for the new **Mariscal Sucre International Airport** serving Ecuador's capital **Quito**. • Costa Rica's civil aviation council (CTAC) has authorized transfer of the concession for **Juan Santamaría International Airport**, serving capital **San José**, to a consortium led by Houston Airport Systems Development Corporation (HASDC). The consortium also includes Canada's ADC and Brazil's Andrade Gutiérrez Concesiones.
Howard Holdings plc, UK and Ireland	• Bought **Coventry Airport** in January 2006 for more than GBP 10 million; the airport was closed by the CAA in 2009 and re-opened in summer 2010 by the new owner, Sir Peter Rigby's Patriot Aviation group.
Hutchison Port Holdings (HPH), Hong Kong	• Owns **Grand Bahama International Airport** on Grand Bahama Island in **The Bahamas** jointly with the Grand Bahama Airport Authority and has management control. HPH also owns the nearby Freeport seaport facilities on Grand Bahama.
IAC (International Airport Centers), USA	• Owns real estate at US airports; **sold 37 facilities at seven international airports** to AMB in October 2003.
IAT (International Aviation Terminals Inc), USA	• Owns and leases real estate at **North American airports**.
ICA (Ingenieros Civiles Asociados), Mexico City, Mexico (Also called Constructoras ICA; is Mexico's largest construction group) www.ica.com.mx	• Partner (74.5%) in Operadora Mexicana de Aeropuertos (OMA), together with ADP Management (25.5%) of France, which operates **Mexico's privatized Grupo Centro Norte airports.** May sell part of its shares to reduce debt load. • Former investor VINCI SA (37.25%) sold its stake to ICA in December 2005. ICA currently holds 58.6% of the shares and plans to sell some of its stake to reduce its debt burden.

Who owns and manages privatized airports?

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Company	Activities
ICF Airports, Antalya, Turkey (Fraport IC İçtaş Antalya Airport Terminal Investment and Management Inc) www.icfairports.com	• Joint venture of Fraport AG (51%) and IC Içtaş Holding, set up in May 2007 to build and operate terminals at **Antalya Airport**. Since 2008 has operated all three terminals at the airport. The concession for operating all three terminals runs until the year 2024: 17 years for International Terminal 1 and the Domestic Terminal and 15 years for International Terminal 2. ICF's sphere of activity also extends to the VIP and capital improvement programme (CIP) terminals as well as all other related facilities. In the past, International Terminal 1 was managed by Fraport from 1 April 1998 to 13 September 2007 and was the first Build, Operate, Transfer project in Turkish aviation history. The Domestic Terminal was previously operated by the State Airports Authority (DHMI). International Terminal 2 was operated by Çelebi and IC between April 2005 and September 2009.
IC Investment Holding, Ankara, Turkey (brahim Çeçen Yatırım Holding) www.ictas.com.tr	• Founded in 1969 by Ibrahim Çeçen, IC Investment Holding has more than 11 business units spanning various business sectors. These include construction, infrastructural development, tourism, energy, agriculture and prefabricated steel products. IC Ictas, a subsidiary company of IC Investment Holding, has emerged as one of the leading construction companies for domestic and international macro-scale projects. • Operates **Antalya Airport** under a Transfer of Operating Rights (TOR) scheme; has a BOT contract for **Zafer Airport** in **Turkey**; and has on-going construction contracts at **St. Petersburg's Pulkovo Airport**, the **Burgas** and **Varna** airports in Bulgaria and **Ordu Giresun Airport** in Turkey. (See also ICF Airports)
IDC-Concesiones S.A., Chile (Gestión e Ingeniería IDC S.A) www.idc-concesiones.cl	• Operates the **Puerto Montt, La Serena, Calama** and **Antofagasta** airports in Chile in a joint venture with Flughafen Zürich in the A-Port consortium (see there). • As a partner in the OPAIN consortium, won a 20-year concession to operate **Bogota's El Dorado International Airport**. Flughafen Zürich AG Airport holds a technical assistance contract and one share of OPAIN. • Won a 20-year contract to run **Santiago Mariño Caribbean International Airport** on **Isla Margarita,** Venezuela in a joint venture with Zürich Airport. • Took over the management of four airports in **Honduras** in April 2006 (**Tegucigalpa**, **San Pedro Sula**, **La Ceiba** and **Roatan**). (See A-Port S.A)
I-Group LLC, Boston, USA www.i-group.com	• Is investing US$7 million in an airport on **Mayaguana**, the hitherto under-developed, most easterly island of **The Bahamas**.
IIU Ltd, Ireland Fax: +353 (1) 670 0925 (International Investment & Underwriting Ltd, owned by financier Dermot Desmond)	• Owned and operated **London City Airport**, UK until its take-over by the AIG-FP/GIP consortium in autumn 2006. • IIU owner Dermot Desmond holds a 5% stake in TBI plc.
Impregilo SpA, Milan, Italy Fax: +39 (02) 2442 2340	• Was a partner in the Aeropuertos Dominicanos Siglo XXI, S.A. consortium that managed four airports in the **Dominican Republic**. The stake was sold. • Closed a contract in September 2005 for the sale to Gemina S.p.A. of its 11% equity investment in Leonardo S.r.l., the company that held 51.08% of Aeroporti di Roma S.p.A. at that time.

Who owns and manages privatized airports?

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Company	Activities
Incheon International Airport Corp. (IIAC), South Korea (IIAC is building a sustainable long-term business platform beyond consulting service offerings on acquiring equity in foreign airports, BOT deals and incorporating joint ventures - e.g., in the Middle East, Asia and Russian markets - by drawing upon its experience and know-how from consulting projects)	• Acquired a 10% stake in Russia's **Khabarovsk Novy Airport** in 2011. • IIAC is in talks to buy into airports in Russia's Far East, such as **Vladivostok**, **Kamchatka** and **Sakhalin**. • Helped oversee the opening of **Erbil International Airport** in Iraq. • Developed the master plan for **Mactan-Cebu International Airport** in the Philippines. • Provides IT design for **Siem Reap-Angkor International Airport** in Cambodia. • Provides consulting and operating services to the **Haikou, Lanzhou** and **Sanya** airports in China in a joint venture with HNA Airport Group. • Provided airport consulting and operating services in **Nepal**. • Signed a joint management partnership agreement with PT Angkasa Pura I, the **Indonesian** state-owned enterprise operating a total of 13 airports, to provide consulting services for three years to support commercial facility development and passenger service improvement of **Surabaya's Juanda International Airport**, the second-busiest airport in Indonesia. The agreement also provides for expanding the scope of cooperation to cover subsequent airport modernization projects, as well as technology and management consulting deals.
Industry Funds Management (IFM), Melbourne, Australia www.industryfundsmanagement.eu	• Acquired a 35.5% stake in Manchester Airports Group in erarly 2013 to become a partner in MAG's acquisition of **London Stansted Airport**. • The largest investor in Australian airports, with equity interests in the airports of five state capitals (including **Adelaide**, **Brisbane**, **Melbourne** and **Perth**) and Northern Territory Airports (**Darwin International**, **Alice Springs** and **Tennant Creek**). • Is interested in buying a minority stake in **Vienna International Airport**.
Inframérica Participações, Brazil	• The consortium partners Infravix Participações and Corporación América have joined Brazil's state airport authority Infraero to form Inframérica Participações, a new company that will manage **Brasilia's Jubilino Kubitschek International Airport**. Held 51% by Inframérica and 49% by Infraero, the company oversaw the consortium's move to full management control of the Brasilia airport from mid-September 2012.
Infra-Group, Bucharest, Romania (Owned by BlueAero and Romstrade) www.infra-group.ro	• Was founded in March 2010 and operates ground-handling services at two airports in Romania: **Băneasa Airport** in Bucharest (which now only handles business aviation) and **Sibiu International Airport** in Transylvania. • Plans to build Romania's first privately financed airport, **Bucharest South International**, at Adunatil Copaceni.

Who owns and manages privatized airports?

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Company	Activities
Infratil NZ Ltd, Wellington, New Zealand Fax: +64 (4) 473 2388 **Infratil International Ltd**, Australia **Infratil Airports Europe Ltd (IAEL)**, UK www.infratil.com (The Infrastructure and Utilities units of Infratil are subsidiaries of H.R.L. Morrison & Co. Ltd, Brisbane, owned 25% by Lendlease Corp.; the Australian Infrastructure Fund (AIX) owns 31% of Infratil)	• Through Infratil Australia Ltd, held a 49.5% stake in Airstralia Development Group, which manages **Perth Airport**; and 51% in Airport Development Group (ADG), now **Northern Territory Airports** (NTA), which manages Alice Springs, Darwin and Tennant Creek airports in Australia; partnered with AGI (now TBI) in these projects. • Infratil NZ owned 1% of **Auckland International Airport Ltd** before AIAL went public in July 1998; took a stake of AIAL Ltd in August 2007 and sold it in 2009. • Holds a 66% stake in **Wellington International Airport Ltd (WIAL)** through NZ Airports, wholly owned by Infratil New Zealand Ltd (the remaining 34% is owned by Wellington City Council). • IAEL acquired a 67.3% stake of **Glasgow Prestwick Airport** in Scotland for GBP 14.8 million in January 2001. The total purchase cost was GBP 34.5 million. The balance of equity, GBP 7.2 million, was provided by the Special Utilities Investment Trust plc, a UK-based utility investor, and the Omniport consortium of Scottish business interests. In March 2004, Infratil increased its holding to 100%. Put Prestwick up for sale in 2012. • Took over **Manston, Kent's International Airport** in the UK from PlaneStation in 2005; sold its stake to Lothian Shelf (710) Ltd, wholly owned by Ann Gloag, in October 2013. Ann Gloag is an experienced investor who co-founded UK-listed public transport operator Stagecoach Group with her brother Brian Souter. • Owned 90% of **Flughafen Lübeck GmbH** in Germany and sold its stake to the city in 2009.
Intelcan Technosystems Inc., Ottawa, Canada	• Planned to build a US$100 million international airport in **Ghimbav** in Braşov County, **Romania**, under a public-private partnership with Romanian authorities (Bra ov, Harghita and Covasna counties and Ghimbav city). Construction has not yet started.
InterAirports S.A., Honduras (Owned by Flughafen Zürich AG – IDC – SEGESA – SAISA; associated with A-Port (see there))	• Administers all four international airports of **Honduras**: **La Ceiba – Golosón International**; **Roatán – Juan Manuel Gálvez International**; **San Pedro Sula – Ramón Villeda Morales International**; and **Tegucigalpa – Toncontín International**. FZAG supports InterAirports S.A. through its affiliate Unique IDC S.A. de C.V. under a technical service agreement covering all operational issues. San Francisco Airports Services was originally engaged as operator, but was replaced by Vancouver Airport Services (YVR) in 2004 and by the Unique (Flughafen Zürich) IDC consortia in 2006.
Inter-Consult Ltd, Dar es Salaam, Tanzania	• Owned 24% of **Kilimanjaro Airports Development Company** (KADCO), operated under a 25-year concession together with Mott MacDonald of the UK (75%) and the Tanzania Government (1%). The Tanzania Government repossessed the foreign stakes in 2009. Schiphol Group remains the airport's operating partner.
INVEPAR - Investimentos e Paticipações em Infra-Estrutura S.A., Rio de Janeiro, Brazil (An association between Brazil's construction company OAS and civil servant pension funds)	• Holds 90% of the Invepar-ACSA consortium, which includes South Africa's ACSA (10%) and plans to operate **São Paulo/Guarulhos–Governador André Franco Montoro International Airport**. The concession was awarded in February 2012. • Invepar invests in infrastructure companies active in various sectors, including highway concessions. Controls, among other companies, Linha Amarela (LAMSA), Concesionaria Metroviario do Rio de Janeiro S.A. (Metro Rio), Concesionaria Auto Raposo Tavares S.A. (CART) and Concesionaria Litoral Norte (CLN).

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Company	Activities
Inverness Air Terminal Ltd, Inverness, UK	• Has privately financed a GBP 9 million terminal refurbishment project at **Inverness Airport** in Scotland under the Private Finance Initiative (PFI). Partners in the company are the M.J. Gleeson Group, Canmore Partnership, Noble & Company and MPM Adams.
Invest AD, Abu Dhabi (Owned by Abu Dhabi Investment Council (ADIC))	• Holds a 38% stake in the multi-national AIG consortium which won a BOT contract for a new passenger terminal at **Amman's Queen Alia International Airport** in Jordan in 2007. The new landmark terminal was opened in March 2013.
Istanbul Sabiha Gökçen (ISG), Istanbul, Turkey	• A partnership of Limak Holding (LİMAK), GMR Infrastructure (GMR) and Malaysia Airports Holdings Bhd (MAHB). ISG took over the operational rights of the terminals at **Istanbul Sabiha Gökçen International Airport**, including the management of car park, ground handling, cargo and aircraft refuelling operations as well as the airport hotel and CIP facilities for a period of 20 years on 1 May 2008. Having paid EUR 1.932 billion for these operational rights, ISG also made an investment of EUR 500 million. The new terminal and its associated structures – altogether, covering a total area of 320,000 square metres, which will contribute to the rapid growth of the airport and bring its annual passenger capacity to 25 million – were constructed as environmentally friendly buildings using contemporary architecture and conforming to international standards. The facility was put into service on 31 October 2009. • Limak and GMR may each sell a 15% interest in SGIA to Malaysia Airports, giving the Malaysia-based company control of 50% of the company.
Japan Airport Terminal Co. Ltd, Tokyo Haneda, Japan	• Listed company that has owned and operated the terminals at **Tokyo's Haneda Airport** since 1953.
Johnson Controls	See **AvPORTS**.
Kallax Cargo AB, Luleå, Sweden Fax: +46 (920) 237 811	• Acquired the LFV-owned Luleå-Kallax air base at **Luleå Airport** in northern Sweden for development into an international cargo centre. Kallax Cargo Airport is controlled by Kallax Cargo AB, which is owned two-thirds by NCC AB and Fastighet AB Norrporten and one-third by the City of Luleå.
Kato Investment Group, Egypt	• Is developing the new **El Alamein Airport** in Egypt on a BOT basis.
Keolis, France Fax: +33 (2) 4133 5005 (Resulted from a merger of Via GTI/Paribas Group and Cariane in 2001. Is a multimodal public transport provider, managing airports with less than 100,000 passengers a year)	• Was a partner in the consortium which manages Europort Vatry (usually known as **Châlons Vatry Airport** or Paris Vatry Airport), the multi-modal airport in France. Sold its 23.31% stake in 2005. • Manages the new **Angers – Loire Airport**, **Albert – Picardie Airport**, **Troyes – Barberey Airport**, **La Môle – Saint-Tropez Airport**, Épinal – Mirecourt Airport and **Dole – Jura Airport** in France and provides ground transport services at a number of French airports. • Has managed the **Grenoble–Isère** and **Chambéry-Savoie** airports in France in a joint venture with VINCI Airports since 2004. The Chambéry concession was due to expire in 2013.
KfW IMPEX-Bank GmbH, Frankfurt, Germany	• Holds 4% of Budapest Airport Zrt, the operating company of **Budapest Ferenc Liszt Airport**.

Who owns and manages privatized airports?

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Company	Activities
KGS Group, Chennai, India	• Is the majority shareholder in **Aranmula International Airport Ltd**, the operator of a new airport being built in Aranmula, a temple town in the South Indian state of Kerala. MAHB may take a 15% stake in that company. • India's Reliance Group, owned by the 11th richest Indian, Anil Ambani, has a 15% stake in KGS Group.
Moh. Abdulmohsin al-Kharafi Group, Kuwait Fax: +96 (5) 484 1679	• Through its local subsidiary EMAK, has a BOT contract and 40-year concession for **Marsa Alam International Airport** on the Red Sea in **Egypt** and an associated tourist resort, marina and port development on a private basis. Marsa Alam was Egypt's first BOT airport project. It has been operated by ADP since October 2001.
(JSC) Koltsovo Airport, Yekaterinburg, Russia	• Owns 74.9997% of **JSC International Airport Nizhny Novgorod**, with the Nizhny Novgorod region holding the remainder of the shares.
Korean Airports Corporation (KAC), Seoul, South Korea www.airport.co.kr	• Manages and operates **14 regional airports in South Korea**, including **Seoul's Gimpo International Airport**, **Busan's Gimhae International Airport** and **Jeju International Airport**. The Jeju and Gimpo airports are respectively South Korea's second- and third-busiest. • Together with small and medium-sized industry partners, KAC has succeeded in developing key airport equipment and systems domestically. The time is ripe for KAC to show that Korean-made products such as DME and ILS have as much capability as others in this sector. The company aims to achieve overseas sales of KRW 200 billion (US$180 million) by 2020, or grab a 3% share of the global equipment market. It has exported goods worth some KRW 30 billion to 14 countries over the last four years, including ILS to Turkey. Another area it wants to pursue overseas is build-operate-transfer deals or operation and maintenance contracts, including equity investments in both greenfield and brownfield airports in Southeast Asia, where demand for airport infrastructure is growing on the back of economic growth. • KAC is bidding for O&M of **Quảng Ninh International Airport** on Van Don Island in **Vietnam's** Quảng Ninh Province. Samjong KPMG is doing the feasibility study. • KAC is eyeing opportunities in the **Philippines** and wants to operate an air force base in **Portugal**, where pilots will be trained with Korea's T-50 supersonic aircraft.
Kratos Group, Moscow, Russia	• The group will finance and build a multi-modal cargo terminal at **Moscow Sheremetyevo Airport** in partnership with the Interros Company, the major investor in and shareholder of the planned terminal. Controlled by Russian oligarch Vladimir Potanin, Interros is one of Russia's largest private investment firms, with large stakes in mining, metals, energy, finance, retail, real estate and other sectors.
Kweichow Moutai Co. Ltd, Renhuai, Guizhou province, China	• The liquor manufacturer has invested more than CNY 1 billion in **Guiyang Longdongbao International Airport** in Guizhou province and holds 30% of the airport's shares. It will cover about 70% of the construction cost of the new **Renhuai Maotai Airport** in the same province.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Laing Investments Management Services Ltd, Nottingham, UK Fax: +44 (181) 906 5577 (A subsidiary of John Laing Plc)	• Held 14.5% of the equity in the Adelaide Airport Ltd consortium which owns the **Adelaide** and **Parafield** airports in Australia (see Manchester Airport below); sold it in 2003 to the Motor Trades Association of Australia Superannuation Fund. The current (2011) shareholder equity distribution of Adelaide Airport Ltd is: Unisuper (49.0%), Local Super (19.5%), Colonial First State (15.3%), Industry Funds Management (12.8%) and Perron Investments (3.4%). • Held 14.55% in **Northern Territories Airports** by acquiring the 29.1% TBI plc (ex-AGI) holding in Darwin, Alice Springs and Tennant Creek together with National Australia Asset Management; sold the stake in 2003 to Perpetual Investment Management Limited, a division of Perpetual Trustees Australia Limited. • Former 4% shareholder in **Birmingham International Airport Ltd** in the UK.
LCOR Inc., USA Fax: +1 (610) 408-4420	• LCOR was involved in the US$1.4 billion **JFK International Air Terminal** (Terminal 4) project to replace New York JFK's original International Arrivals Building. Construction of JFKIAT was the largest public/private airport project in US history. The original JFKIAT was completed in 2001 and LCOR managed it together with Schiphol USA LLC and Lehman Brothers. Schiphol Group took 100% control of JFKIAT after acquiring the Lehman Brothers and LCOR stakes.
Lehman Brothers, Inc., New York, USA (**Note:** The investment bank Lehman Brothers, Inc. failed in 2008, causing a world crisis in financial markets)	• Was a partner and financial advisor for the new **Terminal 4 at New York JFK** until its stake was taken over by Schiphol Group. • Was one of the leading investment banking firms in structuring and underwriting securities for airport improvement projects. From 1990, served as book-running senior manager for 24 greenfield airport projects totalling US$4 billion, as co-senior manager for 15 transactions worth US$1.5 billion and as co-manager for an additional 36 transactions representing US$6 billion. • Lehman Brothers maintained a dedicated Airport & Transportation Finance Group staffed with five investment banking professionals with significant experience in airport financing. The group's expertise included introducing new airport credits to the capital markets, preparing strategic financial plans, developing new bond documents and structuring innovative refinancing techniques.
Libra Aeroportos, Brazil (A unit of Grupo Libra)	• Operates **Angra dos Reis Airport** and **Cabo Frio International Airport** in Rio de Janeiro State. • Is interested in converting São Paulo state's **Guarujá military air base** into an international airport on a PPP basis.

Who owns and manages privatized airports?

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Company	Activities
Limak Holding A,S., Ankara, Turkey www.limak.com.tr (An industrial conglomerate that operates in the construction, tourism, energy, cement, and technology sectors).	• A consortium of Limak Construction, GMR Infrastructure (India) and Malaysia Airport Holding Bhd (MAHB) was awarded the tender and established Istanbul Sabiha Gökçen International Airport Investment Construction and Operation Co. Inc.; the tender was called in 2007. GMR sold its 40% interest in SGIA companies in late 2013 to Malaysia Airports, giving MAHB control of 60% of the company. In September 2014, Limak sold its 40% in the airport because it plans to double its investments in the energy sector to focus on the third Istanbul airport project. • The Turkish-French Limak/Aéroports de Lyon consortium won a 20-year concession bid for **Pristina International Airport Adem Jashari** in Kosovo in 2010. The Limak share in the joint-venture company is 90%. • Limak Construction has won a US$387 million contract for the reconstruction and expansion of Terminal 2 at **Cairo International Airport**. The project is being financed by a loan from the World Bank, secured after Egypt went through turmoil during anti-government protests that ousted embattled leader Hosni Mubarak. • A group led by Limak Holding AS secured the right to run **Istanbul's third airport** for 25 years after bidding EUR 22.2 billion. The five-company consortium, which also includes Cengiz Holding AS, Kolin Insaat, Mapa AS and Kalyon Group, won the tender in May 2013 by nearly doubling its initial EUR 12.7 billion bid.
Linfox Transport Group, Australia (Lindsay Fox)	• Operates the **Essendon** and **Avalon** general aviation airports in **Melbourne**. Linfox and the Beck Corporation have a 50-year lease to run the airports, which they acquired from Federal authorities in 2001.
LinkGlobal Logistics Co. Ltd, Beijing, China	• Since 2008, has owned **Parchim International Airport**, a former Soviet military airfield in Germany, where it operates a cargo hub with flights to and from China.
London Supply, Buenos Aires, Argentina Fax: +54 (11) 4321 7315 www.londonsupply.net (Set up over 60 years ago as a ship chandler by José Taratuty)	• Owns and operates **Ushuaia International Airport** in Tierra del Fuego, Argentina and **five airports in Neuquén province** in Argentina (including **Trelew**, **Rio Grande**, **El Calafate** and **Valle del Conlara-Merlo**). • A member of Consorcio Aeropuertos Internacionales SA (CAISA), which has owned, operated and developed the new terminal at **Punta del Este's Capitan Corbeta CA Curbelo International Airport** in Uruguay (see CAISA) since 1995. • Builds and manages a new duty-free zone at **Puerto Iguazú** on Argentina's border with Brazil.
Lothian Shelf (710) Ltd, Edinburgh, Scotland	• Acquired **Manston, Kent's International Airport** in the UK from Infratil in October 2013. Lothian Shelf (710) Ltd is wholly owned by Ann Gloag, an experienced investor with interests in other transport sectors.
Low Cost Airport Group Ltd (LCAG Ltd), Ombersley, UK (Coordinates and manages investment in and acquisition of European regional airports and airlines)	• Has acquired an initial 5% of the share capital in Sogeap SpA, the management company at **Parma Airport** at Parma in northern Italy. • Has acquired a stake in **Osijek Airport** in **Croatia**, near its border with Serbia.
Lufthansa, Germany	• Acquired stakes in **Fraport AG** in 2006 and holds 9.1% of Fraport's capital.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Lufthansa Cargo, Germany Fax: +49 (69) 6969 1185	• Has a 29% stake in a consortium building and operating a cargo terminal at **Shanghai Pudong International Airport**.
Lynxs CargoPorts, USA Fax: +1 (512) 530-2540	• Lynxs Group LLC is a privately owned international real-estate development company based in Austin, TX which specializes in air cargo and related transportation infrastructure facilities at airports worldwide. Lynxs partners with airports to create new air cargo infrastructure and/or redevelop existing yet outdated air cargo or related infrastructure. As a full-service real-estate firm with in-house development, acquisition, property management and leasing capabilities, Lynxs is a recognized leader in its sector, providing interactive, intermodal and international distribution facility solutions for emerging regions' CargoPorts, e.g., Anchorage, Austin, Chicago O'Hare, Fort Lauderdale, Houston Intercontinental, Sacramento, San Antonio, Stewart, Tulsa and London. • Lynxs is currently developing a new air cargo development at **Vienna International Airport** in Austria and recently secured rights to develop the new air cargo facilities at **Chicago O'Hare**, **Calgary International** and **Shannon** airports.
Aéroports de Lyon S.A., Lyon, France Fax: +33 (4) 7222 8032 www.lyonaeroports.com	• Manages the two **Lyon** airports, **Satolas/Saint Exupéry** (international) and **Bron** (general aviation). • Managed **Grenoble–Isère Airport** temporarily. • The Turkish-French Limak/Aéroports de Lyon consortium won a 20-year concession bid for **Pristina International Airport Adem Jashari** in Kosovo in 2010. The Aéroports de Lyon share in the joint-venture company is 10%.
Macquarie Airports Group Ltd (MAG), Australia and UK Fax: +44 (20) 7486 7922	• Acquired a 50% stake in **Bristol Airport** from FirstGroup. As MAG is part-owned by Maquarie Airports (MAp), this gave MAp a 35.5% beneficial interest in Bristol Airport. • Exchanged contracts with Bridgepoint Capital Ltd to acquire its 24.125% shareholding in **Birmingham Airport Holdings Ltd** in the UK, which MAG sold again in 2007. • Acquired 11.7% of the Southern Cross consortium (Southern Cross Airports Corporation Holdings Ltd – SCACH) which acquired **Sydney Airport Corporation Ltd** (SACL) in 2002; plans to acquire most of the 4.96% Abbey National stake in SCACH. • In 2005, the Devon County Council named South West Airports Corp., a company comprising a Macquarie Airports Group and Ferrovial, as the preferred bidder to buy a stake in the **Exeter International Airport** company. • Had a 4.9% interest in Japan Airport Terminal Co., which it sold in 2009.

Who owns and manages privatized airports?

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Company	Activities
Macquarie Airports Ltd (now MAp Airports Ltd), Sydney, Australia www.mapairports.com.au (MAp advised on 5 December 2011 that its foreign ownership level had decreased to 35.0% from a previously announced 35.4%)	• Held a 61.6% interest in MAG (see above), which gave it a 35.5% beneficial interest in **Bristol Airport**. As of March 2010, the shareholders were OTPP (49%); Macquarie European Infrastructure Fund 1 (50%) – part of Macquarie Group; and MAp Airports (1%). • Has a total beneficial interest of 85% in **Sydney Airport Corporation Ltd** after an asset swap with OTPP, disposing of its 30.8% interests in Copenhagen Airports A/S. Macquarie Group had been looking to sell its majority stake in Sydney Airport as it struggled to rebuild its balance sheet after announcing a 24% slump in fiscal 2012 profits, producing its lowest profits in eight years. After posting a sharp jump in earnings for the first half of FY2013, Macquarie Group Ltd planned to spin off its stake in Sydney Airport to its shareholders. They were to receive one stapled security in Sydney Airport for each share in Macquarie they owned. In all, Macquarie expected to hand out about 340 million securities, which had a carrying value of AUD 1.4 billion as of the end of October 2013. • Had acquired a 52.5% interest in **Brussels** International Airport Corporation in 2004, increased to 53.9% in Sept. 2006 and then to 62.1%; now divested. • Had acquired an 11.3% stake in **Copenhagen Airports A/S** in 2005 and increased it to a controlling 53.4% in 2006; now divested. • Through its controlling interest in Copenhagen Airports A/S, held a stake in **ITA**, the strategic partner of Mexican airport operator **ASUR**, and additionally acquired a 5.6% interest in the "B" shares of ASUR. • Held a total beneficial interest of 33.6% in **Aeroporti di Roma** but sold it in 2007 to the Leonardo holding company; • Acquired a 15% stake in **Japan Airport Terminal Co.**, operator of the three **Tokyo Haneda Airport** terminals, as a long-term strategic investment. MAp sold the shareholding in 2009.
Macquarie Infrastructure Company (MIC), New York, NY, USA www.macquarie.com/mic	• MIC announced in March 2014 that its **Atlantic Aviation** business had reached agreement with Los Angeles World Airports for the development of a 36,500 square foot general aviation hangar at **Los Angeles International Airport**. Atlantic Aviation owns terminals and hangars, known as FBOs, at 63 airports throughout the USA. • MIC owns, operates and invests in a portfolio of infrastructure businesses providing basic services to customers in the United States. Its businesses consist of an airport services company, Atlantic Aviation; a gas processing and distribution business, Hawaii Gas; and a 50% interest in a bulk-liquid terminals business, International-Matex Tank Terminals. MIC also owns and operates companies in the contracted power and energy segment, including five solar power generation facilities and a district energy business. The company is managed by a wholly owned subsidiary of the Macquarie Group.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Malaysia Airports Holding Bhd (MAHB), Kuala Lumpur, Malaysia Fax: +60 (3) 755 2379 www.malaysiaairports.com.my (MAHB has proposed a private placement of up to 10% of its issued and paid-up share capital)	• Manages and operates **39 airports in Malaysia**: five international, 16 domestic and 18 Short Take-Off and Landing Ports (STOLports). On 30 November 1999, MAHB became the first airport company to be listed in Asia. • Held a 40% stake in CAMS, which operated **Phnom Penh International Airport** in Cambodia. • Holds an 11% stake in Hyderabad International Airport Ltd in India, the consortium that is building **Hyderabad's** new **Rajiv Gandhi International Airport**; the other partners are GMR Group (63%), AAI (13%) and the government of Andhra Pradesh (13%). • Has a 10% stake through Malaysia Airports (Mauritius) Pvt Ltd in Delhi International Airport Ltd (DIAL)**,** which will modernize New Delhi's **Indira Gandhi International Airport**. The other partners are AAI (26%), GMR Infrastructure (31.1%), GMR Energy (10%), GVL Investments (9%), India Development Fund (3.9%), and Fraport AG (10%). • Had a 20% interest in a joint venture with Limak and GMR to manage and develop **Sabiha Gökçen International Airport** in **Istanbul**, Turkey. GMR sold its 40% interest in SGIA companies to Malaysia Airports in late 2013, giving MAHB control of 60% of the company. • Has a 23% share in GMR Male International Airport Ltd, which won the bid to build, operate, modernize and expand **Malé International Airport** in the Maldives under a 25-year concession. The joint-venture contract was terminated by the new Maldives government in November 2012. • Entered into a joint venture agreement with Nagamas Enterprise (HK) Ltd to manage **Yongzhou LingLing Airport** in Hunan Province, China. • May take up a 15% stake in Aranmula International Airport Ltd, the operator of a new airport being built by Chennai-based KGS Group in **Aranmula**, a temple town in the South Indian state of Kerala. • MAHB may bid to run facilities in **China** and **Indonesia** because of rising travel demand in the Asian nations.
The Manchester Airports Group Plc (MAG), UK Fax: +44 (161) 489 3647 www.manchesterairport.co.uk	• The UK's largest publicly-owned regional airport operator, owns the operating companies **Manchester Airport Plc**, Manchester Airport Development Ltd (MAG Developments, a commercial property company), Manchester Airport Aviation Services, and Ringway Handling Services Ltd. • Managed the **Adelaide, Parafield** and **Coolangatta** airports in Australia together with Serco Asia Pacific for a minimum of five years under a contract which began in 1998. • Acquired an 82.7% stake in the formerly municipally owned **Humberside Airport** in 1999 and sold it again to the Eastern Group in July 2012. • Acquired the East Midlands (now **Nottingham East Midlands**) and **Bournemouth** airports, previously owned by National Express. • MAG agreed to buy **London Stansted Airport** for GBP 1.5 billion in cash in partnership with Australia's Industry Funds Management (IFM), which took a 35.5% stake in MAG.

Who owns and manages privatized airports?

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Company	Activities
Marseille CCI/Airport, France Fax: +33 (4) 4214 2724	• A partner in SEGAP, a manager of airports in **Africa** (see SEGAP).
The Marshall Group, Cambridge, UK	• Owns **Cambridge Airport** in the UK, where Marshall Aerospace is based and headquartered.
Metropol Group, Moscow, Russia (International investment/industrial group with Russian capital)	• Acquired **Lake Baikal Airport** (also called **Ulan-Ude Airport**), located in Ulan-Ude, the capital of Republic of Buryatia in southeastern Siberia, in May 2011 in order to develop the transport infrastructure of the region.
MMM Group Ltd, Thornhill, ON, Canada	• Holds stakes in the groups building the new **Quito** Airport, **Liberia** Airport in Costa Rica, and **Bogotá's El Dorado International Airport** in Colombia (together with other Canadian firms, e.g., ADC and AECON).
Mott MacDonald Group, UK Fax: +44 (181) 681 5706	• Was the majority stakeholder (75%) of **Kilimanjaro Airports Development Company** (KADCO), operated under a 25-year concession together with Inter-Consult Ltd of Tanzania and the Tanzania Government; the government bought back the stake in 2009.
Muhibbah Masteron, Malaysia (Malaysian-Cambodian joint venture)	• Owns 30% of **Cambodia Airports**, the operator of the **Phnom Penh**, **Siem Reap** and **Sihanoukville** airports. The other 70% is owned by the French VINCI group unit VINCI Airports (see there).
National Car Parks, UK	• A former equity holder in **Birmingham International Airport Ltd** (4.25%) in the UK
National Express Group Plc, UK (Airports Division) Fax: +44 (1332) 263 791 (No longer active)	• Owned the airports at **East Midlands** and **Bournemouth** in the U.K, but sold them to Manchester Airport. • Provided management consultancy at **Subic Bay International Airport** in the Philippines for a 12-month period. • Under a 99-year lease agreement by the New York State Department of Transportation, National Express Corporation (NEC), became the operator of the first major privatized US airport, **Stewart International Airport**, in 2000. (NEC is the US subsidiary of the National Express Group, PLC, which operates bus services in the UK, Australia and the USA). Unable to make a profit, the British company sold the airport to the Port Authority of New York and New Jersey in 2007.
NetJets Europe www.netjetseurope.com	• Since 2009, has owned 80% of Hessische Flugplatz GmbH, the operator of the **Frankfurt Egelsbach Airport** general aviation airfield near Frankfurt. The remaining 20% is held by local communities (Egelsbach 11%; Langen 9%).
Nice-Côte d'Azur Airport, Nice, France	• A member of the Hermes Airports consortium which built and operates the termionals at two Cyprus airports, **Larnaca** and **Paphos**.
Northern Capital Gateway Ltd (NCG), Saint Petersburg, Russia	• Operator and developer of **Pulkovo Airport** in **Saint Petersburg**. Fraport holds a 35.5% stake in the consortium; its partners are VTB Bank (with 57.5%), Russia's second largest financial institution; and Copelouzos Group (7%), a Greek business and investment conglomerate.

Who owns and manages privatized airports?

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Company	Activities
Novaport LLC, Moscow, Russia (Part of AEON Corporation's group of companies)	• Specializes in realizing complex airport development projects at partly or wholly owned Russian airports, e.g., at **Novosibirsk Tolmachevo Airport** (JSC Aeroport Tolmachevo, 38%); **Chelyabinsk Airport** (JSC Chelyabinskoe Aviapredpriyatie, 68%); **Barnaul Airport** (JSC Aviaprdpriyatie Altay, 48%); **Tomsk Bogashevo Airport** (Aeroport Tomsk LLC, 75%); **Chita Kadala Airport** (JSC AeroChita, 100%); **Bryansk International Airport** JSC, 74%); and **Astrakhan's Narimanovo Airport** (JSC Aeroport Astrakhan, minority interest). **Odessa International Airport** in Ukraine was to be the company's first non-Russian investment. • Russia's state-owned oil giant Rosneft and Novaport, businessman Roman Trotsenko's airport investment company, could purchase **Moscow Domodedovo Airport**. The parties were discussing an acquisition deal worth US$4.7 billion. Of this, US$2.5 billion concerns Domodedovo's refuelling complex, which Rosneft would buy. The rest of the assets would pass to Novaport, which owns and runs a number of airports in regional Russian cities. The parties were reported in September 2013 to have signed a memorandum agreeing the sale "two months ago". • Negotiations over the sale of Domodedovo Airport have continued since shortly after a terrorist incident at the airport in 2011. The Russian Government, seeking to place responsibility on the airport's ownership in the aftermath of the incident, found itself unable to identify the beneficiary shareholder. The name of the owner — Dmitry Kamenshchik, head of East Line Group — was revealed by Domodedovo Airport in mid-September 2013.
Odebrecht TransPort (OTP), Brazil	• In November 2013, a consortium comprising Odebrecht TransPort of the Odebrecht group (which had a 60% share) and Singapore's airport operator Changi (with a 40% share) won the concession to manage and develop **Rio de Janeiro's Galeão International Airport** for 25 years.
Ogden Aviation, USA Fax: +1 (212) 868-5895 (Taken over by Menzies of the U.K)	• Was the managing partner (with a 29% stake) in the MASC-Ogden ground-handling joint venture at **Macau International Airport**. • Was a partner, with a 28% stake, in the Aeropuertos Argentina 2000 S.A. consortium that purchased **32 Argentinean airports**. • Was the BOT partner in the runway consortium at **Bogotá**, Colombia's airport. • Was the managing partner in the Aeropuertos Dominicanos Siglo XXI, S.A. consortium that manages four airports in the Dominican Republic: **Santo Domingo** (Las Americas), **Puerto Plata** (Gregorio Luperón), **Samaná** (Arroyo Barril), and **Barahona** (Maria Montez). • A partner in ADR Handling at the **Rome** airports; manages the fuel facilities at **Tocumen International Airport** in Panama and San Juan's **Luis Muñoz Marin International Airport** in Puerto Rico; operates cargo terminals, e.g., in **Amsterdam**, **Barcelona**, **Madrid** and **Prague**; and operates other airport facilities. • Altogether, Ogden was present at **121 airports in 25 countries**.
OHL Concesiones, (Obrascon-Huarte-Lain) Madrid, Spain (Primarily a toll road operator)	• Owns 36% of AMAIT (Administradora Mexiquense del Aeropuerto Internacional de Toluca S.A) the operating company of **Licenciado Adolfo López Mateos International Airport** at **Toluca** in Mexico. The remainder is owned by the Federal and State governments. The airport, incorporated in 2006, is part of the Metropolitan Airport System (MAS) serving the Mexican capital. • Is bidding for airport concessions in **Chile**.

Who owns and manages privatized airports?

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Company	Activities
Oman Aviation Services, Oman	• Owns 5% of OAMC (Oman Airports Management Company S.A.O.C), a closed joint stock company owned by the Government of the Sultanate of Oman for the management and operation of **Muscat International Airport** and **Salalah Airport** and for the future airports of **Adam**, **Ad Duqm**, **Sohar** and **Ras Al Hadd**.
OMERS (Ontario Municipal Employees Retirement System), Toronto, Canada www.omers.com	• OMERS is a pension fund created by statute in 1962 to handle the retirement benefits of local government employees in the province of Ontario, Canada. It has become one of the largest institutional investors in Canada. Borealis Infrastructure (Borealis) manages infrastructure investments for OMERS and is a world leader in developing infrastructure investing as an asset class for institutional investors. • Is a strategic investment partner of ADC & HAS Airports Worldwide (see there)
Omniport plc, UK Fax: +44 (20) 7667 6449 www.omniport.co.uk	• Completed an arrangement in 2004 with Norfolk County Council and Norwich City Council to acquire **Norwich International Airport**. Omniport now owns 80.1% of Norwich Airport Ltd, with 19.9 % of the equity remaining with the two councils. • Owned and operated **Glasgow Prestwick Airport** until it was sold to Infratil. • Omniport owns 100% of the holding company (NV HBLM) which owns **Maastricht Aachen Airport** in the Netherlands.
OTPP Board, Canada www.otpp.com (Teachers' is the largest professional pension plan in Canada, with CAD 87.4 billion in net assets at 31 December 2008. It invests the pension fund's assets and administers the pensions of 284,000 active and retired teachers in Ontario. Stephen Dowd, senior VP and head of infrastructure investing for Teachers', said: "Teachers' is a substantial long-term investor in key infrastructure assets around the world.")	• Through an asset swap with MAp in 2011, acquired stakes in the **Brussels** and **Copenhagen** airports in exchange for the 11.02% OTPP stake in **Sydney Airport**, plus cash. The transaction resulted in Teachers' Infrastructure Group adding to its current airport holdings with ownership of 39% of Brussels Airport and 30% of Copenhagen Airport. • Owns 49% of **Bristol Airport**, with Macquarie European Infrastructure Fund 1 – part of Macquarie Group – holding 50% and MAp Airports (formerly Macquarie Airports) 1%. • Owns 48.25% of **Birmingham Airport** in the UK with a partner. • Owned 11.02% of **Sydney Airport** until 2011.
OPAIN S.A. (Operadora Aeroportuaria Internacional S.A), Bogotá, Colombia	• Has operated **Bogotá's El Dorado International Airport** under a 20-year concession since 1997. The concessionaire is controlled by Colombian construction firms, including Grupo Odinsa, CSS Constructores, Grupo Cóndor and subsidiary Construcciones El Cóndor, and Marval; and by Swiss firm Flughafen Zürich AG.

Who owns and manages privatized airports?

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Company	Activities
Peel Airports Ltd, UK Fax: +44 (161) 629 8332 (A subsidiary of property group Peel Holdings Ltd, owners of the Manchester Ship Canal; 65% of Peel Airports was acquired by Vancouver Airport Services – now Vantage Airport Group – in 2010)	• Owned 76% of **Liverpool John Lennon Airport** in the UK after having acquired British Aerospace (Liverpool Airport) Ltd in 1997. • Acquired the RAF Finningley RAF station in South Yorkshire, now transformed into the regional **Robin Hood Airport Doncaster Sheffield**. • Owns 50% of **Sheffield City Airport Ltd** (no longer active as an airport). • Separately, Peel's interests include **City Airport** and **City Heliport** in **Manchester** and **Durham Tees Valley Airport**. In the latter case, Peel Airports became a strategic partner of Teesside International Airport by acquiring a 75% stake in 2003; the airport's name was changed to Durham Tees Valley Airport. • After Vancouver Airport Services acquired a 65% share in The Peel Group, the latter retained a 35% share and a presence on the board.
Penambang Group, Malaysia	• Has managed and developed **Polokwane International Airport** (formerly Gateway International Airport) serving Polokwane (formerly Pietersburg) in Limpopo Province in South Africa under a 50-year concession since 2002. The airport is a former air force base. The group holds 90% of the airport company's stock.
The Perot family, USA	• Owns **Fort Worth Alliance Airport** in Texas, where American Airlines has built a US$480 million maintenance base.
Piaggio Aero Industries, Italy Fax: +39 (010) 652 0160	• Owns 13% of Società Aeroporto Toscano (SAT), which is the operator of **Pisa International Airport** in Italy.
Pioneer Aerodrome Services Co. Ltd, Yangon, Myanmar	• Won a 30-year concession in 2011 to operate **Yangon International Airport**.
PlaneStation Group plc, UK (Formerly **Wiggins**) Fax: +44 (171) 493 0189 (The company went into voluntary administration on 26 July 2005; Infratil and Babcock & Brown took over the airport assets)	• Was the owner of **Manston, Kent's International Airport**, in the UK and developed it as London Manston Airport. • Had acquired a 50-year lease of **Smyrna Airport** near Nashville, TN in the USA, through its PlaneStation US subsidiary. • Was considering a 30-year concession to operate and develop **Hans Christian Andersen Airport** serving **Odense**, Denmark but failed to agree with the military. • Was considering operating concessions for the airports of **Plzeň-Líně** in the Czech Republic and **Maringá** in Paraná State in Brazil. • Held an operating licence for the international terminal of **Melbourne International Airport**, Florida for an initial period of 10 years with five consecutive five-year extensions, subject to performance thresholds, for a total of 35 years. • Acquired **Black Forest Airport** in Lahr, Germany. Planned to acquire **Parchim International** in Germany, **Cuneo Levaldigi Airport** in Italy, **Alba Airport Székesfehérvár** at Börgönd in Hungary**,** and long leaseholds at other European airports, to set up PlaneStations and develop a worldwide cargo service network.

Who owns and manages privatized airports?

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Company	Activities
PPL "Polish Airports" State Enterprise, Warsaw, Poland www.lotnisko-chopina.pl	• Manages two airports in Poland: **Warsaw Chopin Airport** and **Port Lotniczy Zielona Góra (Zielona Góra-Babimost Airport)**; PPL also holds shares in 10 commercial-law companies managing regional airports (data as of 2011): - Międzynarodowy Port Lotniczy Kraków-Balice sp. z o.o. (**International Airport Kraków-Balice Ltd**) – 76.19%; - Port Lotniczy Szczecin-Goleniów sp. z o.o. (**Szczecin-Goleniów Airport Ltd**) – 52.50%; - Port Lotniczy Poznań-Lawica sp. z o.o. (**Poznan-Lawica Airport Ltd**) – 49.89%; - Port Lotniczy Rzeszów-Jasionka sp. z o.o. (**Rzeszów-Jasionka Airport Ltd**) – 47.25% - Port Lotniczy Gdańsk sp. z o.o. (**Gdansk Airport Ltd**) – 31.43%; - Port Lotniczy Modlin sp. z o.o.(**Warsaw-Modlin Mazovian Airport Ltd**) – 25.74%; - Port Lotniczy Wrocław S.A. (**Wroclaw Airport** joint stock company) – 20.23%; - Górnośląskie Towarzystwo Lotnicze S.A. (Upper Silesian Aviation Group. Joint stock company – **Katowice Airport**) – 16.41%; - Port Lotniczy Mazury sp. z o.o. (**Mazury International Airport Ltd**) – 12.67%; - Port Lotniczy Bydgoszcz S.A. (**Bydgoszcz Airport** joint stock company) – 8.06%. • PPL is the sole or majority shareholder in seven Polish companies that provide services to **passengers, cargo and aircraft**: - Warsaw Airport Services sp. z o.o. (Warsaw Airport Services Ltd) – 100%; - KRK Airport Services sp. z o.o. (KRK Airport Services Ltd) – 100%; - GDN Airport Services sp. z o.o. (GDN Airport Services Ltd) – 100%; - POZ Airport Services sp. z o.o. (POZ Airport Services Ltd) – 100%; - SZZ Airport Services sp. z o.o. (SZZ Airport Services Ltd) – 100%; - LDT Wroclaw sp. z o.o. (LTD Wroclaw Airport Services Ltd) – 59.30%; and - Airport Cleaning Service sp. z o.o. (Airport Cleaning Services Ltd) – 100% • PPL also holds shares in companies providing **non-aeronautical services**): - Port Hotel sp. z o.o. (Port Hotel Ltd Courtyard by Marriott) – 100%; - Casinos sp. z o.o. (Casinos Ltd) – 33.33%; and - PHZ Baltona S.A (Baltona S.A. Foreign Trade Company) – 12.75%.
Primkop Airport Management, South Africa	• Manages **Kruger Mpumalanga International Airport** near Nelspruit in South Africa (see ABB).
ProLogis, USA	• Real-estate developer specializing in logistics facilities; will build a large, multi-tenant distribution centre in Japan's **Chūbu Centrair International Airport**.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
PSP Investments (Public Sector Pension Investment Board), Canada	• PSP Investments is one of the largest pension investment managers in Canada with assets under management totaling CAD 76.1 billion as at 31 March 2013. It manages pension contributions for the federal public service, the Canadian Armed Forces, the Royal Canadian Mounted Police and the Reserve Forces. • Acquired Hochtief AirPorts in 2013, renamed **AviAlliance** (see there). At present, AviAlliance holds shares in the airports of **Athens**, **Budapest**, **Düsseldorf**, **Hamburg** and **Tirana**. A stake in **Sydney Airport**, Australia, was previously acquired by PSP Investments as a direct shareholding.
Pu-Ren Group, Hong Kong	• Took over **Lübeck Airport** in Germany on 1 August 2014 through its German subsidiary Pu-Ren Germany GmbH, Lauenburg.
Qatar Holdings LLC, Doha, Qatar (A wholly owned subsidiary of Qatar Investment Authority)	• Agreed terms with Ferrovial S.A. and other existing investors in August 2012 to acquire a 20% indirect shareholding in **BAA Ltd**, the operator of **London Heathrow** and – formerly – **London Stansted** airports, **Glasgow** and **Aberdeen** airports in Scotland, and **Southampton Airport** in southern England. The deal involved a 10.62% stake from Ferrovial, stakes of 5.63% of FGP Topco from Britannia Airport Partners and 3.75% from GIC. FGP Topco Ltd, a consortium formed by Ferrovial with partners, acquired BAA in 2006. Ferrovial's diluted indirect stake in BAA prior to the Qatar Holdings deal was 39.37%. It has now declined to 33.65%.
Corporación **Quiport S.A.**, Quito, Ecuador	• Owned by Aecon Group Inc., Canada (45.5%), AG Concessões, Brazil (45.5%), and Houston Airport System Development Corporation, USA (9%). Built and operates **Quito's** new airport under a 35-year concession from February 2013.
Ramport Aero, Russia	• Russia's Rostekhnologii (Rostec) and Lithuanian Avia Solutions Group created a joint venture, Ramport Aero, to turn **Ramenskoye Airfield near Moscow** into a low-cost carrier (LCC) airport. Avia Solutions Group holds 75% minus one share in the new company and Rostec subsidiary TVK Russia holds 25% plus one share. Total investments for developing the airport are expected to reach RUB 10 billion (US$277 million) over seven years. Avia Solutions Group is undertaking the Ramenskoye development project in three stages, which are to be carried out from 2014 through 2019. In the first stage, it is building a new 7,000-square metre passenger terminal with an annual passenger capacity of up to 1.8 million, as well as short- and long-term parking facilities. The airport is expected to handle its first passengers in 2016. By 2021, it will handle 12 million passengers per year.
Raytheon Infrastructure, Inc., USA	• A partner in the Aguadilla Consortium for Transportation (ACT) which won the operating and development contract for **Rafael Hernández Airport** in **Aguadilla**, Puerto Rico.
Regional Airports Holdings International Ltd (RAHI) Bangalore, India www.rahi.in (A joint venture between COMET Infra Developments Pvt. Ltd. (CIDPL) and IL&FS Transportation Networks Ltd (ITNL))	• Is developing two non-metro Indian airports, at **Gulbarga** and **Shimoga** in Karnataka. With the support of partners and experts such as NACO and Intervistas, RAHI aims to develop world-class facilities in Tier-II and Tier-III cities.

Who owns and manages privatized airports?

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Company	Activities
Regional Airports Ltd (RAL), UK Fax: +44 (1256) 862 115 (Founded by Andrew Walters in 1990 as a private company)	• Owns and operates **London Biggin Hill Airport**, UK • **London Southend Airport** (London Express Airport) was sold to the Stobart Group in 2008. RAL operates as a holding company for subsidiary-airport operations. Regional Airports Ltd also operates Northolt Handling, the Premier Service passenger handling service for commercial flights at **RAF Northolt**.
Regional & City Airports Management (RCAM), Exeter, UK (Also called The Rigby Group)	• The Rigby Group's aviation division Regional & City Airports (RCA) acquired **Norwich International Airport** in 2014 as part of its strategy to grow its share in the sector and increase the role of regional airports. • The Rigby Group owns and operates **Coventry Airport** and **Exeter International Airport**. It also holds management contracts for both **Blackpool International Airport** (now closed) and **City of Derry Airport** and says it is looking to build its portfolio of owned or managed airport assets over the next five years.
Renova Group, Moscow, Russia www.renova.ru (The group is owned by billionaire Viktor Vekselberg)	• The Renova Group has now formed Russia's largest airport holding company, controlling Koltsovo (Ekaterinburg), Strigino (Nizhny Novgorod), Kurumoch (Samara), Bolshoye Savino (Perm), and (Krasnoyarsk-Yemelyanovo). It also plans to build a new airport in Rostov-on-Don. • Through its Regional Airports subsidiary, the group is a majority shareholder of **Yekaterinburg's Koltsovo Airport** (OJSC Koltsovo). • Acquired 73.621% of the shares of **Nizhny Novgorod International Airport** (also known as Strigino Airport), with the Government of the Nizhny Novgorod region retaining a 25.001% interest. • Agreed to acquire 71% of the company that controls **Samara's Kurumoch International Airport**. It also has an option to acquire 25% more. • Signed an agreement with the Interros' Interport management company to develop an international passenger and freight hub at **Yemelyanovo International Airport** in **Krasnoyarsk.** • The development of **Rostov-on-Don Airport**, referred to as the "Southern Hub" due to its southern location in Russia, will be funded by the Regional Airports arm of the Renova Group.
Reuben Brothers, Geneva, Switzerland (The investment vehicle is called Aldersgate Investments)	• Owns **London Oxford Airport**, which it acquired in 2007 and substantially upgraded. • Announced the purchase from Andrew Davis of the **London Heliport** in Battersea. The heliport has been in continuous operation since 1959, providing essential service to the business community and emergency services.
The Rigby Group Plc, UK	• For its Regional & City Airports Management aviation division, acquired **Exeter International Airport** in the UK in 2013 through its Patriot Aerospace division. • Headed by its chairman, Sir Peter Rigby, it already has aviation interests through British International Helicopters, a helicopter operator based in Newquay, Cornwall, and holds part ownership of **Coventry Airport** in the West Midlands.
Rostec, Russia	• Is a partner with Lithuanian Avia Solutions Group in the **Rampart Aero** joint venture formed to turn **Ramenskoye Airfield near Moscow** into a low-cost carrier airport. See **Rampart Aero** for more details on ownership and planned development of the airport.

Who owns and manages privatized airports?

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Company	Activities
Sacyr Vallehermoso S.A., Madrid, Spain	• Leads a consortium that is building and will operate the new **Región de Murcia International Airport** at **Corvera** in Spain; owns 60% of the consortium.
SAT – Società Aeroporto Toscano SpA, Italy	• Owns 100% of **Pisa International Airport** and 86% of **Elba's Marina di Campo Airport**.
SATS, Singapore (Singapore Airport Terminal Services (Pte) Ltd) Fax: +65 542 1197	• Has a 24.5% stake in Asia Airfreight Terminal Co Ltd (AAT) at **Hong Kong International Airport** and a 30% stake in Tan Son Nhat Cargo Services Ltd (TCS) at Ho Chi Minh City's **Tan Son Nhat International Airport** in Vietnam. • Has had a joint venture, Beijing Aviation Ground Services (BGS), at **Beijing** since 1995.
SAVE S.p.A., Venice, Italy Fax: +39 (041) 269 5114	• The operator of **Venice Marco Polo Airport**, SAVE owns 90% of the **Treviso** airport company, Aer tre SpA; holds a stake in the **Padua** airport company, Aeroporto Civile di Padova S.p.A.; holds a stake in **Venice-Lido Airport**, through Nicelli S.p.A.; and holds a stake in **Pantelleria Airport**, through GAP S.p.A., which manages the handling services. • Acquired Airest, an Austrian in-flight catering company, in 2006. • Sold a 10.258% stake in Gemina SpA (owner of Aeroporti di Roma/AdR) in 2007. • Is the majority shareholder of **Brussels South Charleroi Airport** (BSCA) in Belgium. Société wallonne des aéroports (Sowaer), owned by the Walloon Region through its investment arm Sambrinvest, sold a 27.66% stake to SAVE SpA and Holding communal for EUR 11.346 million in 2009. The stake is held by Belgian Airports, a newly founded company owned 65% by SAVE and 35% by Holding communal. Belgian Airports holds an option to increase its stake by 21.24% (for consideration of at least EUR 8 million) to 48.33% at a later date. • SAVE will be the future operator of **Verona Villafranca Airport** and is considering taking a stake in **Ljubljana Jože Pučnik Airport** in Slovenia. • Is interested in other Italian airports (**Trieste** and **Olbia**) and in managing foreign airports (e.g., **Sharm el-Sheikh International Airport** in Egypt).
JSC Sberbank, Moscow, Russia www.sberbank.ru (Russia's largest bank. It holds about 27% of all Russian banking assets and employs nearly 240,000 people. The Central Bank of Russian Federation is the founder and major shareholder of Sberbank, owning 57.6% of its issued outstanding shares. Other shares are held by more than 245,000 individual and institutional investors)	• On 22 June 2012, JSC Sberbank signed a joint venture agreement to invest in and develop **airports in Russia**. Basic Element (see there) holds 50% plus one share, Changi Airports International (CAI; see there) holds 30% and JSC Sberbank holds 20% minus one share in the joint venture. Basic Element is contributing shares of the airports in the Krasnodar region to the joint venture, including shares in the airports of **Sochi**, **Krasnodar**, **Anapa** and **Gelendzhik**. The total value of the assets exceeds US$500 million. The joint enterprise's purpose is to develop the airports in the **Krasnodar region** further, to improve service levels for passengers and airlines, to increase the capitalization of these assets and also to expand its portfolio of airport assets.

Who owns and manages privatized airports?

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Company	Activities
SCAE, Singapore (Singapore Changi Airport Enterprise Pte Ltd) Fax: +65 545 5369	• Acquired a 7.14% stake in **Auckland Airport** in New Zealand, previously held by North Shore City Council, and had plans to acquire another 25.8%; sold its stake in December 2001 in a surprise move. • Took a 50% share in Alterra Partners (see there); SCAE decided to sell its share of **London Luton Airport** to UK-based airport operator TBI plc as part of plans to pursue new investment opportunities in Asia, particularly China and India. • In June 2005 signed an initial agreement to spend up to CNY 1.6 billion (US$19 million) for up to 45% of **Nanjing Lukou International Airport**. • Together with Alterra, had planned to acquire stakes in Omani airports **Seeb** and **Salalah** and the two Cyprus airports (**Larnaca** and **Paphos**); both projects failed. • Together with its sister company, Changi Airports International Pte. Ltd (CAI; see there), SCAE has investments in airports in **Lima**, **Curaçao** and **San José** (Costa Rica). It also has representative offices in Delhi and Beijing.
Schiphol Group, The Netherlands Fax: +31 (20) 601 4602 (Trade name of N.V. Luchthaven Schiphol, owned 75.8% by the State of the Netherlands, 21.8% by the City of Amsterdam, and 2.4% by the City of Rotterdam. Schiphol International is the division responsible for international activities at the Schiphol Group)	• Schiphol Group owns and operates the **Amsterdam Airport Schiphol**, **Rotterdam The Hague** and **Lelystad** airports, and acquired a 51% stake in **Eindhoven Airport**, all in The Netherlands. • Through its Schiphol International division, is a partner in the management companies of **Brisbane Airport** in Australia. It has an 18.72% stake in BACL, which has a 50-year lease. • Manages the **International Air Terminal at John F. Kennedy International Airport, New York** through Schiphol USA LLC (which has a 100% stake in JFKIAT after acquiring the Lehman Brothers and LCOR stakes). • Has an 8% holding in **Aéroports de Paris** (cross ownership). • Holds a 1% stake in **Vienna** International Airport plc. • Formed the Pantares alliance with Fraport AG, Frankfurt. • In 2004, Schiphol International won a 7-year contract to assist the management of **Reina Beatrix Airport** in **Aruba** in the Netherlands Antilles. • Is the airport operating partner of **Kilimanjaro International Airport** in Tanzania in the KADCO consortium, now wholly owned by the Tanzanian government. **Schiphol Real Estate** • Schiphol Real Estate, a wholly owned Schiphol Group subsidiary, develops, invests in, manages and markets commercial property. Schiphol Real Estate is active at and around **Amsterdam Airport Schiphol**, **Eindhoven Airport** and **Rotterdam The Hague Airport** in The Netherlands. Internationally, the company has operations near **Milan Malpensa Airport** and at **Hong Kong International Airport**.

Who owns and manages privatized airports?

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Company	Activities
SCL Terminal Aéreo de Santiago S. A., Santiago, Chile	• The SCL consortium was originally formed by Agencias Universales S.A. (Agunsa; 47%), Sabco Administrador de Fondos de Inversión S.A. of Chile (13%), contractors FCC and Grupo Dragados of Spain (30%), and YVRAS holding (10%) to develop and operate the passenger terminal at **Santiago's Comodoro Arturo Merino Benítez International Airport**. Current owners include Agunsa, CIMENTA Inmobiliaria Parque Tres S.A., Desarrollo de Concesiones Aeroportuarias, S.L., Global Vía Infraestructuras S.A., and YVR Airport Services Ltd.
SEA SpA – Milan Airports, Italy Fax: +39 (2) 7485 2054 www.seamilano.eu (Partial privatization planned)	• Owns and operates the two Milan airports, **Linate** and **Malpensa**, as well as **Bergamo's Il Caravaggio International Airport** (SEA held a 49.98% share of Sacbo but reduced it to 30.98% in February 2009). • Acquired **32 airports in Argentina** as a member of the Aeropuertos Argentinos 2000 S.A. consortium in 1999 (28% stake originally, now 10%). Through AA 2000, is a member in the CerealSur consortium (now Puerta del Sur) managing **Montevideo's Carrasco International Airport** and operating **José Joaquín de Olmedo International Airport** in **Guayaquil,** Ecuador under a 15-year concession. • Acquired a 12.534% stake in Aeradria SpA, the operating company of **Rimini's Federico Fellini International Airport**, from Alitalia; later SEA sold the stake. • Owned 5% of GESAC, the operator of **Naples International Airport** (now sold), and 0.96% of SAGAT, the operator of **Turin Airport**. • Owns SEA Handling outright. • Holds a 40% stake in Dufrital, a duty-free operator.
SEGAP, France Fax: +33 (1) 4638 2678 (Owned 50% by Egis Avia (ex-Sofréavia) and Marseille Provence Airport)	• Founded in 1988, this 50% subsidiary of Egis Avia (50% is owned by Marseille Provence Airport) is currently operating two airports through local companies: ADL for **Libreville Leon M'ba International Airport** in Gabon (since 1988) and AERIA for **Port Bouet Airport** in **Abidjan** in the Ivory Coast (since 1996). Holds a 35% stake in AERIA (Aéroport International d'Abidjan S.A) and a 34.7% stake in ADL (S.A. Aéroport de Libreville).
Serco Group Plc (Serco Aviation), Hook, UK www.serco.com	• Has a management contract for **Scatsta Airport** in Scotland's Shetland Islands under a subcontract with Bristow Helicopters. • Provided management services at **Newquay Cornwall Airport** under a four-year contract. On 1 April 2007, Cornwall Airport Ltd assumed operational management of the airport following the expiry of the Serco contract. • Serco Asia Pacific managed the **Adelaide, Parafield** and **Coolangatta** airports in Australia together with Manchester Airport for a minimum of five years under a contract started in 1998. • Held a US government contract to manage **airports in Iraq** from 2004. • Provides ATC and fire-fighting services at many airports around the world.

Who owns and manages privatized airports?

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Company	Activities
S.E.V.E., Châlons, France (Founding members were: SNC-Lavalin, Montréal Airport, The Chambers of Commerce & Industry of Châlons-en-Champagne, Troyes and Reims and IENAIR)	• S.E.V.E. (Société d'Exploitation de Vatry Europort)) is the group retained by the Marne Department to develop and to operate **Châlons Vatry Airport**, also known as Paris Vatry Airport, especially for cargo services. • Current ownership: Aéroports de Montréal Capital (23.9%), SNC-Lavalin (23.3 %, Keolis (23.9 %), Sogaris (10 %), and the Chambres de Commerce et d'Industrie of Châlons, Reims-Épernay et Troyes (6.5% each). The Keolis stake was to be taken over by Pingat Ingénierie of Reims, which acquired SNC-Lavalin Europe.
SFO Enterprises Inc., USA Fax: +1 (415) 794-5383 (A subsidiary of San Francisco International Airport)	• Led the InterAirports consortium which won a 20-year concession to operate the four international airports in Honduras (**Tegucigalpa's Toncontín**, **San Pedro Sula's Ramón Villeda Morales**, **La Ceiba's Golosón**, and **Juan Manuel Gálvez** serving **Roatán, Bay Islands**); there were two Spanish partners in the consortium. • SFO sold its 10% stake to YVR Airport Services in 2004 and now does not manage, operate or own any privatized airport.
(JSC) Sheremetyevo International Airport, Moscow, Russia	• By a presidential decree in 2008, 52.2% of the **JSC Vladivostok International Airport** shares were transferred to the control of the Moscow airport operator.
Short Brothers plc, UK Fax: +44 (232) 454 406 (Owned by Bombardier Aerospace of Canada through Bombardier Services (UK) Ltd)	• Owned and operated **George Best Belfast City Airport** through Belfast City Airport Ltd; sold all shares of that company to Ferrovial Infrastructuras S.A. (FI) in 2003. George Best Belfast City Airport is now operated by Aeropuerto de Belfast S.A., an FI subsidiary.
Siemens Project Ventures GmbH, Munich, Germany (A unit of Siemens Financial Services (SFS))	• Was the preferred bidder for building and operating the new **Bangalore** airport in India in a consortium with Unique Zürich Airport and India's Larsen & Toubro. The original equity shareholders were Siemens Project Ventures (40%); 17% each Unique – Flughafen Zürich AG and Larsen & Toubro Ltd (stake now sold); and India's Central Government and the government of southern Karnataka state (KSIIDC) each held 13% in the new operating company, Bangalore International Airport Ltd (BIAL). The current BIAL shareholders are private promoters holding 74% (GVK 43%, Siemens Projects Ventures 26%, and Flughafen Zürich 5%), with government agencies hold the remaining 26% (Karnataka State Industrial Investment & Development Corporation 13% and Airport Authority of India 13%).
Sintonia S.A., Luxembourg (Targets large investments in the infrastructure sector, such as highways, airports, ports, railways, power and gas assets, utilities and a variety of regulated assets)	• Owns 33.36% of Gemina S.p.A, of which it holds 25.27% through Investimenti Infrastrutture S.p.A. and 8.09% directly (as at 30 June 2011). Gemina S.p.A. is the holding company of **Aeroporti di Roma** S.p.A., with a participation of 95.76%. • Owns 24.385% of Sagat S.p.A., the company managing **Turin Airport**. Sagat S.p.A. owns 55.45% of Aeroporti Holding S.p.A., which has a 33.40% stake in Aeroporto di Firenze S.p.A., the operator of **Florence Airport, Peretola**. • Sintonia is a joint venture of a limited number of high-profile shareholders who have strong investment track records: Edizione (Benetton family), Goldman Sachs Infrastructure Partners, Mediobanca, and GIC – Government of Singapore Investment Corporation.

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Company	Activities
SNC-Lavalin Investment, Montreal, Canada (SNC-Lavalin Aéroports) (SNC-Lavalin is one of the world's leading engineering and construction groups and a major player in the ownership of infrastructure and in providing operations and maintenance services. SNC-Lavalin has offices across Canada and in more than 35 other countries, and is currently working in some 100 countries. In business since 1911).	• SNC-Lavalin Airports manages and operates a network of 12 airports. • Owns 38.75% of Malta Mediterranean Link Consortium Ltd (MML), which manages **Malta International Airport plc**. • Manages the **Châlons Vatry** cargo airport in France as a member of the S.E.V.E. consortium and wants to develop its European airport activities, e.g., by increasing its 23.31% stake in Vatry to 51.12% (see S.E.V.E). • Manages eight other **French airports** (**Chalon – Champforgeuil** in Burgundy, **Cherbourg – Maupertus**, **Tarbes-Lourdes-Pyrénées**, **Vannes-Meucon** in Britanny, **Rouen**, **Tours Val de Loire**, **Angoulême-Brie-Champniers** and the **Toulouse-Francazal** airfield). These airports provide business, leisure and tourism aviation services. • Has a concession to operate **Dzaoudzi Pamandzi International Airport** in **Mayotte** in the Indian Ocean for 15 years as well as **Grand Case Airport** in Saint-Martin, the French part of the island of **St. Martin/St.Maarten** in the Caribbean.
Sofia International Airport, Sofia, Bulgaria	• Bulgaria's government has assigned the management of the future civilian airport at the Black Sea town of **Balchik** to Sofia International Airport, whose parent organization, the Ministry of Transport – IT and Communications, is thought to have sufficient management experience to guarantee the execution of the project for Balchik Airport.
Southern Cross Airports Corporation Holdings Ltd, Australia	• Southern Cross Airports Corporation Holdings Ltd (SCACH) is led by Australian investment bank Macquarie Bank Ltd, which acquired **Sydney Airport Corporation** in 2002.
Stagecoach Aviation Group, UK (A subsidiary of Stagecoach Holdings Plc) Fax: +44 (1738) 4422 111	• Owned **Glasgow Prestwick Airport**, operated by PIK Ltd. Sold its stake to a consortium comprising Omniport (the Scottish company that will operate the airport), Infrastructure & Utilities NZ (Infratil; see there) and Specialist Utilities Investment Trust.
Stobart Group Plc, Carlisle, UK www.stobartgroup.co.uk	• The haulage group acquired **London Southend Airport** from Regional Airports Limited (RAL) in 2008 and **Carlisle Lake District Airport** in Cumbria, England in 2009. The airports are managed by Stobart Air Ltd.
Sutton Harbour Holdings plc, (Sutton Harbour Group – SHG), Plymouth, UK Fax: +44 (1752) 205 403 www.sutton-harbour.co.uk	• Purchased **Plymouth City Airport** Ltd in the UK, together with the management contract for **Newquay Cornwall Airport** from British Airways in April 2000; remains the manager of Plymouth City Airport under a 150-year-lease from Plymouth City Council. Closed this airport on 23 December 2011, saying it was not economically sustainable. Sold the entire contents of the airport in summer 2012. • On 1 April 2007, Cornwall Airport Ltd assumed operational management of **Newquay Cornwall Airport** following the expiry of the Serco contract.
Sverdrup Aviation, USA Fax: +1 (314) 552-8086	• Operates the new **MidAtlantic Airport**, the second-largest privatized airport in the USA.

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Company	Activities
TAG Aviation SA, Luxembourg Fax: +44 (1252) 518 771 +41 (22) 717,0007 (A subsidiary of TAG-Heuer, watch makers and aviation sponsors of Switzerland, and the Saudi family Aziz Ojjeh)	• Manages and has developed the former Royal Aircraft Establishment (RAE) Farnborough aerodrome in Hampshire, UK into a business aviation centre, 35 miles from Central London, under a conditional leasing agreement; the Farnborough airfield was officially handed over to TAG Aviation on 5 February 2003. The airfield is now called **Farnborough Airport** or TAG London Farnborough Airport. • Operates **La Côte Airport**, a general aviation airfield in **Prangins** in **Vaud** cantonment near Geneva, Switzerland.

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Company	Activities
TAV Airports Holding Co. (TAV Havalimanlari Holding AS) – ex-Tepe Akfen Ventures, Turkey (TAV is a leading airport operation and construction company, organized to take advantage of a specific gap in the aviation sector by providing integrated airport services, including construction, operation and financing of airport projects) (TAV Airports Holding bundles 13 companies, including seven airport operating companies – TAV Istanbul (operating Atatürk Airport), TAV Ankara (operating Esenboga Airport), TAV Izmir (operating the terminal), TAV Alanya (operating Gazipaşa Airport), TAV Georgia (Tbilisi and Batumi airports), TAV Macedonia (Skopje and Ohrid airports) and TAV Tunisie (Monastir and Enfidha airports) – and six service companies. These are ATÜ (duty-free), BTA (F&B), HAVAS (ground handling), TAV IT (IT services), TAV Security, and TAV O&M (specialized operations services). The airport subsidiaries provided services to some 451,000 flights and 53 million passengers in 2011) (In May 2012, French airport operator Aéroports de Paris Management acquired 38% of TAV Havalimanları (TAV Airport Holding) for a total of US$874 million, and 49% of TAV Investment Holding, a construction company. The partnership creates one of the largest airport alliances in the world, directly or indirectly managing 37 airports that serve approximately 180 million passengers a year)	• TAV Airports was founded as a joint venture between two construction groups – Tepe and Akfen – in 1997, when it won the Build-Operate-Transfer (BOT) bid for the International Terminal of **Istanbul Atatürk Airport**. In line with its growth goals, TAV Airports restructured in 2006, organizing its activities as 'operations' and 'construction' under TAV Airports and TAV Construction, respectively. TAV Airports Holding went public in February 2007 after this restructuring. • The biggest shareholders in TAV Havalimanları – Akfen Holding, Tepe İnşaat and Sera Yapı – completed a share transfer to Aéroports de Paris Management on 11 May 2012. More than 40% of the TAV stock is freely floating. • Through its construction company, TAV Construction, the group has been awarded projects in the **Middle East**, **GCC**, **Eastern Europe** and **Caucasus** regions. • TAV's first project in the Gulf Region was providing the hangar roof structural steel work for the Emirates New Engineering Centre in Dubai. • Seeing the opportunities in the **Gulf Region,** TAV applied for other projects and at the moment has a portfolio of three on-going projects valued at US$ 426 million. TAV Construction is mainly involved in airport construction projects, but the Gulf Region is exceptional because TAV entered the market to build hangars for A380s. Later it was awarded other construction work for non-aviation projects. • In **Egypt**, TAV was awarded the contract for the new terminal at **Cairo International Airport** in 2004 and completed it in 2008. • In **Qatar,** TAV won the contract on 27 April 2006 to build the **New Doha International Airport** Passenger Terminal Complex. • In **Tunisia,** TAV Construction was selected for the construction of the greenfield **Enfidha-Hammamet International Airport**, completing it in November 2009; it owns 67% of the operating company, and also of **Monastir Habib Bourguiba International Airport**. • TAV has completed BOT (Build-Operate-Transfer) projects for the **Tbilisi** and **Batumi** international airports in **Georgia** and owns 76% of the operating company. • In **Macedonia**, TAV owns and operates the **Skopje** and **Ohrid** airports. • In **Oman**, the infrastructure works package (MC1) of **Muscat International Airport** was awarded to TAV Construction. • In **Libya**, TAV has been constructing the terminal buildings of the **Sebha** and **Tripoli** airports. • In **Turkey,** TAV has implemented BOT (Build-Operate-Transfer) projects at **Istanbul Atatürk Airport, Ankara's Esenboğa International Airport** and **İzmir Adnan Menderes International Airport**. • On 9 June 2010, the Latvian national airline AirBaltic signed a memorandum of understanding with TAV Airports Holding A.S. as a joint venture partner on a 50:50 shareholding basis for the development, construction and operation of a new passenger terminal at **Riga International Airport** in Latvia. TAV took over the operations; duty-free, food & beverage and other commercial areas at Riga International Airport for 10 years on 1 January 2011. • TAV Airports and its consortium partners Al Rajhi Group and Saudi Oger signed a contract to build and operate the new **Madinah** airport in Saudi Arabia. • TAV Airports, partnering with Aéroports de Paris (ADP) and Limak Holding, is among the companies that have expressed interest in operating rights for the planned **third Istanbul airport**. • TAV is considering five airport tenders abroad as it seeks to replace the earnings it will lose in 2021 when its contract for Istanbul Atatürk Airport terminates. For example, TAV is competing for the right to operate **New York LaGuardia Airport**.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
TBI Airport Holdings Ltd (TBI plc), UK. Fax: +44 (1222) 361 555 ("TBI" stands for Thomas Bailey Investments. The company was started by brothers Peter and Stanley Thomas, the main shareholders; Dermot Desmond holds a 5% stake in TBI plc. In January 2005, TBI was acquired by Airport Concessions & Development Ltd (ACDL), a company 90% owned by Abertis Infrastructuras, S.A., the Barcelona-based Spanish construction and toll-road group, which is 10% owned by AENA Desarrollo Internacional S.A., a unit of AENA, the operator of 47 Spanish airports) **(TBI Airport Management, Inc.**, a subsidiary of TBI Ltd, was owned jointly by international infrastructure provider Abertis Infraestructuras S.A. (with a 90% shareholding) and the international business arm of Aena, the Spanish national airport and air traffic control organization, Aena Desarrollo Internacional S.A. (with a 10% shareholding). ADC & HAS Airports Worldwide bought TBI Airport Management in 2013)	• TBI was a global airport operator with direct ownership or concession agreements at three airports in the UK, three in Bolivia, one in Sweden and one in Florida. • Owned and operated **Cardiff Airport** (since 1995) and **Belfast International** Airport in Northern Ireland (since 1996). The Welsh government bought back Cardiff Airport from TBI on 27 March 2013. • Took control of **London Luton Airport** (formerly owned by London Luton Airport Holdings Ltd) by buying out Barclays Private Equity, the bank that had a controlling interest in the airport operating company. TBI thus increased its stake by 46%, from 25% to 71.4%. Bechtel exercised a right to increase its former 10% shareholding (ex-AGI) to 28.6%. Singapore Changi Airport Enterprise (SCAE) decided to sell its share of Luton Airport to TBI in order to pursue new investment opportunities in Asia, particularly China and India. TBI then acquired the 28.6% shareholding from Alterra Partners, a 50:50 joint venture between SCAE and US-based Bechtel. • Owned Central Florida Terminals, the owner and operator of **Orlando Sanford International Airport** (through TBI Airport Management, Inc). • Acquired 90.1% of **Stockholm Skavsta Airport** in Sweden. • Controlled three airports in **Bolivia**: **El Alto** at **La Paz**, **Viru Viru** at **Santa Cruz** and **Jorge Wilstermann** at **Cochabamba** until February 2013, when they were nationalized by the Bolivian government. • At **Hartsfield-Jackson Atlanta International Airport**, the City of Atlanta Department of Aviation selected TBI to manage both Concourse E and the new Maynard H. Jackson Jr. International Terminal, which opened on 16 May 2012. The terms of the agreement called for an initial term of five years, with a three year option. TBI had operations at Atlanta for over 30 years and managed Concourse E on behalf of the City of Atlanta since its opening in 1994. • By acquiring AGI in September 1999 (see there), TBI gained access to airports in **Australia**, **Bolivia**, **Costa Rica**, **North America** (airport services at 17 locations) and to **Luton** in the UK, i.e., a total of 37 airports. • In May 2001, TBI sold a 29.1% interest from a total holding of 49% in Northern Territory Airports in Australia to National Australia Asset Management and John Laing Investment Private Ltd. Northern Territory Airports comprised **Darwin International Airport**, **Alice Springs Airport** and **Tennant Creek Airport**. TBI sold its remaining Australian stakes – except **Hobart** – to a BAA-led consortium. The interests were originally purchased by Airport Group International Holdings. • TBI plc completed the sale of AGI, its airport services business in the USA, to BBA Group PLC in late 2004. • Spanish-owned TBI once had a network of eight international airports: **London Luton**, **Cardiff** and **Belfast International** in the UK, **Stockholm Skavsta** in Sweden, three in Bolivia until February 2013 (**La Paz**, **Santa Cruz** and **Cochabamba**) and **Orlando Sanford** in the United States, which was managed by TBI Airport Management, Inc. on behalf of the Sanford Airport Authority. • TBI also held management contracts on behalf of local governments or authorities at other locations in the USA: **Bob Hope Airport** in **Burbank, CA; Middle Georgia Regional Airport** and **Macon Downtown Airport** in **Macon, GA;** and **Raleigh-Durham International Airport** in **North Carolina.** • TBI also provides consultancy services through a consortium based in Miami. • In 2013, Houston, TX-based ADC & HAS Airports Worldwide completed the acquisition of airport assets in **Northern Ireland**, **Sweden** and the **US** from TBI Ltd for a purchase price of EUR 297 million. The transaction included the purchase of 100% of the shares in Belfast International Airport, 90.1% of the shares in Stockholm Skavsta Airport and 100% of the shares in the concession for Florida's Orlando Sanford International Airport. Also included in the acquisition were 100% of the shares of TBI Airport Management, which held operations contracts at various airports, including Concourse E and the Maynard Jackson International Terminal at Hartsfield-Jackson Atlanta International Airport, GA; Bob Hope Airport in Burbank, CA; Middle Georgia Airport and Macon Downtown Airport in Macon, GA; and Terminal 2 at Raleigh Durham International Airport, NC.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Tibah Airport Development Company, Saudi Arabia	• This is a TAV Airports-led consortium including partners Al Rahji Holding and Saudi Oger, formed to operate the new airport in **Madinah,** Saudi Arabia, set up by the consortium under a BOT contract.
Toronto Airport (Greater Toronto Airport Authority), Canada	• Was proposed as the operating partner in a **Lagos**, Nigeria BOT terminal project undertaken by the Canadian company Sanders Investment Ltd.
TradePort International Corp., Canada	• Manages **John C. Munro International Airport** in Mount Hope, **Hamilton**, Ontario under a 40-year concession with the City of Hamilton. TradePort International Corporation is a consortium of Westpark Developments, a local Hamilton land development company, the Labourers International Union of North America (LIUNA) and YVR Airport Services.
Tribasa S.A., Mexico (A construction company owned by the Peñaloza family; changed its name to Promotora y Operadora de Infraestructura S.A)	• The Tribasa consortium Aeropuertos Sureste (ASUR) won the 50-year concession contract for **nine airports in Mexico's southeastern region**. The three other partners in the consortium are Copenhagen Airports A/S, Cintra of Spain and GTM of France (now VINCI). The nine airports serve **Cancún**, **Cozumel**, **Huatulco**, **Mérida**, **Minatitlán**, **Oaxaca**, **Tapachula**, **Veracruz** and **Villahermosa**.
Triunfo Participações e Investimentos S.A. (TPISA), São Paulo, Brazil www.tpisa.com.br	Holds 45% of the Aeroportos Brasil consortium, established together with UTC Participações (45%) and the French Egis Airport Operation (10%) for a 30-year concession to operate **São Paulo's Viracopos** Airport in Brazil, awarded in February 2012.
Unión Fenosa, Spain and Mexico (The third-largest Spanish utility)	• A member of Grupo Aeroportuario del Pacífico (GAP) which operates the **Pacific airports in Mexico**. The other partners are AENA, Dragados and the Angeles Group. The operating company is called Aeropuertos Mexicanos del Pacifico, S.A.
UniSuper, Melbourne, Australia (An industry super-fund dedicated to all who work in Australia's higher education and research sector. It had more than 450,000 members and more than AUD 29.8 billion in assets as of 30 June 2011. It is one of Australia's largest superannuation funds)	• Holds a 49% interest in Adelaide Airport Ltd (AAL) and was a founding investor when the airport company was privatized in 1998. AAL operates the two principal aviation gateways to South Australia, **Adelaide Airport** and **Parafield Airport**. • Holds 7% of Brisbane Airport Corporation Pty Limited (BAC), acquired under a long-term (99-year) lease from the Australian Government in 1998. BAC operates and develops **Brisbane Airport**, which is the busiest airport in Queensland in terms of passengers handled and the third busiest in Australia, after Sydney Airport and Melbourne Airport.
Universities Superannuation Scheme Ltd (USS), Liverpool, UK www.usshq.co.uk	• In October 2013, the Spanish construction group Ferrovial entered into an agreement to sell an 8.65% stake in **Heathrow Airport** Holdings (HAH) to British pensions fund Universities Superannuation Scheme Ltd (USS) for GBP 392 million. • USS is a privately owned pension scheme that provides services to academic and academically related staff in UK universities and certain other institutions engaged in higher education and research.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Vantage Airport Group, Vancouver, Canada www.vantageairportgroup.com (Created as Vancouver Airport Services (YVRAS) in 1994 to market the expertise and airport management techniques developed at the multi-award-winning Vancouver International Airport (YVR). Vantage Airport Group is an industry-leading investor, developer and manager of airports around the world. In 2011, its portfolio of 12 airports spanned three continents and welcomed more than 33 million passengers. In 2014, the portfolio still included nine airports. Vantage Airport Group is 90%-owned by the Vancouver International Airport Authority and 10% by CDC Capital Partners, London, U.K)	• Manages five Canadian local airports (**Cranbrook**, **BC**; **Fort St. John**, **BC**; **Hamilton**, **ON**; **Kamloops**, **BC**; and **Moncton**, **NB**) via incentive contracts and a management fee. • In 1998, won the 15-year passenger terminal concession for the **Santiago de Chile** airport as a member of the SCL Terminal Aéreo Santiago consortium. This was formed together with Agencias Universales S.A. (Agunsa; 47%) and Sabco Administrador de Fondos de Inversión S.A. of Chile (13%), contractors FCC and Grupo Dragados of Spain (30%), with YVRAS holding 10%. • Won a 30-year contract to develop, manage and operate **Sangster International Airport** at **Montego Bay**, Jamaica together with Agunsa, Dragados and Ashtrom (an Israel-based construction company that has been working in Jamaica for over 30 years). YVRAS increased its stake in MBJ Airports Ltd from 15% to 25.5% in mid-2007. Its partner in the Sangster capital project is Desarrollo de Concesiones Aeroportuarias S.L. (DCA), Madrid (Abertis), which has a 74.5% stake. • Holds 11% of the Hermes Airports Ltd consortium which built and operates the new terminals at two Cyprus airports, **Larnaca** (completed in November 2009) **and Paphos** (completed in November 2009). • Was awarded and is servicing a 10-year operations and management agreement for operating and developing **Lynden Pindling International Airport** serving **Nassau** and **New Providence** island in The Bahamas under a capital project. • The company is leading a consortium bidding on the **LaGuardia Central Terminal Building** redevelopment project for the Port Authority of New York & New Jersey. *Earlier assignments, no longer pursued:* • Had a 65% equity stake in Peel Airports Ltd (see there), which manages **Liverpool John Lennon Airport** (100% owned), **Robin Hood Airport Doncaster Sheffield** (100%) and **Durham Tees Valley Airport** (75% owned) in the UK. • Managed **Bermuda's L.F. Wade International Airport**. • Won a 15-year contract to manage the new terminal and car park at **Providenciales International Airport** in the Turks and Caicos Islands. • Was a partner in the Aeropuertos Dominicanos Siglo XXI, S.A. consortium that manages four airports in the **Dominican Republic**: **Santo Domingo's** Las Americas, **Puerto Plata's** Gregorio Luperón, **Samaná's** Arroyo Barril and **Barahona's** Maria Montez. • Won a management and development contract for **Rarotonga International Airport** in the Cook Islands. • Was a partner in the consortium for a 25-year concession to manage and develop **Montevideo's Carrasco International Airport**, but the deal was cancelled. • In 2004, acquired the 10% stake of San Francisco International Airport in the InterAirports consortium, which managed four airports in **Honduras**. The management contract was handed over to the Unique-IDC consortium in April 2006. • Was an adviser to **Wellington International Airport** in New Zealand on commercial and retailing matters.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Veolia Transport, Paris, France www.veoliatransdev.com	• Won a contract in May 2011 to operate and modernize **Perpignan–Rivesaltes Airport** and **Carcassonne Salvaza Airport** in southern France until 2018. • Since 2006, has operated **Nîmes, Beauvais-Tillé** and **Lille-Lesquin** airports. • **Beauvais** has a 15-year contract (2008-2022), which is managed 49% by Veolia Transport and 51% by the local Chamber of Commerce. • **Lille** has a 10-year contract (2009-2018), managed 34% by Veolia Transport, 5% by Sanef and 61% by the local Chamber of Commerce. • **Nîmes** has a 5-year contract (2007-2011), managed 100% by Veolia Transport.
Viadukt D.D., Zagreb, Croatia www.viadukt.hr (One of the largest construction contractors in Western Europe and the largest in Croatia)	• Is the contractor for the construction of the current **Zagreb Airport**. In partnership with Bouygues Construction and Aéroports de Paris Management, Viadukt was declared the preferred bidder for the development and operation of Zagreb Airport for 30 years in March 2012.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Vienna International Airport (VIE), Vienna, Austria Fax: +43 (1) 700 72 636 (Vienna International Beteiligungsmanagement Ges. mbH) **(VINT)**	• Vienna International Airport plc has been a private company since 1992. • It manages and owns **Bad Vöslau Airport** in Austria and part-owns **Budaörs Airport** in Hungary. Both are general aviation airfields. • Was a joint-venture partner in the BOT contract for the new international terminal at **Istanbul Atatürk Airport**, holding a 5% stake in TEPE-Akfen-VIE Investment, Construction & Operation Inc. • Was a joint-venture partner in the privatization project for **General José Antonio Anzoátegui International Airport**, which serves **Barcelona** in Venezuela. • Was interested in operating airports in Germany (e.g., **Eberswalde-Finow Airport** near Berlin); was a partner holding 7% in the **Berlin Schönefeld** consortium. • Acquired an 18.7% stake in the consortium that built and operated **Ciudad Real Central Airport** in Spain until it closed in 2012. • Owns 57.1% of Malta Mediterranean Link Consortium Ltd (MML), which holds 40% of **Malta International Airport** plc and manages the airport; the stake gives VIE a 22.8% share in Malta International Airport plc. • VIE Malta Ltd, a wholly owned subsidiary of Flughafen Wien AG, separately acquired a 10% stake in MIA Ltd in early 2006. MIA Ltd is now owned 100% by VIE. • Is a partner in Airport Košice a.s. (ex-the TwoOne consortium) which acquired a majority 66% stake in **Košice International Airport** in eastern Slovakia, the country's second-busiest airport. The consortium also included the Slovak capital group Penta and Austria's Raiffeisen Zentralbank. KSC Holding a.s., a holding company for the 66% stake in the airport company, is 100% owned by VIE. VIE may soon make official its interest in managing **M. R. Štefánik Airport**, which serves **Bratislava**, the capital of Slovakia. • Owned 25.15% of Flughafen Friedrichshafen GmbH in Germany and hence was the largest shareholder of **Friedrichshafen Airport**. Sold its stake to the City of Friedrichshafen. • Owns Indian Airports Holding to pursue airport projects in Asia, mainly **India**. • Was interested in operating airports in Iran (**Mashad**), Greece (**Eastern Crete**) and Italy (**Trieste**).

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
VINCI Airports, Rueil-Malmaison, France (ex-S.G.E) Fax: +33 (1) 5547 7786 www.vinci-airports.com (Groupe GTM's activities in airport management and concessions have been transferred to VINCI Concessions; GTM is now a subsidiary of VINCI. VINCI Concessions has been renamed VINCI Airports, a newly constituted company for activities in airport management and services. Through VINCI companies in the fields of construction (building, civil engineering, roads, tarmacs, runways), information technology and facility management, VINCI is also a major factor in contracting)	• In airport management, VINCI Airports participated in concessions in Mexico Centro Norte (OMA) through Servicios de Tecnologia Aeroportuaria (SETA – 13 airports) and Mexico South East (ASUR* – 9 airports); **Cambodian airports** – 3 airports; and, via ADP Management, 24 airports (**Liège Airport**; **Beijing Capital International Airport**; **Cameroon** – 7 airports; **Guinea** – 2 airports; **Madagascar** – 12 airports; and **Egypt** – **Marsa Alam International Airport**. * VINCI sold its 24.5% stake in Inversiones y Tecnicas Aeroportuarias (ITA), which has a 15% stake in Mexico's airport operator ASUR, in April 2004 and sold its 34.25% stake in SETA in December 2005. As a result, VINCI is no longer involved in managing Mexican airports. • Operates three airports **in Cambodia** through a 70% stake in Cambodia Airports (**Phnom Penh**, **Siem Reap** and **Sihanoukville**). The remaining 30% stake is held by the Muhibbah Masteron joint venture. • In France, has been managing the **Grenoble–Isère, Chambéry, Clermont-Ferrand Auvergne** and **Quimper – Cornouaille** airports in a joint venture with Keolis Group (see there). The Chambéry concession expired in 2013. • Holds an 85% stake in Aéroports du Grand Ouest, which is building and will later operate the new **Aéroport du Grand Ouest** at Notre-Dame-les-Landes. The airport will serve **Nantes and western France**. • Sold its 3.4% stake in the Beijing airport operator BCIA on the Hong Kong stock market. VINCI and ADP together had owned 10% in BCIA through ADP Management; on 30 December 2004, VINCI and ADP ended their partnership. • Acquired a 3.3% stake in Aéroports de Paris in early 2008 and a 4.7% stake in 2013 and now holds 8% of AdP. • In airport services, VINCI acquired Worldwide Flight Services (WFS, one of the world's largest ground handling companies) and SFS (a cargo handling company) in 2001. Acquired SEN's ground handling activities at French airports in 2002. VINCI sold WFS to FBO France in 2006. • In December 2012, VINCI agreed to buy Portuguese airport operator **ANA Aeroportos de Portugal** SA for EUR 3.1 billion. ANA holds a concession for 50 years to operate the country's 10 airports: **Lisbon**, **Porto**, **Faro** and **Beja** on the mainland; **Ponta Delgada**, **Horta**, **Flores** and **Santa Maria** in the Azores ACSA and **Funchal** and **Porto Santo** in Madeira. With this latest acquisition, VINCI Airports is managing 23 airports in Portugal, France and Cambodia, which together handled more than 40 million passengers in 2012, including the 15-million-plus Lisbon hub. • Depending on the timing of the sales of their shareholdings, VINCI is interested in owning airports in **Brazil**, among others. • Vinci Airports is bidding to build and operate the planned but controversial new airport in the ecologically significant **Pampas de Chinchero area near Cusco**, Peru's second city, and to manage the expansion of **Santiago de Chile's** airport. It is also interested in **airports in Asia** and regional platforms in countries such as **Serbia (Belgrade)**, **Greece** and **Brazil**.

Who owns and manages privatized airports?

Compiled by Momberger Airport Information – includes historical data

Company	Activities
Vnukovo-Invest, Moscow, Russia	• Co-owner (25%) of **Vnukovo International Airport** serving **Moscow**. The City Government of Moscow holds the remaining 75%. • Plans to invest half of the cost of RUR 27 billion (US$893.1 million) for a second runway at **Moscow's Domodedovo International Airport** and wants to establish joint management of Domodedovo with the current operator.
Westralia Airports Corp. (WAC), Perth, Australia (WAC operates Perth Airport under a 50-year lease, with a 49-year option, granted by the Australian Federal Government in 1997)	• Operates **Perth Airport**; manages **Christmas Island Airport** and **Cocos (Keeling) Island Airport**. • Westralia Airports Corp. was a wholly owned subsidiary of Airstralia Development Group (ADG). ADG was set up by Infratil Australia Ltd, which held a 49.5% equity interest; Perth Airport Property Fund (PAPF) held 24.6%; Hastings held 9.8%; and Airport Group International Holdings LLC held 16.1%. PAPF and AIF were managed by Hastings Funds Management Ltd, giving Hastings a total equity interest of 34.4%. The AGI share was subsequently taken over by TBI and more recently by BAA plc (see there). After the latest transaction, the owners of Westralia were Hasting Funds Management (85%) and BAA (15%).
WFS (Worldwide Flight Services), Irving, TX, USA; Paris,France; and Hong Kong www.wfs.aero	• One of the largest ground handling organizations in the world; operates more than 100 **air cargo terminals** worldwide and handles 3.5 million tonnes of cargo annually; has a presence at over 120 of the world's major airports in 20 countries. • Is the majority shareholder in Singapore's JetQuay CIP Terminal at **Singapore Changi Airport**.
Wiggins Group plc, UK	• See **PlaneStation Group** (in receivership).
World Investment Group, Egypt	• Will develop the **Farafra Oasis** and **Bahariya Oasis** airports in **Egypt** under BOT projects together with ABB.
Yunnan Airport Group Co Ltd, China	• A state-owned enterprise operating 11 airports in **Southwest China**.
Xanga Investment & Development Group, China www.xanga.hu	• Won the tender called by the Hungarian city of Debrecen to buy 74% of the company that operates **Debrecen International Airport**. Xanga subsidiary Airport Debreceni Holding, the only bidder, agreed to pay HUF 13.4 million for Airport-Debrecen Repül tér-üzemeltet, in which the local government will have a stake of 25% plus one vote. • Airport Debreceni Holding will operate the airport for 75 years, with an option to extend it by 25 years.
YVRAS	• See **Vantage Airport Group** (ex-**Vancouver Airport Services**).
Zürich Airport	• See **Flughafen Zürich AG**.

Who owns and manages privatized airports?

Quoted Airports

Former name	New name	Year of listing
Gemina S.r.l. (est. 1961)	Gemina S.p.A. (holds 95.75% of Aeroporti di Roma)	1981
British Airports Authority	BAA PLC (delisted since 2006)	1987
London City Airport	New, privatized, greenfield airport opens	1987
Japan Airport Terminal Co. Ltd (est. 1953)	Japan Airport Terminal Co. Ltd	1990/1991
Flughafen Wien Ges. mbH	Flughafen Wien AG/Vienna Airport plc	1992
Copenhagen Airports Authority	Copenhagen Airports A/S (formed 1990)	1993/94
Hongqiao International Airport Co. Ltd	Shanghai International Airport Co. Ltd	1994
Xiamen Gaoqi International Airport	Xiamen International Airport Group Co. Ltd	1996
Ljubljana Airport, Slovenia	Aerodrom Ljubljana plc	1997
Aeroporti di Roma (est. 1974)	Aeroporti di Roma S.p.A. (now delisted)	1997 and 2000
Auckland International Airport	Auckland International Airport Ltd (AIAL)	1998
Malaysia Airports Holdings Bhd	Malaysia Airports Holdings Bhd	1999
Beijing Capital Airport/CAAC	Beijing Capital International Airport Co. Ltd	1999
Zürich (FDZ + FIG)	Flughafen Zürich AG (temporarily Unique Zurich Apt)	2000
SAF (Società Aeroporto Fiorentino SpA)	Aeroporto di Firenze S.p.A. – AdF	2000
Operadora Mexicana de Aeropuertos (OMA)	Grupo Aeroportuario del Centro Norte	2000
Shanghai-Hongqiao Int. Airport	Shanghai International Airport Co. Ltd	2000
Nine Mexican airports, southeastern region	Grupo Aeroportuario del Sureste (ASUR)	2000
Flughafen Frankfurt AG	Fraport AG	2001
Haikou Meilan Int. Airport, China	Hainan Meilan International Airport Co. Ltd	2002
Malta International Airport	Malta International Airport Ltd	2002
Macquarie Airports	MAp Airports Ltd	2002
Xi'an Xianyang International Airport	China West Airport Group Co. Ltd	2003
Guangdong airports (within CAAC)	Guangdong Airport Management Corporation (GAMC)	2004
Airports Authority of Thailand (AAT)	Airports of Thailand Public Co. Ltd (AoT)	2004
Brussels (Régie des Voies Aériennes)	BIAC (Brussels International Airport Company)	2004
Budapest Airport Rt.	Budapest Airport Zrt	2005
SAVE S.p.A. (Venice Airprt operator, 1987)	SAVE S.p.A. (listed on Borsa Italiana, Milan)	2005
Twelve Pacific airports, Mexico	GAP (Grupo Aeroportuaria del Pacifico)	2006
Pisa Airport	Società Aeroporto Toscano (SAT)	2007
Hangzhou-Xiaoshan Airport		IPO planned
Hebei Airport Management Holding Co., Ltd (HBAH)		

Note: China has seven publicly listed airport operators. Beijing Capital International Airport and Hainan Meilan International Airport are both listed on the Hong Kong Stock Exchange. Shanghai Airport Authority, Guangzhou Baiyun International Airport, Xiamen Gaoqi International Airport, Xi'an Xianyang International Airport and Shenzhen International Airport are listed on the Shanghai Stock Exchange.

Compiled by Momberger Airport Information – December 2014

Major projects

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
EUROPE & CENTRAL ASIA		
London Estuary Airport project	US$75–100 billion	This was the proposed "Britannia Airport" in the Thames estuary, which was to have an annual capacity of 172 million passengers. The project was ruled out by a special Airports Commission in September 2014.
Istanbul (third airport)	US$29 billion	A third Istanbul airport for, ultimately, 150 million passengers per year. Located on the European side of the city, it is to be built in phases. Phase 1 is to be completed by 2017. Site preparation work is under way.
London Heathrow	US$15.3 billion already spent on transforming LHR. US$4.6 billion is to be spent 2014–2019.	Terminal 6 and a third runway are proposed to be built between 2015 and 2020. Improvements are being made at the other four terminals. Some projects are uncertain because of the general election in May 2015. The US$3.8 billion new Terminal 2 opened in June 2014.
Fiumicino – Leonardo da Vinci International, Rome	US$12 billion	Staged terminal expansion and "New Fiumicino" developments.
Frankfurt	US$10 billion (not including commercial developments by third parties)	Total for planned developments until 2015, including the CargoCity South expansion, a fourth runway (commissioned in October 2011) and a third terminal (this was delayed for three years; construction is to start in 2015 and is expected to cost US$2.7 billion).
Berlin Brandenburg International (BBI)	US$5.7 billion (may go up to EUR 6–7 billion from 4.3 billion)	Not opening before 2016, but a partial opening has been discussed. Because of the delayed opening, construction costs are exploding. Massive claims for damages are expected from airlines and tenants.
Lisbon	US$4.3 billion	A completely new airport was planned at Alcochete. The project was halted for budgetary reasons in mid-2010.
Amsterdam Airport Schiphol	US$3.6 billion	Ongoing terminal and runway projects. A fifth runway has been completed.
Moscow Domodedovo	US$3.5 billion	A 10-year aerotropolis project involves building a third runway, along with passenger and cargo terminal upgrades.
Paris (Charles de Gaulle and Orly)	US$3.4 billion	Ongoing terminal and runway work since 2005. The total also includes merging the Orly terminals.
Moscow Sheremetyevo	up to US$3 billion	New Terminal 3 and general upgrades of T1 and T2.
Dublin	US$2.9 billion	A 10-year expansion plan includes a EUR 600 million new terminal (T2), which opened in November 2010, plus a new runway and general capacity-enhancing upgrades.
London Stansted	US$2.74 billion	For construction of a second runway, a third satellite terminal and improved ground access. The projects are uncertain because of its ownership transfer to MAG.
London Luton	US$2.7 billion	For a 15-year expansion plan, including a new terminal to raise capacity to 24 million passengers per year.

Major projects

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Málaga	US$2.6 billion	Improvements under "Plan Málaga" have included a new Passenger Terminal 3 (opened in 2010), a second runway and an airfield upgrade (2004–2013).
Madrid-Barajas	US$2.4 billion	New cargo terminals and general upgrading work.
Munich	US$2.35 billion	A planned third runway and expansion of Terminal 2.
Oslo Airport, Gardermoen	US$2.2 billion	For a major International Terminal extension, for completion by 2017.
Stockholm Arlanda	US$2.01 billion	A 30-year capital spending programme valued at SEK 13 billion. Terminal 5 will be the main focus of development over the next decade. A new pier, expanded security areas and more commercial space are to be created in Phase 1 of the long-term project.
New Crete airport	US$2 billion	This project is for a planned major replacement airport near Kastelli for Heraklion.
Ashgabat, Turkmenistan	US$2 billion	A completely new airport for the capital by 2016.
Pulkovo Airport, Saint Petersburg	US$1.49 billion	Development is planned by concessionaire Northern Capital Gateway (NCG). A new terminal opened in December 2013.
Milan Malpensa	US$1.4 billion	A strategic investment plan for the period 2009-2016. The non-Schengen Terminal 1C opened in January 2013.
Manchester, UK	US$1.35 billion	For planned ongoing capital investments.
Gran Canaria (Las Palmas)	US$1.32 billion	A new runway and a terminal extension.
London Gatwick	US$1.3 billion	For upgrades and refurbishment of facilities between 2014 and 2019. A new runway and associated midfield terminal are planned after 2019 (no cost data yet).
Moscow Vnukovo	US$1.3 billion	The amount is for a complete overhaul of all facilities.
Copenhagen	US$1.2 billion	This is for new passenger and cargo terminals, as well as road and rail access.
Düsseldorf	US$1.1 billion	New terminals, a rail station and a runway extension.
Vienna International	US$1.1 billion	A new Terminal 3 (Skylink opened on 5 June 2012), new apron, new tower, an office park and a third runway.
Tenerife South	US$1.1 billion	The amount is for a general upgrade.
Efremov, Russia	US$960 million	This is a planned new cargo airport and logistics hub south of Moscow.
Naples Caserta-Grazzanise	US$950 million	A planned new Naples airport at a former air base.
Yuzhny, Rostov-on-Don	US$933 million	A new greenfield airport before the 2018 World Cup.
Helsinki-Vantaa	US$900 million	An expansion programme to 2020.
Alicante	US$870 million	Improvements under "Plan Levante," including a EUR 650 million new passenger terminal.

Major projects

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Grand Ouest, Nantes	US$868 million	A new airport at Notre-Dames-des-Landes after 2014.
Stuttgart	US$800 million	A third terminal (completed); second runway (delayed); mainline rail station; new fuel farm; cogeneration plant and a western extension of the airfield.
Thessaloniki Macedonia	US$715 million	For a runway extension and a new passenger terminal.
Lyon Satolas	US$700 million	For a doubling of capacity.
Murcia-Corvera	US$700 million	A much-delayed new airport, to open in 2015.
Luxembourg	US$630 million	For a new passenger terminal with an underground parking garage and a rail station (completed) and a cargo terminal extension.
Zagreb	US$600 million	Master Plan projects, including a new terminal.
Minsk National, Belarus	US$600 million	A major upgrade, a second runway and a new terminal.
Prague	US$585 million	For a major terminal expansion and a new runway.
Krasnoyarsk, Russia	US$550 million	For rebuilding of the existing airport.
Lisbon Portela	US$530 million	Improvements at the existing airport.
Khorgos, Kazakhstan	US$500 million	A new cargo airport, capable of handling Boeing 747Fs.
Lisbon Portela	US$530 million	New cargo airport, capable of taking Boeing 747s.
Khorgos, Kazakhstan	US$500 million	New cargo airport, capable of taking Boeing 747s.
MIDDLE EAST		
Hamad International, Doha, Qatar	US$15.5 billion	A completely new airport capable of handling A380s and 30 million (eventually growing to 50 million) passengers annually. Its opening was delayed to 2014.
Saudi Arabia (domestic airports)	US$10–15 billion	For upgrading the kingdom's 28 airports up till 2020. The amount includes US$1.3 billion for regional airports.
Al Maktoum International, Dubai UAE	US$8.2 billion	The project for the largest airport in the world at Jebel Ali (JXB) by 2027. It forms the core part of the US$32 billion Dubai World Central project and aerospace cluster.
Dubai International, UAE	US$7.8 billion	For DXB's Strategic Plan 2020, including a third terminal (US$4 billion, opened in 2013), two new concourses, a massive cargo facility and an additional runway.
King Abdulaziz, Jeddah	US$7.2 billion	For the new KAIA 2 terminal and Hajj terminal expansion.
Abu Dhabi, UAE	US$6.8 billion	For a redevelopment project including a second runway, as well as a third, US$3 billion midfield terminal opening in 2017 and new cargo and maintenance facilities.
Kuwait	US$6 billion	To double current capacity with a new US$4.78 billion terminal by 2017.
Muscat International, Oman	US$5.2 billion	For a new US$1.8 million large terminal and related facilities.
Erbil, Iraq	US$3 billion	A new airport, partially opened since March 2011.
Riyadh, Saudi Arabia	US$2.9 billion	For planned expansion work.
Tehran Imam Khomeini International, Iran	US$2.8 billion	A new terminal for 20 million passengers. Phase 1 of the new airport was opened on 30 April 2005.

Major projects

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Madinah, Saudi Arabia	US$2.4 billion	For a new airport, to be built under a BOT contract.
Baghdad	US$2 billion	A general upgrade and three new terminals.
New Eilat Airport	US$1.7 billion	Greenfield international airport near Timna, north of Eilat.
Sohar, Oman	US$1.5 billion	New airport, which opened for operations on 18 November 2014 before its terminal was completed.
Bahrain	US$1 billion	Development and overhaul of facilities to allow it to handle 13.5 million passengers per year.
Amman Queen Alia International	US$850 million	New terminal for nine million passengers per year, opened on 3 March 2013. Also upgrading existing facilities.
Beirut	US$590 million	Terminal and runway rehabilitation.
Ajman, UAE	US$571 million	New international airport, costing over US$3 billion with other developments.
Sana'a, Yemen	US$500 million	New terminal, taxiway, runway and apron expansion.
NORTH AMERICA		
Port Authority of New York & New Jersey	US$26 billion	10-year CAPEX plan for all Authority-run airports (Note: includes amounts listed below for individual airports).
Chicago O'Hare International	US$15 billion	Worldgate Terminal redevelopment, massive runway realignment and eighth runway. Amount includes US$6.6 billion of the O'Hare Modernization Program.
Los Angeles International	US$11 billion	Planned "vision for the future" development under 15-year master plan, raising annual capacity to 89 million passengers. US$4.1 billion package currently under way, includes US$1.5 billion for the Tom Bradley Intl. Terminal.
New York John F. Kennedy International	US$9.4 billion	Redevelopment programme with new terminals (e.g., the US$875 million JetBlue terminal and US$1.4 billion Terminal 4 Concourse B paid for by Delta). Terminal and infrastructure reconstruction, including a US$1.5 billion "AirTrain" rail link, which is operational.
Hartsfield-Jackson Atlanta International	US$9 billion (US$4 billion of this is in new Master Plan)	10-year CIP covering new domestic and international terminals and a sixth runway. New 40-gate south terminal complex with APM. Concourse F opened in May 2012.
Philadelphia International	US$6.4 billion	CIP for the next 13 years with new terminals, runway extensions, a new fifth runway, a people mover and additional car parks.
Louisiana Transportation Center	US$6.4 billion	Planned intermodal centre between Baton Rouge and New Orleans, including a cargo airport.
Miami International	US$6.2 billion	Staged expansion to 2012 of passenger and cargo facilities. New North and South terminals and a new fourth runway.
Newark Liberty International	US$5 billion	For a major terminal overhaul.
Washington Dulles International and Ronald Reagan Washington National	US$4.6 billion (includes US$3.4 billion for Dulles)	The CIP for the two airports. Includes new runways, terminal concourses, people mover, fuel farm and control tower at Dulles.

Major projects

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Boston Logan International	US$4.1 billion	Staged expansion over five years from 2011.
San Francisco International	US$4.1 billion	A 10-year CIP aimed at upgrading SFO's infrastructure to create a world-class facility.
Las Vegas McCarran International	US$4 billion	For a five-year capital plan, including a new US$2.4 billion Terminal 3, which is now open.
New York LaGuardia	US$3.68 billion	A new Central Terminal. A US$1.4 billion Delta Air Lines investment in terminals C and D, including a connector.
Minneapolis/St. Paul International	US$3.1 billion	For a 48-gate terminal expansion, new hotel and new runway (US$900 million), which has opened.
Toronto Pearson International	US$2.87 billion	New three-pier terminal and new runways.
Norman Y. Mineta San Jose International	US$2.8 billion (reduced from $4.5 billion)	For new concourses, a new central passenger terminal, new FIS and a new runway.
Tampa International	US$4.1 billion (initial US$2.5 billion Master Plan)	To be spent in the coming decades to modernize, upgrade and maintain the airport; US$928 million approved for Phase 1 as part of a US$2.5 billion Master Plan.
Honolulu International	US$2.3 billion	10-year refurbishment and improvement plan.
Phoenix International	US$2 billion	Expansion programme, including a new Terminal 2, runway rehabilitatiom and a people mover system.
Dallas/Fort Worth International	US$1.9 billion	Major renovation of Terminals A, B, C and E. Regional rail link (Terminal Renewal & Improvement Programme).
Salt Lake City International	US$1.8 billion	Improvement programme providing a new single terminal and concourse.
Baltimore/Washington International	US$1.8 billion	A five-year terminal upgrade/expansion programme, including a people mover system and new car parks.
Cleveland Hopkins International	US$1.6 billion	For a major expansion project for the next 24 years. Includes a new runway.
Detroit Metropolitan Wayne County International	US$1.6 billion	New midfield terminal and seventh runway (a fifth parallel runway). Reconstruction of Runway 4L/22R in 2016.
Montreal Trudeau (Dorval)	US$1.4 billion	For a 10-year expansion programme.
Oakland International	US$1.4 billion	Terminal Improvement Programme, new apron and road access.
Houston George Bush Intercontinental	US$1.3 billion	Adopted CIP (FY2009-2013), Phase 1 of a 10-year terminal redevelopment project.
Lambert–St. Louis International	US$1.1 billion	Facility upgrade under 20-year plan. A fifth runway.
Orlando International	US$1.1 billion	Projects of the approved CIP; including a new South Terminal.
Vancouver International	US$1.05 billion	For terminal upgrades, apron and taxiway expansion and a rapid-transit link.
Sacramento International	US$1.03 billion	"The Big Build" ongoing capex programme.
San Diego International	US$1 billion	A new "Green Build" terminal, which opened in 2013.
Fort Lauderdale Hollywood	US$1 billion	For a 20-year terminal and airfield development plan.
Louis Armstrong New Orleans	US$1 billion	Expansion of current airport facilities, including a new terminal

Major projects

Major new and recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Raleigh-Durham International	US$877 million	A 2006-2013 capital investment programme, including a US$570 million new terminal.
Seattle-Tacoma International	US$853 million	For a third runway and expansion of Concourse A.
Cincinnati/Northern Kentucky	US$750 million	For runway and terminal work.
Kona International, Hawaii	US$745 million	Upgrading over the next 20 years.
Nashville International	US$700 million	For terminal renovation; runway reconstruction to 2009.
Louisville International	US$700 million	General airport improvement programme.
John Wayne Orange County	US$652 million	A third passenger terminal.
Denver International	US$650 million	For South Terminal redevelopment.
Bradley International	US$650 million	A major expansion project.
Calgary International	US$620 million	Major expansion, including a 14,000-foot runway.
Memphis International	US$591 million	An ongoing expansion project under a CIP.
Winnipeg J.A. Richardson	US$576 million	Redevelopment, including a new passenger terminal.
Dallas Love Field	US$519 million	Modernization with 20-gate concourse under way.
LATIN AMERICA & THE CARIBBEAN		
Mexico City	US$9.23 billion	For a new airport for the capital at Texcoco, to handle 30 million passengers a year by 2018 and eventually 60 million.
Brazil	US$7.5 billion	Modernization of Infraero airports for the 2014 FIFA World Cup and 2016 Olympic Games.
San Juan, Puerto Rico	US$2.57 billion	Upgrading the to-be-privatized Luis Muñoz Marín International Airport.
Buenos Aires	US$1.3 billion US$570 million	For the “Nueva Ezeiza” project. A facelift at Ezeiza to double passenger capacity.
São Paulo Guarulhos	US$1.49 billion	A third terminal, new runway and improved road access.
Palmeira, Brazil	US$1.4 billion	For a planned privately developed airport in Paraná state.
São Paulo (new airport)	US$1.12 billion	For a completely new airport to replace Congohas.
Lima Jorge Chávez	US$950 million	A planned second runway, terminal and apron extension.
Rio de Janeiro Galeão	US$909 million	New gates, check-in desks, car park spaces, etc. before 2016 Olympics. More is to be invested after the Games.
Bogotá El Dorado International	US$900 million	Master Plan work till 2030; US$564 million of the amount spent by 2012 on a new passenger terminal.
Nassau, Bahamas	US$877 million	Three-stage ongoing expansion of Lynden Pindling Int’l.
Cancún International	US$786 million	For expansion work, including a new terminal.
Panama City Tocumen International	US$750 million	A new South Pier terminal complex.
Santiago de Chile	US$700 million	A new terminal by 2017 and other improvements.
Cusco, Peru	US$658 million	Replacement airport at Chinchero, with extensions.
Natal, Brazil	US$575 million	For the new São Gonçalo do Amarante airport.

Major projects

Major new and recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Porto Alegre, Brazil	US$505 million	A new airport for up to 40 million passengers a year.
Viracopos-Campinas, Brazil	US$500 million	A new terminal to handle 5.5 million passengers a year.
AFRICA		
Tripoli, Libya	US$1.39 billion	New facilities for 20 million passengers annually
Khartoum, Sudan	US$1.38 billion	A completely new airport, planned for two stages.
N'Djamena, Chad	US$1 billion	A new airport is being discussed, with plans including a fuel pipeline to the airport.
Durban King Shaka International, South Africa	US$910 million	Durban's new airport, which opened in May 2010.
Cairo International, Egypt	US$871 million	A major upgrade of T2 and a new 4000-meter runway.
Dakar, Senegal	US$725 million	For a new airport, 45 km from the city at Diass.
Bugesera International, Rwanda	US$700 million	A completely new airport for Kigali at Bugesera.
Nairobi, Kenya	US$635 million	A new greenfield terminal and an additional runway.
Benghazi, Libya	US$632 million	For a new passenger terminal and associated facilities.
Kilimanjaro, Tanzania	US$527 million	Rehabilitation of the airport by operator KADCO.
Ndola, Zambia	US$520 million	A new international airport.
Lusaka, Zambia	US$500 million	An extensive extension and new international terminal.
Ouagadougou, Burkina Faso	US$500 million	A completely new airport.
ASIA-PACIFIC		
Tokyo (third airport)	US$35 billion	Planned in Tokyo Bay (with land reclamation).
Hong Kong	US$17.4 billion	For a third runway, with land reclamation and associated apron-expansion projects.
Taiwan Taoyuan International, Taipei	US$15.8 billion	Taoyuan Aerotropolis project, to be completed by 2030. Includes US$1.65 billion new Terminal 3.
Beijing – new airport at Daxing	US$14 billion	A completely new airport south of Beijing, the first phase to handle 45 million passengers after 2018.
Sydney, Badgerys Creek	Up to US$10 billion (US$2.5 billion for less ambitious airport)	A reliever for Sydney Airport, if ever built. The option was last ruled out by ex-Premier Barry O'Farrell in April 2012, but the new government is in favour of the project. Pro and con discussions continue.
Melbourne Airport	US$9.5 billion	The 2013 draft Master Plan sets the scene for an AUD 10 billion investment in airport infrastructure over the next two decades to handle 60 million passengers a year.
Chengdu (second airport)	US$8.9 billion	Construction was due to start in early 2015.
Kansai International, Osaka	US$8 billion	Second runway (opened) and terminal (delayed).
Long Thanh, Mekong Delta, Vietnam	US$8 billion (US$3 billion in Phase 1)	A major new international airport for southern Vietnam. Construction to start in 2016 at the earliest.

Major projects

Major new and recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Xiamen Xiang'an	US$6.6 billion	A completely new airport on partly reclaimed land on Dadeng Island from 2020. Construction begins in 2015.
Qingdao Jiaodong	US$5.7 billion	New airport for 38 million passengers a year from 2018.
Shanghai Pudong International	US$4.8 billion	Phase 2 work of new airport. Phase 1 opened on 1 October 1999.
Haiphong Tien Lang, Vietnam	US$4–5 billion	A new major airport, which would be built after 2015.
Dalian International, China	US$4.3 billion	A planned new airport on reclaimed land off the coast.
Narita International, Tokyo	US$3.8 billion	For a new terminal for low-cost carriers.
Beijing Capital International	US$3.7 billion	An additional passenger terminal, apron and third runway for the 2008 Olympics (third expansion phase).
Shenzhen Bao'an International	US$3.62 billion	For a second runway and a large third terminal, which opened in November 2013.
Incheon International, Seoul	US$3.1 billion	Third development phase (2009–2015).
Clark International, Philippines	US$3 billion	Air base conversion. First terminal already expanded.
Guangzhou Baiyun International	US$3 billion	Phase 2 projects: Terminal 2, third runway, new navaids and radar, new fuel tanks, car park extension.
Chongqing Jiangbei International	US$2.9 billion	New runways and terminal during the next 11 years.
Wuhan Tianhe International	US$2.8 billion	For Terminal 3 redevelopment into international terminal.
Naha, Okinawa	US$2.68 billion	For a proposed second runway.
Suvarnabhumi Airport, Bangkok	US$2.6 billion	Second expansion phase, with a third runway, midfield concourse, people mover and second domestic terminal.
Ninoy Aquino, Manila	US$2.5 billion	Ongoing terminal and airfield work, much delayed.
Brisbane	US$2.3 billion	Investment during the decade to 2023, including a doubling of terminal capacity and a new runway.
Shanghai Hongqiao	US$2.2 billion	A general makeover of Shanghai's former main airport.
Chhatrapati Shivaji International, Mumbai	US$2.19 billion	Upgrading work at the existing airport, including a new international terminal. A new airport is planned at Navi Mumbai (see there).
Changsha Huanghua, China	US$2.15 billion	For a major upgrade, including a large new terminal.
Essendon Airport, Melbourne	US$1.82 billion	Airport and aviation-related development in the next 30 years.
Indira Gandhi, New Delhi	US$1.8 billion	Upgrading and new developments at the present site.
Sydney (existing airport)	US$1.67 billion	Ongoing investments until 2024.
Navi Mumbai, India	US$1.6 billion	A planned new airport for the Mumbai region. The first phase would handle 25 million pasengers a year by 2020.
Hangzhou Xiaoshan, China	US$1.6 billion	For a CAAC-approved expansion plan.
New Pune International, India	US$1.4 billion	A planned new international airport with two runways.
Perth, Australia	US$1.35 billion	New international and domestic terminals by 2015 and a new runway later. T2 (a domestic terminal) opened in March 2013. New international arrivals area opened in November 2013.

Major projects

Major new and recent airport projects (>US$500 million)

Airport/Terminal	Planned investment	Opening date/Major developments
Mackay, Australia	US$1.25 billion	Development over the next 20 years.
Soekarno-Hatta International, Jakarta	US$1.24 billion	Overhaul of existing terminals and airfield, under way since July 2012.
Tokyo Haneda	US$1.2 billion	An additional terminal is being planned.
Karawang, Jakarta reliever apt	US$1.09 billion	This new airport is planned for West Java.
Siem Reap, Cambodia	US$1 billion	A new airport has been proposed by two Korean firms.
Vientiane, Laos	US$1 billion	Completely new airport planned.
Quảng Ninh, Vietnam	US$1 billion	New airport on Van Don Island in Quảng Ninh Province.
Kertajati, Bandung, Indonesia	US$904 million	A replacement for the existing Bandung airport.
Adelaide	US$877 million	Terminal expansion until 2024.
Nội Bài International, Hanoi	US$849 million	For a new Terminal 2.
Phu Quoc, Vietnam	US$810 million	New resort island airport for seven million passengers a year.
Nagpur, India	US$745 million	Development of a major cargo hub (the Mihan project).
Islamabad, Pakistan	US$730 million	A completely new airport is due to open in 2016.
Mopa Airport, Goa, India	US$680 million	This is a new airport, planned to replace Dabolim.
Macau	US$625 million	For medium-term expansion.
Hanthawaddy, Myanmar	US$600 million	A greenfield airport opening in 2019.
Buleleng, Bali, Indonesia	US$547 million	This greenfield airport is planned in northern Bali.
Jieyang Chaoshan, China	US$515 million	A new airport in eastern Guangdong province.
Maldives International Airport	US$511 million	For an upgrade of the existing airport.
Kolkata, India	US$505 million	Phase 1 of a major terminal upgrade, opened in 2012.
Nanjing Lukou, China	US$500 million	Ongoing work. Phase I opened in 1997.
Guam	US$500 million	A multi-project upgrade.

Note: Historical dollar conversion rates

Compiled by Momberger Airport Information; based on confirmed figures/estimates

December 2014

Major projects completed (by year)

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Investment	Opening date
London-Heathrow – Terminal 2	US$3.8 billion	This new terminal opened on 4 June 2014.
Kuala Lumpur International	US$1.2 billion	The new KLIA-2 terminal, built to handle 45 million passengers a year, opened in May 2014.
Kualanamu International, Medan, Indonesia	US$693 million	This completely new airport opened in 2014.
Hamad International, Doha, Qatar	US$15.5 billion	Staged openings were delayed until May 2014. The airport saw its first cargo flights in December 2013.
Terminal 2, Chhatrapati Shivaji International, Mumbai	US$2 billion	Opened on 11 January 2014. The terminal began handling passenger flights in June.
Al Maktoum International, Dubai	US$8.2 billion (part of DWC project)	Al Maktoum International opened to passenger traffic on 28 October 2013.
Pulkovo, St. Petersburg	US$950 million	New “green” terminal opened on 4 December 2013.
Shenzhen Bao’an International	US$1.39 billion	A new Terminal 3 opened in late November 2013.
New York John F. Kennedy International	US$1.4 billion	The renovated, extended Terminal 4 opened on 24 May 2013, with seven renovated gates and the first nine of 20 planned new gates, all in Concourse B.
Canberra	US$436 million	A refurbished terminal opened on 13 March 2013.
Perth	US$123 million	New domestic Terminal 2 opened on 4 March 2013.
Queen Alia International, Amman	US$800 million	The new terminal soft-opened on 3 March 2013. Full operations began on 21 March 2013.
Hambantota, Sri Lanka	US$209 million	This new airport officially opened on 19 March 2013.
New Mariscal Sucre, Quito	US$683 million	New airport at Tumbaco opened in February 2013.
Dubai International	Included in US$7.8 billion Strategic Plan 2020	Staged opening of Concourse A, Terminal 3 started on 2 January 2013.
Atlanta Hartsfield-Jackson International Airport	US$1.4 billion	The Maynard H. Jackson Jr. International Terminal opened in late 2012.
Frankfurt Airport	US$710 million	800m-long Pier A-plus opened on 10 October 2012.
Paris CDG Terminal 2	US$580 million	Boarding satellite S4 opened on 28 June 2012.
Kunming International, Yunnan	US$3.3 billion	This new airport opened on 28 June 2012.
Las Vegas McCarran	US$2.4 billion	A new Terminal 3 opened on 27 June 2012.
Vienna International	US$1 billion	Skylink terminal opened on 5 June 2012.
Boryspil International, Kiev	US$600 million	Terminal D opened on 28 May 2012.
Atlanta Hartsfield-Jackson	US$1.5 billion	Concourse F opened on 16 May 2012.
Changsha Huanghua, China	US$2.15 billion	The new Terminal 2 opened in July 2011.
Alicante	US$760 million	A new terminal opened on 23 March 2011.
Dublin	US$600 million	Terminal 2 opened in November 2010.
Tokyo Haneda	US$6.9 billion	The fourth runway, a new terminal and car park extensions opened in October 2010.

Major projects completed (by year)

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Investment	Opening date
Indira Gandhi, New Delhi	US$3 billion	Terminal 3 opened on 14 July 2010.
O R Tambo International, Johannesburg, South Africa	US$1.18 billion	Prepared for the A380 and FIFA World Cup 2010 with a new Central Terminal and International Pier.
Chhatrapati Shivaji, Mumbai	US$58 million	The new terminal 1C opened on 17 April 2010.
Shanghai Hongqiao	US$2.2 billion	A new terminal opened on 16 March 2010.
Málaga	US$320 million	The new Terminal 3 opened on 15 March 2010.
Enfidha-Hammamet, Tunisia	US$739 million	This new airport, built to handle seven million passengers per year, opened in late 2009.
Sabiha Gökçen, Istanbul	US$745 million	New international terminal opened in October 2009.
Larnaca, Cyprus	US$770 million	A new terminal opened in November 2009.
Barcelona	US$4.6 billion	The new Terminal 1 opened in June 2009.
Incheon International (the new international airport for Seoul)	US$5 billion	Phase 2 (Concourse A, an additional runway and a cargo terminal) was completed in June 2008.
Cairo International	US$340 million	The new Terminal 3 opened on 27 April 2009.
Ciudad Real Central	US$1.38 billion	New airport opened in late 2008 but closed in 2012.
Hamburg	US$500 million	A new terminal, parking garages, apron and 'Airport Plaza' shopping mall opened on 4 December 2008.
Indianapolis International	US$1.5 billion	A 10-year CIP with a new, US$1.1 billion, 40-gate midfield terminal opened on 12 November 2008.
Singapore Changi	US$1 billion	Terminal 3 opened on 25 July 2008.
Luxembourg Findel	US$650 million	A new terminal with an underground car park and a rail station opened in May 2008.
London Heathrow Terminal 5	US$8.5 billion	This new terminal opened on 28 March 2008.
Kempegowda, Bangalore	US$630 million	This completely new airport opened in 2008.
Rajiv Gandhi, Hyderabad	US$1 billion	Completely new airport opened on 23 March 2008.
Beijing Capital International	US$2.7 billion	Terminal 3 opened on 29 February 2008.
Mexico City International	US$600 million-plus	The new Terminal 2 opened in early 2008.
Suvarnabhumi Airport, Bangkok	US$5.6 billion	This new airport opened on 28 September 2006.
Kobe, Japan	US$2.9 billion	A new offshore airport opened in February 2006.
Madrid-Barajas	US$9.2 billion	The new Terminal 4 opened in February 2006. Two new runways opened in 2004.
Chṣpu Centrair, Nagoya	US$7.3 billion	Opened on 17 February 2005 for the World Expo.
Ben Gurion, Tel Aviv	US$1 billion	"Natbag 2000" project was approved in 1994 and saw Terminal 3 (Phase 1) completed in late 2004.
Cologne Bonn	US$610 million	A new terminal with a rail link and a station was completed in 2004.
Stuttgart	US$250 million	Terminal 3 opened in March 2004.
Zürich	US$1.6 billion	The "Project 2000" Fifth Expansion Phase, including a midfield terminal, had a staged opening in 2003 and was completed in 2004.

Major projects completed (by year)

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Investment	Opening date
Guangzhou Baiyun International	US$2.4 billion	The new Baiyun International Airport's Phase 1 opened on 5 August 2004.
Chicago Midway	US$927 million	A six-year terminal development project was completed on 8 June 2004.
Tehran Imam Khomeini International	US$1 billion	Phase 1 had been ready since February 2004 and opened in 2005.
Stockholm Arlanda	US$1.4 billion	A third runway and a capacity increase were completed in 2003.
Leipzig/Halle	US$1 billion	A new terminal with a rail station, and a new runway were completed on 30 June 2003.
Munich	US$1.1 billion	The second terminal opened on 29 June 2003.
Funchal, Madeira	US$550 million	A runway and apron extension was completed in 2000. A terminal upgrade was completed in 2002.
New York John F. Kennedy International	US$1.4 billion	Terminal 4 opened on 24 May 2001, replacing the former International Arrivals Building.
Sabiha Gökçen, Istanbul	US$700 million	The new airport opened on 8 April 2001.
Incheon International (the new international airport for Seoul)	US$5.4 billion	Phase I opened on 29 March 2001. Three more phases were planned to follow.
Athens International	US$2.3 billion	Athens' new airport opened on 28 March 2001.
San Francisco International	US$4.1 billion	A major expansion, including a new International Terminal, opened in 2000. The expansion also included a new cargo complex and new light rail link.
Kingsford Smith International, Sydney	US$695 million US$1.5 billion	Pre-Olympic Games terminal and airfield expansion. The total includes ground access, now completed.
King Fahd International, Dammam, Saudi Arabia	US$2.6 billion	This new airport opened on 27 October 1999. In available land, it is the world's largest airport site.
Pudong International, Shanghai	US$4.8 billion	New airport's Phase 1 opened on 1 October 1999.
Austin-Bergstrom International	US$685 million	A conversion project opened on 23 May 1999.
Haikou Meilan International	US$460 million	This opened in early 1999, replacing Dayingshan.
London Heathrow Airport BA World Cargocentre	US$415 million	Opened on 19 January 1999. This cargo terminal has an annual handling capacity of 800,000 tonnes.
Milan Malpensa	US$1 billion	The first phase of the Malpensa 2000 terminal project opened on 25 October 1998. (The non-Schengen Terminal 1C opened in January 2013.)
Oslo Airport, Gardermoen	US$2.9 billion	This new airport opened on 8 October 1998, replacing Oslo's former Fornebu Airport.
Hong Kong International	US$9 billion (airport only); US$20.4 billion with infra-structure and reclamation	Phase I opened on 6 July 1998. Hong Kong International was built on reclaimed land at Chek Lap Kok and replaced the famous Kai Tak Airport.
Kuala Lumpur International	US$3.5 billion	Phase 1 (MYR 9 billion) opened in June 1998.

Major projects completed (by year)

Major new & recent airport projects (>US$500 million)

Airport/Terminal	Investment	Opening date
London Heathrow "Heathrow Express"	US$735 million	Service on this new rail line between London Paddington and Heathrow started in June 1998.
Galeão, Rio de Janeiro	US$600 million	Terminal 2 opened on 28 March 1998.
Macau International	US$1 billion	This airport opened on 8 December 1995.
Denver International	US$4.8 billion	The new airport opened on 28 February 1995.
Kansai International, Osaka	US$13 billion	Phase I opened on 4 September 1994.
Munich Airport	US$5.67 billion	Opened on 17 May 1992.

Note: Historical dollar conversion rates

Compiled by Momberger Airport Information; based on confirmed figures/estimates

December 2014

Statistical Annex

Conventional signs:

… Data not available

. Decimal point

– Magnitude nil

N/A Not applicable

Statistical indicators in this annex refer to the financial year 2013.

Airport financial performance

1. % Change 2013/2012
2. Per passenger % change 2013/2012
3. Per WLU % change 2013/2012
4. Per aircraft movement
5. Per passenger
6. Per passenger (by region and size category)
7. Per work load unit (WLU)
8. Per employee

Annex 1

Year-over-year % change in key financial metrics (2013/2012)

		Total airport revenue	Operating revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Non-operating revenue
Region	**Africa**	6.7%	9.0%	12.5%	1.0%	-9.9%
	Asia-Pacific	11.8%	11.2%	13.1%	9.2%	37.8%
	Europe	2.2%	4.5%	6.2%	1.8%	-44.7%
	Latin America-Caribbean	6.5%	6.9%	5.4%	9.6%	-7.8%
	Middle East	11.6%	10.8%	5.8%	16.9%	67.3%
	North America	4.4%	2.2%	0.6%	4.7%	33.6%
	World	5.5%	5.8%	6.0%	5.5%	0.8%
Airport size (passengers)	**<1m**	0.6%	3.5%	2.0%	7.0%	-13.2%
	1-5m	4.4%	5.3%	6.6%	2.7%	4.1%
	5-15m	4.6%	3.7%	4.0%	3.2%	21.3%
	15-25m	8.6%	8.9%	8.7%	9.3%	7.0%
	25-40m	4.4%	3.9%	2.9%	5.4%	24.1%
	>40m	6.6%	6.2%	5.7%	6.7%	15.2%
Till system	**Single till**	7.0%	7.6%	10.0%	4.2%	-3.7%
	Hybrid till	6.6%	7.2%	11.1%	2.1%	-0.2%
	Dual till	2.5%	3.5%	3.5%	3.6%	-25.6%
Ownership model	**Public ownership (100%)**	5.3%	4.8%	4.1%	5.9%	16.6%
	Public-private partnership (PPP)	3.6%	5.3%	7.4%	2.0%	-43.4%
	Private ownership (100%)	6.0%	7.4%	9.6%	4.2%	-22.3%
Selected economic groupings	**Advanced economies**	4.2%	4.6%	4.8%	4.2%	-1.2%
	Major advanced economies (G7)	4.5%	4.6%	4.6%	4.5%	5.4%
	Euro area	1.5%	3.8%	5.4%	1.2%	-51.1%
	European Union	2.0%	4.4%	6.6%	1.0%	-47.5%
	Emerging and developing economies	9.7%	9.8%	9.4%	10.4%	10.1%
	Emerging and developing Asia	14.5%	14.2%	21.2%	3.5%	31.6%
	ASEAN-5	14.9%	12.4%	14.0%	10.5%	67.9%
	Sub-Saharan Africa	9.4%	12.5%	15.5%	5.9%	-25.4%
	Selected prospect markets					
	BRICS	9.3%	10.2%	13.4%	4.7%	-28.1%
	Next 11	2.9%	3.0%	1.7%	4.6%	-0.9%
	MINT	5.0%	4.5%	1.6%	9.4%	24.2%
	Emerging aviation markets	9.3%	9.6%	9.4%	9.8%	0.3%
	Major exporters of manufactured goods	5.1%	5.1%	5.4%	4.8%	6.0%

Annex 1 (cont'd)

Year-over-year % change in key financial metrics (2013/2012)

		Total operating expenses	Operating surplus/deficit (EBITDA)	Capital costs	Total cost (operating + capital costs)	Debt
Region	**Africa**	2.6%	6.5%	-10.7%	-3.7%	-20.6%
	Asia-Pacific	13.1%	10.9%	-2.1%	6.2%	-4.8%
	Europe	-2.3%	8.7%	-2.7%	-2.5%	-1.6%
	Latin America-Caribbean	9.3%	2.9%	22.0%	12.1%	21.9%
	Middle East	4.0%	23.5%	9.2%	6.4%	96.0%
	North America	2.0%	6.7%	7.4%	4.5%	-23.3%
	World	2.3%	8.8%	2.0%	2.1%	-2.3%
Airport size (passengers)	**<1m**	7.5%	-27.9%	4.4%	7.7%	-4.3%
	1-5m	4.4%	3.9%	-1.0%	3.0%	-6.9%
	5-15m	1.3%	8.0%	6.8%	3.2%	7.7%
	15-25m	8.1%	9.2%	5.8%	6.1%	1.6%
	25-40m	5.4%	3.4%	-1.4%	2.4%	19.2%
	>40m	1.5%	11.2%	3.0%	2.1%	-20.0%
Till system	**Single till**	-2.2%	16.8%	-3.8%	-2.7%	2.3%
	Hybrid till	3.2%	10.3%	2.5%	3.0%	13.1%
	Dual till	3.7%	1.1%	1.5%	2.6%	0.2%
Ownership model	**Public ownership (100%)**	3.1%	7.5%	4.5%	3.8%	-2.3%
	Public-private partnership (PPP)	1.1%	6.9%	3.4%	1.6%	-0.6%
	Private ownership (100%)	1.1%	10.5%	-5.8%	-2.6%	-3.3%

Selected economic groupings	**Advanced economies**	0.6%	8.1%	0.9%	0.8%	-5.4%
	Major advanced economies (G7)	2.2%	7.1%	2.1%	2.2%	-7.0%
	Euro area	-2.1%	7.4%	-0.6%	-1.5%	-1.4%
	European Union	-2.4%	8.6%	-4.8%	-3.1%	-2.2%
	Emerging and developing economies	8.0%	11.2%	6.6%	7.0%	12.8%
	Emerging and developing Asia	12.0%	16.7%	-7.1%	4.3%	-6.6%
	ASEAN-5	15.3%	14.5%	-2.7%	6.2%	-8.2%
	Sub-Saharan Africa	5.2%	8.5%	-28.3%	-10.0%	-13.7%
	Selected prospect markets					
	BRICS	12.3%	6.0%	-6.4%	6.7%	-9.7%
	Next 11	1.3%	3.1%	1.6%	1.5%	4.7%
	MINT	1.3%	6.4%	6.7%	3.3%	43.0%
	Emerging aviation markets	7.5%	11.2%	5.6%	7.1%	30.3%
	Major exporters of manufactured goods	1.3%	9.3%	1.0%	1.0%	-6.9%

Annex 2

Year-over-year % change in key financial metrics (per passenger, 2013/2012)

		Total airport revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Total operating expenses	Capital costs	Total cost (operating + capital costs)
Region	**Africa**	11%	16%	6%	9%	-6%	2%
	Asia-Pacific	5%	7%	2%	6%	-7%	1%
	Europe	0%	4%	-1%	-5%	-5%	-5%
	Latin America-Caribbean	1%	0%	4%	4%	16%	7%
	Middle East	4%	-1%	9%	-2%	2%	-1%
	North America	3%	-1%	3%	1%	6%	3%
	World	2%	3%	2%	-1%	-1%	-1%
Airport size (passengers)	**<1m**	-4%	-3%	2%	3%	-1%	2%
	1-5m	1%	3%	0%	2%	-4%	0%
	5-15m	2%	2%	0%	-1%	4%	1%
	15-25m	3%	4%	4%	3%	3%	3%
	25-40m	1%	0%	2%	2%	-5%	-1%
	>40m	3%	2%	3%	-2%	-1%	-2%
Till system	**Single till**	4%	7%	2%	-4%	-6%	-5%
	Hybrid till	4%	8%	-1%	0%	0%	0%
	Dual till	-2%	-1%	-1%	0%	-2%	-1%
Ownership model	**Public ownership (100%)**	3%	1%	3%	1%	2%	1%
	Public-private partnership (PPP)	2%	6%	1%	0%	2%	0%
	Private ownership (100%)	0%	4%	-2%	-4%	-10%	-7%
Selected economic groupings	**Advanced economies**	2%	3%	3%	-1%	-1%	-1%
	Major advanced economies (G7)	3%	3%	3%	1%	1%	1%
	Euro area	1%	6%	1%	-2%	-1%	-2%
	European Union	1%	6%	0%	-3%	-6%	-4%
	Emerging and developing economies	3%	3%	4%	2%	1%	1%
	Emerging and developing Asia	11%	20%	0%	9%	-10%	1%
	ASEAN-5	4%	3%	0%	2%	-9%	-1%
	Sub-Saharan Africa	8%	13%	4%	5%	-29%	-11%
	Selected prospect markets						
	BRICS	6%	11%	2%	9%	-9%	4%
	Next 11	-3%	-4%	-1%	-5%	-4%	-4%
	MINT	-4%	-7%	0%	-8%	-3%	-6%
	Emerging aviation markets	2%	3%	3%	1%	-1%	0%
	Major exporters of manufactured goods	2%	3%	2%	-1%	-1%	-1%

Annex 3

Year-over-year % change in key financial metrics (per WLU, 2013/2012)

		Total airport revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Total operating expenses	Capital costs	Total cost (operating + capital costs)
Region	**Africa**	11%	17%	6%	9%	-5%	2%
	Asia-Pacific	6%	8%	4%	7%	-6%	2%
	Europe	0%	5%	0%	-4%	-5%	-4%
	Latin America-Caribbean	2%	1%	5%	5%	17%	7%
	Middle East	4%	-1%	9%	-2%	2%	0%
	North America	3%	-1%	4%	1%	6%	3%
	World	3%	3%	3%	0%	0%	0%
Airport size (passengers)	**<1m**	-3%	-2%	3%	5%	1%	4%
	1-5m	2%	3%	0%	2%	-4%	0%
	5-15m	2%	2%	1%	-1%	5%	1%
	15-25m	4%	4%	5%	3%	3%	3%
	25-40m	1%	0%	2%	2%	-4%	0%
	>40m	3%	3%	3%	-2%	0%	-1%
Till system	**Single till**	5%	8%	2%	-4%	-6%	-5%
	Hybrid till	4%	9%	0%	1%	0%	0%
	Dual till	-1%	0%	0%	0%	-2%	0%
Ownership model	**Public ownership (100%)**	3%	2%	4%	1%	2%	1%
	Public-private partnership (PPP)	2%	7%	1%	0%	2%	1%
	Private ownership (100%)	1%	5%	-1%	-4%	-9%	-6%
Selected economic groupings	**Advanced economies**	3%	4%	3%	-1%	0%	-1%
	Major advanced economies (G7)	3%	4%	3%	1%	1%	1%
	Euro area	1%	6%	1%	-2%	-1%	-2%
	European Union	1%	7%	0%	-3%	-5%	-4%
	Emerging and developing economies	4%	4%	5%	2%	2%	2%
	Emerging and developing Asia	11%	20%	1%	9%	-9%	2%
	ASEAN-5	6%	5%	2%	3%	-8%	0%
	Sub-Saharan Africa	9%	14%	6%	7%	-28%	-10%
	Selected prospect markets						
	BRICS	6%	11%	2%	10%	-9%	4%
	Next 11	-2%	-3%	-1%	-4%	-4%	-4%
	MINT	-4%	-7%	1%	-7%	-2%	-5%
	Emerging aviation markets	3%	4%	4%	2%	0%	1%
	Major exporters of manufactured goods	3%	3%	3%	-1%	-1%	-1%

Annex 4

Airport financial performance (US$ per aircraft movement, 2013)

		Total airport revenue	Operating revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Non-operating revenue
Region	**Africa**	1,176	1,127	815	312	50
	Asia-Pacific	2,381	2,308	1,205	1,104	67
	Europe	2,890	2,820	1,734	1,086	71
	Latin America-Caribbean	994	974	631	343	20
	Middle East	4,080	4,000	2,069	1,931	79
	North America	1,113	1,000	607	393	113
	World	1,815	1,733	1,028	705	81
Airport size (passengers)	**<1m**	418	373	261	113	45
	1-5m	853	782	524	258	71
	5-15m	1,397	1,317	819	498	81
	15-25m	2,083	1,974	1,142	832	102
	25-40m	1,939	1,886	1,126	760	53
	>40m	2,542	2,417	1,319	1,098	125
Till system	**Single till**	1,859	1,786	1,085	701	72
	Hybrid till	1,737	1,641	952	689	96
	Dual till	1,961	1,911	1,149	762	50
Ownership model	**Public ownership (100%)**	1,486	1,401	818	583	84
	Public-private partnership (PPP)	2,502	2,452	1,528	924	49
	Private ownership (100%)	2,620	2,529	1,540	988	91
Selected economic groupings	**Advanced economies**	1,980	1,884	1,094	790	95
	Major advanced economies (G7)	1,736	1,625	970	655	109
	Euro area	2,886	2,828	1,765	1,064	57
	European Union	3,011	2,938	1,827	1,111	73
	Emerging and developing economies	1,438	1,391	878	513	48
	Emerging and developing Asia	1,644	1,607	1,027	580	37
	ASEAN-5	1,675	1,565	871	695	110
	Sub-Saharan Africa	997	978	689	289	19
	Selected prospect markets					
	BRICS	1,205	1,185	772	413	20
	Next 11	1,549	1,496	816	680	53
	MINT	1,231	1,192	736	456	39
	Emerging aviation markets	1,434	1,402	855	547	32
	Major exporters of manufactured goods	1,893	1,795	1,052	743	97

Annex 4 (cont'd)

Airport financial performance (US$ per aircraft movement, 2013)

		Total operating expenses	Operating surplus/deficit (EBITDA)	Capital costs	Total cost (operating + capital costs)	Debt
Region	**Africa**	417	711	402	890	3,148
	Asia-Pacific	985	1,396	581	1,578	5,578
	Europe	1,612	1,278	833	2,467	7,252
	Latin America-Caribbean	571	424	169	738	854
	Middle East	2,338	1,771	1,128	3,561	17,868
	North America	509	587	467	976	3,895
	World	907	895	551	1,464	4,730
Airport size (passengers)	**<1m**	336	56	99	446	632
	1-5m	481	374	241	731	1,562
	5-15m	728	665	387	1,102	2,976
	15-25m	988	1,094	637	1,625	6,609
	25-40m	963	976	691	1,655	6,026
	>40m	1,156	1,385	758	1,914	6,362
Till system	**Single till**	885	975	591	1,486	5,989
	Hybrid till	860	877	514	1,379	3,681
	Dual till	1,066	895	517	1,598	4,490
Ownership model	**Public ownership (100%)**	731	740	466	1,204	4,361
	Public-private partnership (PPP)	1,402	1,100	650	2,047	4,215
	Private ownership (100%)	1,214	1,405	844	2,065	8,178

Selected economic groupings	**Advanced economies**	983	978	635	1,622	5,469
	Major advanced economies (G7)	900	813	602	1,502	5,331
	Euro area	1,716	1,169	816	2,570	6,647
	European Union	1,723	1,287	877	2,630	7,789
	Emerging and developing economies	729	707	342	1,072	2,505
	Emerging and developing Asia	770	874	449	1,250	1,931
	ASEAN-5	742	933	231	955	2,308
	Sub-Saharan Africa	332	587	230	627	2,630
	Selected prospect markets					
	BRICS	649	556	221	845	1,120
	Next 11	592	953	347	945	1,529
	MINT	489	723	286	779	1,237
	Emerging aviation markets	723	711	312	1,021	2,092
	Major exporters of manufactured goods	950	925	592	1,542	5,196

Annex 5

Airport financial performance (US$ per passenger, 2013)

		Total airport revenue	Operating revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Non-operating revenue
Region	**Africa**	18.37	17.59	12.72	4.88	0.77
	Asia-Pacific	19.16	18.57	9.69	8.88	0.54
	Europe	28.52	27.82	17.11	10.71	0.70
	Latin America-Caribbean	14.73	14.43	9.35	5.08	0.30
	Middle East	31.34	30.73	15.90	14.84	0.61
	North America	16.27	14.62	8.87	5.74	1.65
	World	20.96	20.02	11.88	8.14	0.93
Airport size (passengers)	**<1m**	16.03	14.32	9.99	4.33	1.71
	1-5m	17.47	16.02	10.73	5.29	1.45
	5-15m	18.20	17.15	10.67	6.48	1.05
	15-25m	22.14	20.98	12.14	8.84	1.08
	25-40m	19.33	18.80	11.22	7.58	0.53
	>40m	21.98	20.90	11.40	9.50	1.08
Till system	**Single till**	20.23	19.44	11.81	7.63	0.79
	Hybrid till	19.08	18.02	10.46	7.56	1.06
	Dual till	22.19	21.63	13.01	8.63	0.56
Ownership model	**Public ownership (100%)**	18.41	17.36	10.14	7.22	1.03
	Public-private partnership (PPP)	24.67	24.18	15.07	9.11	0.49
	Private ownership (100%)	26.72	25.79	15.71	10.08	0.93
Selected economic groupings	**Advanced economies**	23.54	22.40	13.01	9.40	1.12
	Major advanced economies (G7)	22.42	20.99	12.53	8.46	1.41
	Euro area	28.20	27.64	17.25	10.40	0.56
	European Union	29.39	28.68	17.83	10.85	0.71
	Emerging and developing economies	15.43	14.92	9.41	5.50	0.51
	Emerging and developing Asia	13.76	13.45	8.60	4.86	0.31
	ASEAN-5	12.88	12.03	6.69	5.34	0.85
	Sub-Saharan Africa	18.61	18.25	12.85	5.40	0.36
	Selected prospect markets					
	BRICS	13.52	13.30	8.67	4.63	0.22
	Next 11	15.13	14.61	7.97	6.64	0.52
	MINT	13.56	13.13	8.11	5.03	0.43
	Emerging aviation markets	14.72	14.39	8.78	5.62	0.33
	Major exporters of manufactured goods	22.08	20.93	12.26	8.67	1.14

Annex 5 (cont'd)

Airport financial performance (US$ per passenger, 2013)

		Total operating expenses	Operating surplus/deficit (EBITDA)	Capital costs	Total cost (operating + capital costs)	Debt
Region	**Africa**	6.56	11.19	5.52	12.23	42.20
	Asia-Pacific	7.92	11.23	4.61	12.53	43.03
	Europe	15.90	12.61	8.23	24.36	71.13
	Latin America-Caribbean	8.47	6.28	2.51	10.94	12.98
	Middle East	17.95	13.60	8.55	27.00	166.26
	North America	7.57	8.72	6.93	14.50	57.49
	World	10.55	10.41	6.39	16.98	56.25
Airport size (passengers)	**<1m**	14.04	2.36	4.24	19.09	32.19
	1-5m	9.86	7.66	5.04	15.33	35.39
	5-15m	9.47	8.66	5.09	14.48	40.41
	15-25m	10.51	11.64	6.78	17.30	72.79
	25-40m	9.60	9.73	6.89	16.50	61.29
	>40m	10.00	11.98	6.55	16.55	57.36
Till system	**Single till**	9.62	10.60	6.43	16.18	66.74
	Hybrid till	9.45	9.63	5.63	15.10	41.89
	Dual till	12.06	10.13	5.80	17.93	51.11
Ownership model	**Public ownership (100%)**	9.14	9.27	5.81	15.02	55.87
	Public-private partnership (PPP)	13.82	10.84	6.40	20.16	40.92
	Private ownership (100%)	12.39	14.33	8.62	21.07	81.87

Selected economic groupings	**Advanced economies**	11.80	11.74	7.64	19.51	66.85
	Major advanced economies (G7)	11.79	10.64	7.88	19.66	69.47
	Euro area	16.77	11.43	8.00	25.18	64.53
	European Union	16.82	12.57	8.58	25.72	75.41
	Emerging and developing economies	7.81	7.58	3.61	11.31	27.25
	Emerging and developing Asia	6.44	7.32	3.66	10.19	15.70
	ASEAN-5	5.70	7.17	1.74	7.22	16.33
	Sub-Saharan Africa	6.40	11.31	3.84	10.45	42.98
	Selected prospect markets					
	BRICS	7.28	6.24	2.48	9.49	13.42
	Next 11	5.74	9.23	3.34	9.08	14.44
	MINT	5.34	7.89	3.10	8.44	12.78
	Emerging aviation markets	7.42	7.30	3.20	10.48	22.06
	Major exporters of manufactured goods	11.19	10.89	6.98	18.18	62.00

Annex 6

Airport financial performance, by region and size category (US$ per passenger, 2013)

	Total airport revenue	Operating revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Non-operating revenue
AFRICA	18.37	17.59	12.72	4.88	0.77
<1m	14.89	14.63	11.70	2.92	0.27
1-5m	15.46	14.50	10.89	3.61	0.96
5-15m	18.56	17.45	12.82	4.64	1.11
15-25m	23.02	23.01	15.25	7.76	0.01
25-40m	N/A	N/A	N/A	N/A	N/A
>40m	N/A	N/A	N/A	N/A	N/A
1st quartile	6.72	6.61	5.62	1.54	0.00
2nd quartile (median)	12.97	12.97	8.59	2.62	0.01
3rd quartile	23.03	22.57	15.82	4.64	0.56
ASIA-PACIFIC	19.16	18.57	9.69	8.88	0.54
<1m	8.86	8.53	5.69	2.84	0.33
1-5m	10.81	10.37	7.39	2.98	0.44
5-15m	12.90	12.47	7.32	5.15	0.43
15-25m	26.52	25.82	12.52	13.29	0.24
25-40m	21.08	20.65	12.25	8.40	0.42
>40m	20.18	19.47	9.12	10.35	0.71
1st quartile	4.49	4.21	2.83	0.97	0.02
2nd quartile (median)	8.95	8.84	4.75	2.52	0.07
3rd quartile	18.48	16.98	9.79	6.64	0.45
EUROPE	28.52	27.82	17.11	10.71	0.70
<1m	26.12	21.40	16.12	5.28	4.71
1-5m	21.52	20.22	13.72	6.50	1.30
5-15m	22.85	22.30	14.23	8.07	0.55
15-25m	28.47	27.87	16.50	11.37	0.59
25-40m	29.58	29.46	16.05	13.41	0.12
>40m	32.47	31.78	19.65	12.12	0.69
1st quartile	14.25	12.73	9.28	3.47	0.00
2nd quartile (median)	21.27	20.04	12.87	6.26	0.30
3rd quartile	28.98	26.30	17.43	9.97	1.64

Annex 6 (cont'd)

Airport financial performance, by region and size category (US$ per passenger, 2013)

	Total operating expenses	Operating surplus/deficit (EBITDA)	Capital costs	Total cost (operating + capital costs)	Debt
AFRICA	6.56	11.19	5.52	12.23	42.20
<1m	9.90	4.99	4.01	14.63	26.02
1-5m	8.49	6.97	8.10	17.86	64.28
5-15m	5.63	11.40	5.72	11.35	29.53
15-25m	4.40	18.62	3.03	7.42	46.13
25-40m	N/A	N/A	N/A	N/A	N/A
>40m	N/A	N/A	N/A	N/A	N/A
1st quartile	4.79	0.40	2.05	7.08	12.01
2nd quartile (median)	6.62	5.26	3.30	15.70	40.10
3rd quartile	13.72	9.83	5.61	19.21	41.13
ASIA-PACIFIC	7.92	11.23	4.61	12.53	43.03
<1m	7.40	1.44	3.71	11.06	49.00
1-5m	5.19	5.62	2.33	7.77	18.43
5-15m	4.81	8.10	2.90	7.70	33.73
15-25m	12.49	14.03	8.57	21.57	329.06
25-40m	9.34	11.74	7.44	16.78	45.05
>40m	7.68	12.50	3.53	11.20	14.26
1st quartile	3.68	-0.97	0.77	4.11	5.98
2nd quartile (median)	6.32	3.51	2.31	9.12	15.40
3rd quartile	10.40	8.88	4.43	15.17	47.19
EUROPE	15.90	12.61	8.23	24.36	71.13
<1m	20.51	5.60	9.48	35.46	57.95
1-5m	12.91	8.60	5.05	19.25	34.00
5-15m	14.20	8.65	5.80	20.10	36.97
15-25m	14.86	13.60	8.93	23.79	60.87
25-40m	18.85	10.73	8.79	27.64	77.24
>40m	16.92	15.55	9.46	26.38	92.49
1st quartile	8.54	4.13	3.10	16.86	11.93
2nd quartile (median)	14.49	7.42	6.02	21.79	27.81
3rd quartile	21.23	10.25	10.64	30.83	60.49

Annex 6 (cont'd)

Airport financial performance, by region and size category (US$ per passenger, 2013)

	Total airport revenue	Operating revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Non-operating revenue
LATIN AMERICA-CARIBBEAN	14.73	14.43	9.35	5.08	0.30
<1m	13.64	13.02	8.90	4.12	0.62
1-5m	15.20	14.69	10.47	4.23	0.50
5-15m	15.20	14.96	9.87	5.09	0.24
15-25m	12.93	12.73	8.37	4.36	0.20
25-40m	15.67	15.49	8.68	6.82	0.18
>40m	N/A	N/A	N/A	N/A	N/A
1st quartile	6.37	6.20	3.87	1.70	0.00
2nd quartile (median)	12.84	12.12	8.09	2.53	0.01
3rd quartile	20.17	19.20	12.79	5.86	0.29
NORTH AMERICA	16.27	14.62	8.87	5.74	1.65
<1m	23.13	16.85	8.30	8.54	6.29
1-5m	20.25	16.38	8.99	7.39	3.88
5-15m	18.29	15.77	9.19	6.58	2.52
15-25m	16.62	13.99	8.29	5.69	2.64
25-40m	16.70	15.85	10.03	5.81	0.85
>40m	14.66	13.47	8.28	5.19	1.19
1st quartile	14.09	12.29	6.22	5.29	0.92
2nd quartile (median)	16.92	14.39	7.65	6.92	2.04
3rd quartile	22.69	18.34	9.79	8.24	4.07
WORLD	20.96	20.02	11.88	8.14	0.93
<1m	16.03	14.32	9.99	4.33	1.71
1-5m	17.47	16.02	10.73	5.29	1.45
5-15m	18.20	17.15	10.67	6.48	1.05
15-25m	22.14	20.98	12.14	8.84	1.08
25-40m	19.33	18.80	11.22	7.58	0.53
>40m	21.98	20.90	11.40	9.50	1.08
1st quartile	8.87	8.48	5.01	2.07	0.00
2nd quartile (median)	15.60	14.12	8.98	4.40	0.13
3rd quartile	23.20	20.78	13.20	7.51	1.22

Annex 6 (cont'd)

Airport financial performance, by region and size category (US$ per passenger, 2013)

	Total operating expenses	Operating surplus/deficit (EBITDA)	Capital costs	Total cost (operating + capital costs)	Debt
LATIN AMERICA-CARIBBEAN	8.47	6.28	2.51	10.94	12.98
<1m	13.62	0.02	1.55	15.29	18.51
1-5m	9.70	5.58	3.66	13.15	17.48
5-15m	8.26	6.93	2.11	10.38	13.93
15-25m	5.95	6.98	1.17	7.12	6.52
25-40m	7.93	7.74	3.55	11.48	10.56
>40m	N/A	N/A	N/A	N/A	N/A
1st quartile	6.84	-8.28	0.37	8.65	0.46
2nd quartile (median)	11.96	1.44	1.20	13.76	3.39
3rd quartile	20.74	7.75	4.27	25.17	17.41
NORTH AMERICA	7.57	8.72	6.93	14.50	57.49
<1m	15.20	8.57	9.29	24.49	29.68
1-5m	9.45	10.81	8.25	17.69	47.72
5-15m	8.09	10.20	7.67	15.76	61.39
15-25m	7.16	9.47	6.50	13.65	54.58
25-40m	8.10	8.60	7.06	15.15	56.63
>40m	6.87	7.79	6.54	13.41	59.05
1st quartile	6.76	6.43	4.83	12.40	18.36
2nd quartile (median)	8.66	8.43	6.84	15.53	39.21
3rd quartile	11.34	11.59	9.42	21.02	73.41
WORLD	10.55	10.41	6.39	16.98	56.25
<1m	14.04	2.36	4.24	19.09	32.19
1-5m	9.86	7.66	5.04	15.33	35.39
5-15m	9.47	8.66	5.09	14.48	40.41
15-25m	10.51	11.64	6.78	17.30	72.79
25-40m	9.60	9.73	6.89	16.50	61.29
>40m	10.00	11.98	6.55	16.55	57.36
1st quartile	6.09	0.48	1.35	9.95	3.64
2nd quartile (median)	10.43	6.00	3.79	15.54	17.41
3rd quartile	16.62	9.44	7.42	24.16	44.50

Annex 7

Airport financial performance (US$ per WLU, 2013)

		Total airport revenue	Operating revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Non-operating revenue
Region	**Africa**	16.60	15.90	11.49	4.41	0.70
	Asia-Pacific	15.31	14.84	7.75	7.10	0.43
	Europe	25.60	24.98	15.36	9.62	0.62
	Latin America-Caribbean	13.40	13.13	8.51	4.62	0.27
	Middle East	24.85	24.37	12.60	11.77	0.48
	North America	13.75	12.35	7.50	4.85	1.40
	World	17.91	17.11	10.15	6.96	0.80
Airport size (passengers)	**<1m**	14.23	12.71	8.87	3.84	1.52
	1-5m	14.22	13.04	8.73	4.30	1.18
	5-15m	15.90	14.98	9.32	5.66	0.92
	15-25m	20.33	19.27	11.15	8.12	0.99
	25-40m	16.88	16.41	9.80	6.62	0.47
	>40m	17.73	16.86	9.20	7.66	0.87
Till system	**Single till**	17.31	16.63	10.10	6.53	0.67
	Hybrid till	16.34	15.43	8.96	6.48	0.91
	Dual till	19.67	19.17	11.53	7.64	0.50
Ownership model	**Public ownership (100%)**	15.58	14.69	8.58	6.11	0.88
	Public-private partnership (PPP)	21.25	20.83	12.98	7.85	0.42
	Private ownership (100%)	23.79	22.96	13.99	8.98	0.83
Selected economic groupings	**Advanced economies**	19.90	18.93	10.99	7.94	0.95
	Major advanced economies (G7)	18.98	17.77	10.61	7.16	1.19
	Euro area	24.99	24.50	15.28	9.21	0.50
	European Union	26.19	25.55	15.89	9.66	0.63
	Emerging and developing economies	13.49	13.04	8.23	4.81	0.45
	Emerging and developing Asia	11.09	10.84	6.93	3.91	0.25
	ASEAN-5	11.11	10.38	5.77	4.61	0.73
	Sub-Saharan Africa	16.75	16.43	11.57	4.86	0.32
	Selected prospect markets					
	BRICS	11.63	11.44	7.45	3.98	0.19
	Next 11	13.31	12.86	7.01	5.85	0.46
	MINT	12.51	12.12	7.48	4.64	0.39
	Emerging aviation markets	12.67	12.39	7.55	4.83	0.28
	Major exporters of manufactured goods	18.48	17.52	10.26	7.25	0.95

Annex 7 (cont'd)

Airport financial performance (US$ per WLU, 2013)

		Total operating expenses	Operating surplus/deficit (EBITDA)	Capital costs	Total cost (operating + capital costs)	Debt
Region	**Africa**	5.99	10.21	5.02	11.11	38.36
	Asia-Pacific	6.33	8.98	3.67	9.98	33.96
	Europe	14.28	11.32	7.37	21.82	63.36
	Latin America-Caribbean	7.70	5.71	2.29	9.95	11.83
	Middle East	14.22	10.77	6.74	21.28	140.84
	North America	6.40	7.37	5.86	12.26	48.60
	World	9.02	8.90	5.45	14.49	48.05
Airport size (passengers)	**<1m**	12.48	2.10	3.75	16.92	27.35
	1-5m	8.02	6.24	4.06	12.33	27.48
	5-15m	8.28	7.57	4.44	12.62	34.84
	15-25m	9.65	10.68	6.21	15.85	66.41
	25-40m	8.39	8.49	6.02	14.40	53.43
	>40m	8.07	9.66	5.29	13.35	47.20
Till system	**Single till**	8.23	9.07	5.49	13.81	57.49
	Hybrid till	8.09	8.25	4.82	12.93	35.98
	Dual till	10.69	8.98	5.13	15.87	44.92
Ownership model	**Public ownership (100%)**	7.74	7.84	4.91	12.69	47.31
	Public-private partnership (PPP)	11.91	9.34	5.50	17.32	35.06
	Private ownership (100%)	11.03	12.76	7.65	18.71	71.91

Selected economic groupings	**Advanced economies**	9.97	9.93	6.45	16.47	56.19
	Major advanced economies (G7)	9.98	9.01	6.67	16.65	58.74
	Euro area	14.87	10.13	7.06	22.24	56.67
	European Union	14.99	11.20	7.63	22.86	66.63
	Emerging and developing economies	6.83	6.63	3.14	9.86	24.31
	Emerging and developing Asia	5.19	5.89	2.95	8.20	13.43
	ASEAN-5	4.92	6.19	1.50	6.19	14.24
	Sub-Saharan Africa	5.84	10.32	3.48	9.47	38.97
	Selected prospect markets					
	BRICS	6.26	5.37	2.13	8.15	12.01
	Next 11	5.06	8.14	2.94	8.00	12.49
	MINT	4.94	7.31	2.87	7.81	11.93
	Emerging aviation markets	6.38	6.28	2.75	9.01	19.50
	Major exporters of manufactured goods	9.37	9.12	5.84	15.21	51.98

Annex 8

Airport financial performance (thousands US$ per operator employee, 2013)

		Total airport revenue	Operating revenue	Operating aeronautical revenue	Operating non-aeronautical revenue	Non-operating revenue
Region	**Africa**	101	96	70	27	4
	Asia-Pacific	277	269	140	128	8
	Europe	285	279	171	107	7
	Latin America-Caribbean	239	233	150	84	5
	Middle East	326	320	165	154	6
	North America	361	324	196	127	37
	World	286	273	162	111	12
Airport size (passengers)	**<1m**	70	61	43	18	8
	1-5m	153	141	95	46	12
	5-15m	204	192	119	73	12
	15-25m	473	449	261	188	22
	25-40m	310	302	179	123	8
	>40m	332	315	172	143	16
Till system	**Single till**	248	239	145	94	10
	Hybrid till	362	342	199	144	20
	Dual till	267	260	155	105	7
Ownership model	**Public ownership (100%)**	270	255	149	106	15
	Public-private partnership (PPP)	289	284	176	108	5
	Private ownership (100%)	314	304	185	119	11
Selected economic groupings	**Advanced economies**	422	402	233	169	20
	Major advanced economies (G7)	379	355	212	143	23
	Euro area	349	342	213	129	7
	European Union	329	321	200	122	8
	Emerging and developing economies	139	135	85	50	4
	Emerging and developing Asia	139	136	87	49	3
	ASEAN-5	140	130	73	58	9
	Sub-Saharan Africa	123	121	85	36	2
	Selected prospect markets					
	BRICS	148	147	94	52	2
	Next 11	168	163	88	75	5
	MINT	159	155	96	59	4
	Emerging aviation markets	182	179	108	70	4
	Major exporters of manufactured goods	374	355	207	147	19

Annex 8 (cont'd)

Airport financial performance (thousands US$ per operator employee, 2013)

		Total operating expenses	Operating surplus/deficit (EBITDA)	Capital costs	Total cost (operating + capital costs)	Debt
Region	**Africa**	36	62	33	74	261
	Asia-Pacific	115	163	69	186	593
	Europe	160	126	82	245	734
	Latin America-Caribbean	136	101	43	180	261
	Middle East	191	145	89	281	1,380
	North America	166	195	154	320	1,298
	World	144	143	88	236	802
Airport size (passengers)	**<1m**	65	8	22	95	151
	1-5m	88	66	43	137	311
	5-15m	107	98	60	170	472
	15-25m	226	247	143	377	1,566
	25-40m	153	157	109	262	988
	>40m	151	181	99	250	919
Till system	**Single till**	120	132	80	202	833
	Hybrid till	179	183	109	292	788
	Dual till	145	122	71	219	662
Ownership model	**Public ownership (100%)**	135	137	86	224	877
	Public-private partnership (PPP)	162	127	79	249	514
	Private ownership (100%)	145	169	101	248	903

Selected economic groupings	**Advanced economies**	211	210	135	348	1,161
	Major advanced economies (G7)	200	180	132	332	1,186
	Euro area	208	141	98	308	771
	European Union	189	141	95	285	836
	Emerging and developing economies	71	69	33	106	263
	Emerging and developing Asia	65	74	38	106	172
	ASEAN-5	62	78	19	79	152
	Sub-Saharan Africa	44	78	34	92	415
	Selected prospect markets					
	BRICS	80	68	29	112	182
	Next 11	64	108	36	102	162
	MINT	63	99	34	100	210
	Emerging aviation markets	92	90	40	133	328
	Major exporters of manufactured goods	189	184	118	308	1,055

Distribution of revenue

Annex 9

Distribution of revenue (% of total airport revenue, 2013)

		Aeronautical revenue*	Non-aeronautical revenue**	Non-operating revenue
Region	**Africa**	69.2%	26.5%	4.2%
	Asia-Pacific	50.6%	46.4%	3.0%
	Europe	60.0%	37.6%	2.4%
	Latin America-Caribbean	63.5%	34.5%	2.0%
	Middle East	50.7%	47.3%	1.9%
	North America	54.5%	35.3%	10.2%
	World	56.7%	38.8%	4.5%
Airport size (passengers)	**<1m**	61.6%	26.7%	11.7%
	1-5m	61.4%	30.3%	8.3%
	5-15m	58.6%	35.6%	5.8%
	15-25m	54.8%	39.9%	5.2%
	25-40m	58.0%	39.2%	2.8%
	>40m	51.9%	43.2%	4.9%
Till system	**Single till**	58.4%	37.7%	3.9%
	Hybrid till	54.8%	39.6%	5.5%
	Dual till	58.6%	38.9%	2.5%
Ownership model	**Public ownership (100%)**	55.1%	39.2%	5.7%
	Public-private partnership (PPP)	61.1%	36.9%	2.0%
	Private ownership (100%)	58.8%	37.7%	3.5%

Selected economic groupings	**Advanced economies**	55.2%	39.9%	4.9%
	Major advanced economies (G7)	55.9%	37.7%	6.4%
	Euro area	61.2%	36.9%	2.0%
	European Union	60.7%	36.9%	2.4%
	Emerging and developing economies	61.0%	35.7%	3.3%
	Emerging and developing Asia	62.5%	35.3%	2.2%
	ASEAN-5	52.0%	41.5%	6.6%
	Sub-Saharan Africa	69.1%	29.0%	1.9%
	Selected prospect markets			
	BRICS	64.1%	34.3%	1.6%
	Next 11	52.7%	43.9%	3.4%
	MINT	59.8%	37.1%	3.1%
	Emerging aviation markets	59.6%	38.2%	2.2%
	Major exporters of manufactured goods	55.5%	39.2%	5.2%

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

Annex 10

Distribution of revenue (% of total airport revenue, 2013)

		Aeronautical revenue	Ground handling revenue	Non-aeronautical revenue	Non-operating revenue
Region	**Africa**	67.6%	2.3%	25.9%	4.2%
	Asia-Pacific	49.6%	1.3%	46.1%	3.0%
	Europe	56.1%	4.9%	36.5%	2.4%
	Latin America-Caribbean	62.7%	1.1%	34.2%	2.0%
	Middle East	49.5%	1.6%	47.0%	1.9%
	North America	54.3%	0.1%	35.2%	10.2%
	World	54.8%	2.5%	38.2%	4.5%
Airport size (passengers)	**<1m**	54.8%	4.8%	25.4%	11.3%
	1-5m	58.5%	3.5%	29.7%	8.3%
	5-15m	55.9%	3.1%	35.2%	5.8%
	15-25m	53.1%	3.2%	38.1%	5.5%
	25-40m	56.2%	1.9%	39.1%	2.8%
	>40m	50.0%	2.0%	43.0%	4.9%
Till system	**Single till**	57.3%	1.7%	37.1%	3.9%
	Hybrid till	53.6%	2.7%	38.1%	5.5%
	Dual till	55.6%	3.5%	38.4%	2.5%
Ownership model	**Public ownership (100%)**	53.8%	1.7%	38.6%	5.8%
	Public-private partnership (PPP)	58.5%	4.0%	35.5%	2.0%
	Private ownership (100%)	55.5%	3.5%	37.5%	3.5%

Selected economic groupings	**Advanced economies**	53.2%	2.6%	39.2%	4.9%
	Major advanced economies (G7)	53.7%	2.6%	37.1%	6.5%
	Euro area	56.0%	6.4%	35.6%	2.0%
	European Union	56.5%	5.2%	35.9%	2.4%
	Emerging and developing economies	59.3%	2.3%	35.1%	3.3%
	Emerging and developing Asia	61.2%	2.5%	34.0%	2.2%
	ASEAN-5	51.2%	0.8%	41.4%	6.6%
	Sub-Saharan Africa	67.9%	1.6%	28.6%	1.9%
	Selected prospect markets				
	BRICS	63.7%	1.1%	33.6%	1.6%
	Next 11	51.9%	1.4%	43.3%	3.4%
	MINT	58.8%	1.9%	36.1%	3.1%
	Emerging aviation markets	58.8%	1.4%	37.6%	2.2%
	Major exporters of manufactured goods	53.5%	2.6%	38.6%	5.3%

Annex 11

Distribution of aeronautical revenue (% of total aeronautical revenue, 2013)

		Passenger charges (AIF and PFC included)	Landing charges	Terminal rentals*	Security charges	Other aeronautical charges**
Region	**Africa**	64%	25%	1%	1%	10%
	Asia-Pacific	40%	25%	2%	5%	28%
	Europe	44%	18%	0%	18%	21%
	Latin America-Caribbean	63%	13%	0%	3%	22%
	Middle East	77%	18%	0%	1%	4%
	North America	24%	27%	42%	0%	8%
	World	41%	21%	12%	8%	17%
Airport size (passengers)	**<1m**	54%	18%	3%	6%	20%
	1-5m	51%	20%	7%	9%	13%
	5-15m	48%	21%	10%	6%	14%
	15-25m	44%	23%	11%	11%	12%
	25-40m	33%	26%	17%	3%	21%
	>40m	35%	20%	21%	2%	22%
Till system	**Single till**	46%	22%	6%	8%	18%
	Hybrid till	42%	22%	11%	11%	13%
	Dual till	45%	20%	4%	12%	19%
Ownership model	**Public ownership (100%)**	36%	24%	19%	5%	15%
	Public-private partnership (PPP)	45%	19%	0%	19%	16%
	Private ownership (100%)	45%	16%	3%	7%	29%
Selected economic groupings	**Advanced economies**	35%	22%	16%	10%	16%
	Major advanced economies (G7)	30%	23%	25%	7%	15%
	Euro area	42%	17%	0%	19%	22%
	European Union	44%	18%	0%	18%	20%
	Emerging and developing economies	57%	18%	1%	3%	20%
	Emerging and developing Asia	31%	20%	3%	5%	41%
	ASEAN-5	70%	23%	0%	2%	4%
	Sub-Saharan Africa	63%	29%	1%	1%	5%
	Selected prospect markets					
	BRICS	38%	20%	2%	3%	37%
	Next 11	60%	18%	0%	1%	20%
	MINT	63%	12%	1%	1%	23%
	Emerging aviation markets	54%	18%	1%	3%	25%
	Major exporters of manufactured goods	36%	22%	17%	9%	16%

* Terminal rentals paid by airlines for space utilization.

** Other aeronautical charges include miscellaneous passenger-related (security, transfer/transit, etc.) and aircraft-related (aircraft parking, boarding bridge, navaid, etc.). charges, cargo charges and all other unidentified charges.

Annex 12

Distribution of aircraft-related to passenger-related revenues (2013) (based on aircraft-related charges and passenger-related charges)

		Aircraft-related revenue	Passenger-related revenue
Region	**Africa**	30.53%	69.47%
	Asia-Pacific	44.46%	55.54%
	Europe	34.76%	65.24%
	Latin America-Caribbean	24.61%	75.39%
	Middle East	21.34%	78.66%
	North America	53.39%	46.61%
	World	37.89%	62.11%
Airport size (passengers)	**<1m**	32.90%	67.10%
	1-5m	29.83%	70.17%
	5-15m	31.98%	68.02%
	15-25m	33.37%	66.63%
	25-40m	52.08%	47.92%
	>40m	45.50%	54.50%
Till system	**Single till**	35.10%	64.90%
	Hybrid till	32.43%	67.57%
	Dual till	36.11%	63.89%
Ownership model	**Public ownership (100%)**	42.51%	57.49%
	Public-private partnership (PPP)	28.29%	71.71%
	Private ownership (100%)	43.53%	56.47%

Selected economic groupings	**Advanced economies**	41.72%	58.28%
	Major advanced economies (G7)	46.78%	53.22%
	Euro area	34.43%	65.57%
	European Union	33.94%	66.06%
	Emerging and developing economies	29.97%	70.03%
	Emerging and developing Asia	36.38%	63.62%
	ASEAN-5	26.65%	73.35%
	Sub-Saharan Africa	33.66%	66.34%
	Selected prospect markets		
	BRICS	37.00%	63.00%
	Next 11	33.71%	66.29%
	MINT	32.29%	67.71%
	Emerging aviation markets	32.10%	67.90%
	Major exporters of manufactured goods	40.33%	59.67%

Annex 13

Distribution of ground handling revenue (% of total ground handling revenue, 2013)

		Ground handling concessions revenue	Ground handling charges	Other
Region	**Africa**	27.3%	62.9%	9.8%
	Asia-Pacific	25.3%	22.1%	52.6%
	Europe	27.6%	55.8%	16.6%
	Latin America-Caribbean	22.9%	56.0%	21.1%
	Middle East	65.5%	0.0%	34.5%
	North America	...	...	...
	World	27.2%	51.9%	20.9%
Airport size (passengers)	**<1m**	6.4%	86.6%	7.1%
	1-5m	16.8%	66.4%	16.7%
	5-15m	13.4%	39.5%	47.1%
	15-25m	31.3%	67.0%	1.7%
	25-40m	5.5%	63.4%	31.0%
	>40m	50.1%	29.9%	20.0%
Till system	**Single till**	36.8%	47.6%	15.6%
	Hybrid till	56.1%	36.5%	7.4%
	Dual till	12.3%	59.7%	28.0%
Ownership model	**Public ownership (100%)**	22.3%	51.4%	26.2%
	Public-private partnership (PPP)	35.3%	50.0%	14.8%
	Private ownership (100%)	20.2%	61.6%	18.2%

Selected economic groupings	**Advanced economies**	26.75%	53.78%	19.47%
	Major advanced economies (G7)	19.70%	51.90%	28.40%
	Euro area	27.99%	56.51%	15.50%
	European Union	25.71%	57.78%	16.50%
	Emerging and developing economies	28.48%	46.36%	25.16%
	Emerging and developing Asia	50.79%	44.29%	4.92%
	ASEAN-5	3.08%	6.12%	90.81%
	Sub-Saharan Africa	28.51%	51.02%	20.47%
	Selected prospect markets			
	BRICS	60.07%	31.70%	8.23%
	Next 11	45.78%	35.55%	18.66%
	MINT	49.96%	44.41%	5.63%
	Emerging aviation markets	49.91%	33.46%	16.63%
	Major exporters of manufactured goods	26.19%	54.38%	19.42%

Annex 14

Aircraft-related revenues* breakdown (2013)

		Landing charges	Parking charges	Boarding bridge charges	Noise and environmental charges	Navaid charges	Other aircraft-related charges
Region	**Africa**	87%	5.2%	3.9%	0.0%	3.5%	0.6%
	Asia-Pacific	75%	5.8%	6.1%	0.7%	2.0%	10.2%
	Europe	63%	8.9%	5.9%	4.2%	10.2%	7.8%
	Latin America-Caribbean	58%	13.7%	5.8%	0.0%	17.1%	5.2%
	Middle East	83%	7.2%	4.5%	0.0%	1.6%	3.9%
	North America	99%	0.1%	0.8%	0.0%	0.0%	0.1%
	World	76%	6.1%	4.4%	1.8%	5.8%	5.7%
Airport size (passengers)	**<1m**	57%	6.8%	1.9%	0.0%	30.2%	4.4%
	1-5m	80%	4.7%	2.5%	0.1%	6.7%	5.7%
	5-15m	80%	5.3%	5.9%	0.9%	5.2%	3.2%
	15-25m	81%	5.1%	5.4%	4.7%	2.7%	1.2%
	25-40m	79%	7.0%	1.4%	3.7%	1.3%	8.0%
	>40m	85%	2.2%	4.4%	0.0%	6.8%	1.1%
Till system	**Single till**	72%	7.1%	8.6%	0.9%	8.7%	2.9%
	Hybrid till	81%	5.2%	3.5%	4.6%	1.5%	4.6%
	Dual till	66%	8.9%	3.6%	2.6%	8.2%	11.3%
Ownership model	**Public ownership (100%)**	78%	4.2%	4.5%	1.6%	8.1%	3.7%
	Public-private partnership (PPP)	70%	11.2%	2.5%	3.2%	0.6%	12.8%
	Private ownership (100%)	76%	7.5%	8.1%	1.2%	3.5%	4.2%

Selected economic groupings	**Advanced economies**	78.36%	5.79%	4.04%	2.46%	3.06%	6.29%
	Major advanced economies (G7)	81.89%	5.99%	1.75%	2.05%	0.11%	8.22%
	Euro area	62.28%	10.20%	6.51%	3.62%	7.74%	9.65%
	European Union	64.95%	10.34%	5.90%	3.56%	6.71%	8.54%
	Emerging and developing economies	69.80%	6.84%	5.60%	0.13%	13.63%	4.01%
	Emerging and developing Asia	78.90%	6.02%	3.41%	0.00%	7.93%	3.75%
	ASEAN-5	88.59%	2.76%	8.62%	0.00%	0.00%	0.03%
	Sub-Saharan Africa	90.14%	4.95%	0.47%	0.00%	4.25%	0.19%
	Selected prospect markets						
	BRICS	74.87%	6.48%	1.85%	0.00%	13.97%	2.82%
	Next 11	57.47%	8.26%	8.53%	0.00%	23.38%	2.37%
	MINT	40.43%	9.41%	10.28%	0.00%	37.69%	2.20%
	Emerging aviation markets	65.94%	7.11%	5.31%	0.63%	16.60%	4.41%
	Major exporters of manufactured goods	78.39%	6.34%	3.45%	2.52%	2.87%	6.43%

*Terminal rentals are excluded from aircraft-related revenues.

Annex 15

Passenger-related revenues breakdown (2013)

		Passenger charges (AIF and PFC included)	Security charges	Transfer/transit charges	Other passenger-related charges
Region	**Africa**	98.72%	0.83%	0.00%	0.46%
	Asia-Pacific	81.58%	7.72%	0.79%	9.91%
	Europe	69.31%	26.74%	0.72%	3.23%
	Latin America-Caribbean	95.70%	4.21%	0.01%	0.08%
	Middle East	98.24%	1.56%	0.11%	0.08%
	North America	99.94%	0.06%	0.00%	0.00%
	World	81.19%	15.16%	0.49%	3.16%
Airport size (passengers)	**<1m**	89.09%	9.48%	0.17%	1.27%
	1-5m	82.29%	14.89%	0.05%	2.76%
	5-15m	84.32%	10.05%	0.00%	5.62%
	15-25m	78.98%	18.35%	1.61%	1.06%
	25-40m	94.36%	5.57%	0.00%	0.07%
	>40m	91.84%	1.49%	1.20%	5.48%
Till system	**Single till**	81.48%	13.59%	0.55%	4.38%
	Hybrid till	73.16%	19.26%	0.92%	6.66%
	Dual till	77.87%	19.69%	0.43%	2.01%
Ownership model	**Public ownership (100%)**	86.19%	11.01%	0.60%	2.21%
	Public-private partnership (PPP)	65.11%	28.12%	0.61%	6.15%
	Private ownership (100%)	91.44%	7.02%	0.11%	1.43%

Selected economic groupings	**Advanced economies**	76.22%	20.62%	0.57%	2.59%
	Major advanced economies (G7)	81.69%	16.75%	0.25%	1.30%
	Euro area	66.65%	29.17%	0.64%	3.54%
	European Union	69.17%	26.95%	0.59%	3.29%
	Emerging and developing economies	90.53%	4.81%	0.36%	4.30%
	Emerging and developing Asia	64.10%	10.11%	0.00%	25.79%
	ASEAN-5	96.28%	2.82%	0.00%	0.90%
	Sub-Saharan Africa	98.53%	0.82%	0.00%	0.65%
	Selected prospect markets				
	BRICS	78.41%	7.02%	0.02%	14.55%
	Next 11	93.96%	1.30%	2.48%	2.26%
	MINT	95.53%	1.89%	1.78%	0.80%
	Emerging aviation markets	89.72%	4.17%	0.45%	5.66%
	Major exporters of manufactured goods	78.00%	18.72%	0.47%	2.80%

Annex 16

Distribution of non-aeronautical revenue (% of total non-aeronautical revenue, 2013)

		Retail concessions	Food and beverage	Car parking*	Rental car concessions	Advertising
Region	**Africa**	37.1%	1.3%	15.1%	3.9%	7.1%
	Asia-Pacific	39.7%	3.4%	9.2%	1.2%	4.5%
	Europe	34.6%	4.8%	15.1%	2.2%	2.2%
	Latin America-Caribbean	25.3%	6.0%	8.9%	2.6%	4.7%
	Middle East	48.6%	4.9%	7.7%	2.2%	3.0%
	North America	8.3%	7.1%	39.3%	16.6%	5.7%
	World	27.7%	5.2%	20.3%	6.2%	3.9%
Airport size (passengers)	**<1m**	16.9%	2.7%	14.0%	5.9%	3.5%
	1-5m	19.1%	4.6%	25.1%	9.3%	3.8%
	5-15m	23.0%	4.8%	26.2%	7.2%	3.5%
	15-25m	26.2%	5.7%	22.8%	6.6%	3.6%
	25-40m	23.9%	5.5%	21.4%	5.8%	3.3%
	>40m	34.8%	5.7%	16.1%	6.3%	6.0%
Till system	**Single till**	35.5%	4.0%	13.4%	5.2%	2.5%
	Hybrid till	24.0%	8.3%	22.7%	6.8%	6.3%
	Dual till	31.1%	4.3%	16.3%	2.9%	3.2%
Ownership model	**Public ownership (100%)**	22.9%	6.4%	24.2%	9.0%	4.1%
	Public-private partnership (PPP)	30.3%	3.5%	16.1%	1.4%	5.2%
	Private ownership (100%)	40.3%	3.3%	12.1%	2.4%	2.1%
Selected economic groupings	**Advanced economies**	26.6%	5.1%	23.4%	7.3%	3.3%
	Major advanced economies (G7)	19.8%	5.6%	27.7%	9.3%	3.8%
	Euro area	27.4%	6.0%	18.2%	3.1%	2.6%
	European Union	32.0%	5.1%	15.3%	2.4%	2.1%
	Emerging and developing economies	32.3%	5.8%	7.9%	1.6%	6.6%
	Emerging and developing Asia	31.5%	4.2%	5.3%	0.8%	16.9%
	ASEAN-5	34.3%	13.7%	5.3%	0.2%	3.6%
	Sub-Saharan Africa	27.6%	0.1%	17.5%	5.1%	7.7%
	Selected prospect markets					
	BRICS	25.7%	5.5%	9.2%	2.8%	12.1%
	Next 11	44.8%	1.0%	6.3%	0.6%	2.6%
	MINT	37.0%	1.7%	7.7%	1.2%	3.6%
	Emerging aviation markets	30.9%	6.3%	7.9%	1.9%	7.6%
	Major exporters of manufactured goods	24.2%	5.5%	22.7%	7.4%	4.0%

*Car parking revenue includes revenue from airport-operated parking lots and car parking concessions revenue.

Annex 16 (cont'd)

Distribution of non-aeronautical revenue (% of total non-aeronautical revenue, 2013)

		Fuel and oil	Aviation catering service	Utility recharges	Property & real estate revenue or rent	Other
Region	**Africa**	3.2%	0.3%	4.4%	14.9%	12.6%
	Asia-Pacific	1.7%	0.5%	4.1%	27.9%	7.9%
	Europe	0.8%	0.3%	5.6%	18.7%	15.7%
	Latin America-Caribbean	3.6%	0.4%	1.8%	13.1%	33.6%
	Middle East	7.0%	1.4%	2.7%	10.7%	11.9%
	North America	...	...	...	13.5%	9.4%
	World	1.1%	0.3%	3.4%	18.3%	13.7%
Airport size (passengers)	**<1m**	3.2%	0.1%	2.7%	21.2%	29.7%
	1-5m	2.2%	1.1%	2.7%	17.5%	14.7%
	5-15m	1.7%	0.4%	3.8%	17.5%	12.0%
	15-25m	0.9%	0.0%	2.6%	21.8%	9.9%
	25-40m	0.8%	0.2%	1.6%	20.0%	17.6%
	>40m	0.5%	0.2%	4.7%	13.9%	11.9%
Till system	**Single till**	1.8%	0.5%	5.7%	17.1%	14.3%
	Hybrid till	0.8%	0.3%	1.5%	17.7%	11.6%
	Dual till	0.9%	0.3%	3.7%	22.2%	15.1%
Ownership model	**Public ownership (100%)**	1.2%	0.2%	2.2%	16.9%	12.9%
	Public-private partnership (PPP)	1.0%	0.4%	3.6%	22.9%	15.7%
	Private ownership (100%)	0.7%	0.6%	6.8%	17.5%	14.2%

Selected economic groupings	**Advanced economies**	0.5%	0.1%	3.5%	18.6%	11.8%
	Major advanced economies (G7)	0.1%	0.1%	3.7%	16.4%	13.6%
	Euro area	0.8%	0.2%	4.0%	21.7%	16.0%
	European Union	0.6%	0.3%	6.0%	19.3%	16.9%
	Emerging and developing economies	3.6%	0.9%	2.9%	16.7%	21.5%
	Emerging and developing Asia	5.1%	1.2%	2.7%	21.2%	11.2%
	ASEAN-5	1.4%	1.6%	4.8%	18.1%	17.2%
	Sub-Saharan Africa	3.5%	0.2%	5.5%	18.4%	14.5%
	Selected prospect markets					
	BRICS	4.7%	1.2%	3.3%	17.4%	18.2%
	Next 11	1.9%	0.0%	1.7%	27.1%	14.1%
	MINT	2.3%	0.0%	1.6%	20.2%	24.8%
	Emerging aviation markets	3.6%	0.7%	2.1%	18.2%	20.8%
	Major exporters of manufactured goods	0.4%	0.2%	3.5%	18.5%	13.5%

Annex 17

Distribution of non-aeronautical revenue (2013)

		Concessions	Airport-owned activities	Other non-aeronautical
Region	**Africa**	65%	28%	7%
	Asia-Pacific	64%	34%	2%
	Europe	50%	46%	4%
	Latin America-Caribbean	64%	32%	4%
	Middle East	76%	19%	4%
	North America	77%	14%	9%
	World	61%	33%	5%
Airport size (passengers)	**<1m**	59%	38%	3%
	1-5m	65%	31%	4%
	5-15m	64%	30%	6%
	15-25m	63%	33%	4%
	25-40m	62%	31%	7%
	>40m	64%	31%	5%
Till system	**Single till**	63%	34%	3%
	Hybrid till	66%	27%	6%
	Dual till	55%	40%	5%
Ownership model	**Public ownership (100%)**	69%	25%	6%
	Public-private partnership (PPP)	50%	45%	4%
	Private ownership (100%)	53%	43%	4%

Selected economic groupings	**Advanced economies**	60.5%	34.1%	5.4%
	Major advanced economies (G7)	59.7%	33.5%	6.7%
	Euro area	44.3%	51.4%	4.2%
	European Union	47.4%	48.5%	4.0%
	Emerging and developing economies	65.4%	30.5%	4.1%
	Emerging and developing Asia	72.7%	26.3%	1.0%
	ASEAN-5	62.6%	30.8%	6.6%
	Sub-Saharan Africa	63.5%	29.0%	7.5%
	Selected prospect markets			
	BRICS	70.4%	26.4%	3.2%
	Next 11	64.0%	33.3%	2.8%
	MINT	54.4%	42.9%	2.7%
	Emerging aviation markets	66.2%	30.9%	2.9%
	Major exporters of manufactured goods	60.1%	34.3%	5.6%

Distribution of costs

Annex 18

Distribution of operating expenses (% of total operating expenses, 2013)

		Personnel expenses	Contracted services	Materials, equipment, supplies	Communications, utilities, energy and waste	Insurance, claims, settlements
Region	**Africa**	40.4%	4.0%	2.8%	12.1%	2.1%
	Asia-Pacific	20.6%	21.0%	1.6%	9.6%	1.7%
	Europe	39.3%	22.2%	3.4%	6.8%	1.6%
	Latin America-Caribbean	26.9%	17.3%	1.9%	11.4%	0.9%
	Middle East	46.2%	16.4%	0.0%	10.1%	0.6%
	North America	37.3%	29.7%	6.4%	8.1%	1.8%
	World	35.3%	23.1%	3.7%	8.1%	1.6%
Airport size (passengers)	**<1m**	42.9%	12.3%	3.3%	6.2%	1.1%
	1-5m	39.2%	16.1%	3.7%	7.5%	1.6%
	5-15m	36.4%	21.4%	3.9%	8.2%	1.3%
	15-25m	36.8%	21.9%	5.3%	8.1%	1.1%
	25-40m	28.8%	23.6%	6.0%	9.2%	1.7%
	>40m	36.0%	19.5%	3.3%	8.3%	0.8%
Till system	**Single till**	35.9%	25.1%	2.2%	9.1%	2.5%
	Hybrid till	31.1%	20.4%	4.3%	8.3%	0.8%
	Dual till	36.5%	23.9%	3.8%	7.0%	1.3%
Ownership model	**Public ownership (100%)**	35.2%	26.6%	5.0%	8.0%	2.2%
	Public-private partnership (PPP)	35.8%	24.2%	3.0%	7.6%	0.8%
	Private ownership (100%)	35.5%	11.6%	0.8%	8.8%	0.7%
Selected economic groupings	**Advanced economies**	36.5%	25.7%	4.0%	7.2%	1.7%
	Major advanced economies (G7)	38.6%	22.5%	4.5%	8.0%	1.4%
	Euro area	37.9%	26.3%	3.0%	6.8%	2.0%
	European Union	39.4%	22.9%	3.1%	7.0%	1.7%
	Emerging and developing economies	30.7%	13.6%	2.6%	11.4%	1.1%
	Emerging and developing Asia	23.5%	12.1%	1.5%	13.4%	0.6%
	ASEAN-5	22.9%	19.4%	2.3%	8.7%	0.6%
	Sub-Saharan Africa	41.7%	3.5%	2.1%	15.7%	2.1%
	Selected prospect markets					
	BRICS	33.3%	12.3%	2.1%	11.0%	0.5%
	Next 11	21.7%	28.4%	2.9%	12.9%	1.0%
	MINT	20.3%	21.9%	3.5%	16.6%	1.1%
	Emerging aviation markets	26.6%	14.3%	2.1%	12.5%	0.8%
	Major exporters of manufactured goods	35.2%	25.8%	3.7%	8.1%	1.7%

Annex 18 (cont'd)

Distribution of operating expenses (% of total operating expenses, 2013)

		Maintenance (excluding contracted services)	Lease, rent, concession fee payments	General and administration expenses	Other
Region	**Africa**	9.6%	2.1%	2.5%	24.4%
	Asia-Pacific	10.0%	9.9%	12.8%	12.8%
	Europe	5.7%	3.8%	7.2%	10.0%
	Latin America-Caribbean	8.5%	9.8%	6.5%	16.7%
	Middle East	9.4%	10.7%	4.7%	1.9%
	North America	0.2%	2.7%	4.1%	9.6%
	World	5.3%	5.0%	7.0%	10.8%
Airport size (passengers)	**<1m**	6.9%	1.9%	11.3%	14.1%
	1-5m	4.5%	8.0%	7.6%	11.8%
	5-15m	5.5%	8.0%	6.9%	8.5%
	15-25m	4.4%	4.5%	7.0%	10.9%
	25-40m	4.3%	9.1%	7.2%	10.1%
	>40m	7.0%	2.9%	7.5%	14.7%
Till system	**Single till**	5.7%	6.0%	6.7%	6.8%
	Hybrid till	4.6%	8.8%	14.0%	7.7%
	Dual till	6.8%	3.8%	6.7%	10.3%
Ownership model	**Public ownership (100%)**	3.5%	3.5%	6.0%	10.2%
	Public-private partnership (PPP)	6.4%	5.8%	8.7%	7.8%
	Private ownership (100%)	9.5%	9.0%	8.3%	15.8%

Selected economic groupings	**Advanced economies**	4.4%	3.8%	6.9%	9.7%
	Major advanced economies (G7)	4.8%	3.3%	6.5%	10.5%
	Euro area	5.4%	1.8%	6.4%	10.4%
	European Union	5.9%	3.7%	7.1%	9.1%
	Emerging and developing economies	8.5%	9.7%	7.4%	15.0%
	Emerging and developing Asia	10.3%	21.8%	12.7%	4.1%
	ASEAN-5	8.1%	4.8%	17.8%	15.5%
	Sub-Saharan Africa	10.7%	1.0%	3.5%	19.7%
	Selected prospect markets				
	BRICS	8.8%	10.0%	6.7%	15.2%
	Next 11	6.0%	3.7%	11.3%	12.1%
	MINT	6.7%	5.8%	14.6%	9.5%
	Emerging aviation markets	9.0%	12.6%	7.8%	14.4%
	Major exporters of manufactured goods	4.9%	3.6%	7.2%	9.9%

Annex 19

Operating expenses and capital costs (2013)

				% Distribution of capital costs		
		Operating expenses as % of total cost	Capital costs as % of total cost	Interest expenses	Depreciation/ amortization	Other capital costs
Region	**Africa**	61.1%	38.9%	23.8%	75.8%	0.4%
	Asia-Pacific	63.0%	37.0%	31.6%	68.1%	0.3%
	Europe	66.2%	33.8%	33.6%	61.0%	5.4%
	Latin America-Caribbean	77.0%	23.0%	26.3%	43.6%	30.1%
	Middle East	76.1%	23.9%	..	..	..
	North America	52.2%	47.8%	42.5%	57.5%	0.0%
	World	62.4%	37.6%	35.9%	60.1%	4.0%
Airport size (passengers)	**<1m**	77.8%	22.2%	17.7%	73.7%	8.6%
	1-5m	67.1%	32.9%	28.4%	68.9%	2.7%
	5-15m	65.5%	34.5%	35.5%	61.1%	3.4%
	15-25m	60.8%	39.2%	36.2%	62.5%	1.3%
	25-40m	58.2%	41.8%	37.7%	53.2%	9.0%
	>40m	59.8%	40.2%	41.6%	56.9%	1.5%
Till system	**Single till**	60.0%	40.0%	34.6%	58.5%	6.9%
	Hybrid till	62.7%	37.3%	35.6%	61.8%	2.6%
	Dual till	67.7%	32.3%	34.2%	61.7%	4.1%
Ownership model	**Public ownership (100%)**	61.4%	38.6%	34.2%	62.6%	3.2%
	Public-private partnership (PPP)	68.3%	31.7%	32.2%	65.0%	2.7%
	Private ownership (100%)	59.1%	40.9%	44.2%	48.7%	7.1%
Selected economic groupings	**Advanced economies**	60.9%	39.1%	36.7%	61.3%	2.1%
	Major advanced economies (G7)	59.9%	40.1%	38.7%	58.7%	2.6%
	Euro area	68.2%	31.8%	27.0%	66.3%	6.7%
	European Union	66.6%	33.4%	32.9%	62.0%	5.1%
	Emerging and developing economies	69.6%	30.4%	31.6%	52.5%	15.9%
	Emerging and developing Asia	63.2%	36.8%	32.7%	66.7%	0.5%
	ASEAN-5	75.8%	24.2%	15.5%	84.5%	0.0%
	Sub-Saharan Africa	63.3%	36.7%	..	..	..
	Selected prospect markets					
	BRICS	74.6%	25.4%	25.8%	70.0%	4.2%
	Next 11	65.0%	35.0%	27.5%	55.4%	17.1%
	MINT	63.3%	36.7%	32.6%	41.9%	25.5%
	Emerging aviation markets	71.1%	28.9%	24.5%	54.4%	21.1%
	Major exporters of manufactured goods	61.5%	38.5%	35.0%	62.5%	2.5%

Labour productivity and costs

Annex 20

Labour productivity (2013)

		Productivity per airport operator employee (per annum)			
		Movements	Passengers	Cargo (metric tonnes)	WLU
Region	**Africa**	84	5,474	58	6,058
	Asia-Pacific	116	14,458	363	18,089
	Europe	99	9,935	114	11,422
	Latin America-Caribbean	239	16,427	158	18,006
	Middle East	80	10,412	272	13,130
	North America	315	21,880	380	25,682
	World	153	13,466	226	15,867
Airport size (passengers)	**<1m**	187	4,545	61	5,148
	1-5m	178	9,093	158	10,670
	5-15m	141	11,104	164	12,746
	15-25m	222	20,864	189	22,752
	25-40m	148	15,397	229	17,685
	>40m	130	15,090	362	18,709
Till system	**Single till**	133	12,250	207	14,324
	Hybrid till	208	18,993	318	22,178
	Dual till	135	12,035	154	13,576
Ownership model	**Public ownership (100%)**	177	14,500	257	17,068
	Public-private partnership (PPP)	115	11,758	187	13,632
	Private ownership (100%)	115	11,512	147	12,981
Selected economic groupings	**Advanced economies**	205	17,556	314	20,975
	Major advanced economies (G7)	208	16,470	288	19,348
	Euro area	121	12,359	159	14,596
	European Union	109	11,191	137	13,019
	Emerging and developing economies	97	9,112	133	10,440
	Emerging and developing Asia	85	10,110	244	12,549
	ASEAN-5	83	10,835	172	12,556
	Sub-Saharan Africa	122	6,627	74	7,367
	Selected prospect markets				
	BRICS	126	11,293	182	13,108
	Next 11	104	11,125	160	12,728
	MINT	126	11,923	107	12,996
	Emerging aviation markets	126	12,518	207	14,584
	Major exporters of manufactured goods	189	16,622	319	20,060

Annex 21

Labour costs (US$, 2013)

		Labour cost (US$)			
		Labour cost per employee	Labour cost per movement	Labour cost per passenger	Labour cost per WLU
Region	**Africa**	15,157	171	2.7	2.4
	Asia-Pacific	20,406	178	1.5	1.2
	Europe	63,876	633	6.2	5.6
	Latin America-Caribbean	39,058	169	2.5	2.2
	Middle East	58,205	685	6.5	5.6
	North America	61,338	192	2.8	2.4
	World	49,731	309	3.6	3.1
Airport size (passengers)	**<1m**	30,264	166	6.7	5.9
	1-5m	35,115	191	3.9	3.2
	5-15m	39,843	258	3.4	2.9
	15-25m	77,655	336	3.6	3.4
	25-40m	42,732	277	2.8	2.4
	>40m	50,336	375	3.4	2.8
Till system	**Single till**	43,722	316	3.5	3.0
	Hybrid till	56,638	268	2.9	2.5
	Dual till	53,411	403	4.5	4.0
Ownership model	**Public ownership (100%)**	45,667	247	3.1	2.7
	Public-private partnership (PPP)	60,388	499	4.9	4.2
	Private ownership (100%)	53,792	473	4.6	4.1
Selected economic groupings	**Advanced economies**	74,983	352	4.2	3.6
	Major advanced economies (G7)	74,976	340	4.4	3.7
	Euro area	78,633	650	6.3	5.6
	European Union	74,144	679	6.6	5.9
	Emerging and developing economies	19,656	201	2.2	2.0
	Emerging and developing Asia	14,668	172	1.5	1.3
	ASEAN-5	14,104	170	1.3	1.1
	Sub-Saharan Africa	20,150	140	2.7	2.5
	Selected prospect markets				
	BRICS	26,893	200	2.3	2.1
	Next 11	15,783	151	1.4	1.2
	MINT	15,864	125	1.2	1.1
	Emerging aviation markets	21,692	165	1.7	1.5
	Major exporters of manufactured goods	65,919	332	3.9	3.3

Aeronautical activities

22. Passenger and landing charges

23. Fixed asset productivity

24. Airport site and terminal area

25. Airport operations

Annex 22

Passenger and landing charges (US$, 2013)

		Passenger-related revenue per passenger	Aircraft-related revenue per movement	Landing revenue per passenger	Landing revenue per WLU
Region	**Africa**	8.00	225.35	3.05	2.76
	Asia-Pacific	4.55	518.22	2.40	2.02
	Europe	9.57	513.05	2.88	2.64
	Latin America-Caribbean	5.96	134.97	1.14	1.03
	Middle East	12.12	427.81	2.72	2.16
	North America	2.14	167.05	2.43	2.04
	World	5.71	310.13	2.44	2.12
Airport size (passengers)	**<1m**	5.29	70.74	1.55	1.49
	1-5m	6.21	129.60	2.02	1.64
	5-15m	5.75	206.37	2.15	1.87
	15-25m	6.02	280.83	2.51	2.32
	25-40m	3.91	426.62	3.02	2.63
	>40m	4.01	437.24	2.17	1.82
Till system	**Single till**	5.99	291.72	2.30	2.00
	Hybrid till	5.77	328.75	2.23	1.95
	Dual till	7.21	365.06	2.51	2.22
Ownership model	**Public ownership (100%)**	4.15	260.73	2.36	2.04
	Public-private partnership (PPP)	9.91	399.69	2.73	2.36
	Private ownership (100%)	6.64	501.29	2.50	2.30

Selected economic groupings	**Advanced economies**	5.55	343.42	2.80	2.40
	Major advanced economies (G7)	4.17	277.86	2.68	2.27
	Euro area	10.15	549.36	2.82	2.55
	European Union	9.99	521.00	2.89	2.64
	Emerging and developing economies	5.90	238.55	1.74	1.54
	Emerging and developing Asia	4.90	334.69	1.98	1.71
	ASEAN-5	3.88	428.61	1.25	1.11
	Sub-Saharan Africa	8.14	221.43	3.72	3.35
	Selected prospect markets				
	BRICS	4.49	235.77	1.86	1.67
	Next 11	4.91	267.89	1.48	1.30
	MINT	5.08	233.70	1.03	0.95
	Emerging aviation markets	5.32	249.89	1.63	1.43
	Major exporters of manufactured goods	5.28	317.96	2.58	2.20

Annex 23

Fixed asset productivity (2013)

		Terminal area per passenger (sq. meters)	Daily movements per gate	Daily movements per runway	Daily passengers per gate	Daily passengers per check-in desk
Region	**Africa**	9.0	14.1	63	1,238	136
	Asia-Pacific	5.2	14.8	153	1,931	318
	Europe	4.8	13.5	122	1,383	292
	Latin America-Caribbean	3.9	20.8	74	1,716	234
	Middle East	9.6	19.0	130	2,728	272
	North America	3.6	12.8	183	888	297
	World	4.6	13.9	131	1,268	282
Airport size (passengers)	**<1m**	10.3	14.2	29	465	92
	1-5m	4.9	17.0	86	784	207
	5-15m	4.7	16.4	156	1,254	275
	15-25m	3.3	14.8	237	1,393	342
	25-40m	4.5	12.5	283	1,238	296
	>40m	4.4	13.1	369	1,544	352
Till system	**Single till**	5.5	13.2	98	1,249	237
	Hybrid till	4.6	13.3	145	1,227	329
	Dual till	3.9	16.2	136	1,556	303
Ownership model	**Public ownership (100%)**	4.6	13.5	129	1,140	277
	Public-private partnership (PPP)	5.3	13.7	125	1,512	299
	Private ownership (100%)	3.2	17.1	139	1,724	283

Selected economic groupings	**Advanced economies**	4.25	13.03	164	1,117	295
	Major advanced economies (G7)	3.82	13.06	187	1,030	287
	Euro area	5.43	12.58	113	1,309	280
	European Union	5.10	12.68	118	1,315	282
	Emerging and developing economies	5.38	17.12	90	1,834	269
	Emerging and developing Asia	7.01	13.57	141	1,679	304
	ASEAN-5	3.93	14.84	137	2,001	390
	Sub-Saharan Africa	3.33	18.93	60	1,472	125
	Selected prospect markets					
	BRICS	5.05	17.26	114	1,839	275
	Next 11	4.75	17.13	94	1,923	279
	MINT	3.50	18.77	84	1,929	274
	Emerging aviation markets	5.05	17.64	107	1,968	285
	Major exporters of manufactured goods	4.36	13.03	163	1,150	290

Annex 24

Airport site and terminal area (2013)

		Total airport site area (sq. meters)		Passenger terminal area (sq. meters)	
		Daily airside area per movement	Daily landside area per passenger	Daily airside area per passenger	Daily landside area per passenger
Region	**Africa**	41,628	476	2.61	3.70
	Asia-Pacific	16,218	122	4.37	1.96
	Europe	24,042	48	2.30	1.68
	Latin America-Caribbean	22,642	163	3.57	2.54
	Middle East	57,487	547	2.44	6.04
	North America	12,530	265	1.98	2.18
	World	17,642	207	2.82	2.25
Airport size (passengers)	**<1m**	60,017	892	8.64	5.32
	1-5m	26,121	514	3.29	2.81
	5-15m	18,194	293	2.51	2.13
	15-25m	13,710	112	2.29	1.54
	25-40m	9,761	131	1.79	3.03
	>40m	9,782	131	3.44	1.86
Till system	**Single till**	20,007	243	3.43	2.74
	Hybrid till	16,334	204	2.94	1.61
	Dual till	19,718	109	1.99	2.15
Ownership model	**Public ownership (100%)**	17,154	236	2.93	2.55
	Public-private partnership (PPP)	20,424	132	3.66	2.02
	Private ownership (100%)	17,667	117	1.90	1.47
Selected economic groupings	**Advanced economies**	13,956	207	2.48	1.80
	Major advanced economies (G7)	12,954	232	2.02	1.93
	Euro area	21,635	48	2.20	1.98
	European Union	21,597	46	2.29	1.66
	Emerging and developing economies	28,740	207	3.55	3.22
	Emerging and developing Asia	20,798	122	6.99	3.54
	ASEAN-5	12,764	88	5.17	1.31
	Sub-Saharan Africa	35,742	500	2.80	3.05
	Selected prospect markets				
	BRICS	22,162	104	6.36	3.31
	Next 11	28,312	218	2.31	2.41
	MINT	25,168	163	1.77	2.65
	Emerging aviation markets	24,359	130	3.15	3.45
	Major exporters of manufactured goods	13,249	204	2.45	1.92

Annex 25

Airport operations (2013)

		Passengers per movement	Passenger as a % of WLU	Cargo tonnes per movement	Cargo as a % of WLU	Average number of runways	Movements per runway (per day)
Region	**Africa**	64	88.5%	0.83	11.5%	1.35	63
	Asia-Pacific	121	83.8%	2.57	17.8%	1.39	153
	Europe	103	87.8%	1.24	10.6%	1.38	122
	Latin America-Caribbean	66	91.1%	0.70	9.6%	1.24	74
	Middle East	124	78.4%	3.42	21.6%	1.64	130
	North America	57	85.4%	1.01	15.1%	3.12	183
	World	83	85.9%	1.38	14.2%	1.61	131
Airport size (passengers)	**<1m**	24	88.9%	0.29	11.2%	1.20	29
	1-5m	49	81.6%	1.11	18.4%	1.54	86
	5-15m	77	87.4%	1.11	12.6%	1.97	156
	15-25m	94	91.8%	0.84	8.2%	2.37	237
	25-40m	100	87.3%	1.46	12.7%	3.18	283
	>40m	118	81.0%	2.76	19.0%	3.58	369
Till system	**Single till**	92	85.6%	1.55	14.5%	1.36	98
	Hybrid till	91	85.6%	1.53	14.4%	1.67	145
	Dual till	88	88.6%	1.13	11.4%	1.50	136
Ownership model	**Public ownership (100%)**	79	84.9%	1.44	15.4%	1.64	129
	Public-private partnership (PPP)	105	86.3%	1.67	13.7%	1.59	125
	Private ownership (100%)	98	89.0%	1.21	11.0%	1.46	139
Selected economic groupings	**Advanced economies**	78	84.7%	1.35	14.7%	2.04	164
	Major advanced economies (G7)	69	85.2%	1.23	15.1%	2.64	187
	Euro area	104	86.0%	1.42	11.7%	1.39	113
	European Union	103	86.9%	1.33	11.2%	1.36	118
	Emerging and developing economies	97	88.2%	1.46	13.2%	1.28	90
	Emerging and developing Asia	117	86.6%	2.28	16.9%	1.36	141
	ASEAN-5	129	87.3%	1.89	12.8%	1.16	137
	Sub-Saharan Africa	56	87.6%	0.79	12.4%	1.32	60
	Selected prospect markets						
	BRICS	99	88.8%	1.58	14.2%	1.33	114
	Next 11	105	88.3%	1.40	11.8%	1.38	94
	MINT	93	92.6%	0.74	7.4%	1.30	84
	Emerging aviation markets	102	87.4%	1.67	14.3%	1.30	107
	Major exporters of manufactured goods	81	84.6%	1.47	15.3%	1.95	163

Annex 25 (cont'd)

Airport operations (2013)

		Passengers per square meter of terminal space	Average terminal area (sq. meters)	Average airport site area (hectares)	Average number of gates	Average number of check-in desks	Average number of self-service kiosks
Region	**Africa**	14,851	54,242	658	5.3	45.3	1.8
	Asia-Pacific	25,831	131,287	671	16.8	85.1	14.3
	Europe	27,474	75,641	417	13.0	52.5	8.7
	Latin America-Caribbean	33,975	25,806	366	3.1	29.2	2.6
	Middle East	13,865	272,616	1,682	8.9	58.5	3.7
	North America	37,303	148,507	1,666	45.1	134.7	33.8
	World	28,657	84,552	668	15.2	58.4	8.9
Airport size (passengers)	**<1m**	12,896	8,321	261	0.8	8.9	0.3
	1-5m	27,447	31,891	604	6.3	31.6	4.1
	5-15m	28,624	110,514	1,037	17.8	87.0	18.0
	15-25m	40,234	173,868	1,300	37.9	155.1	34.5
	25-40m	29,873	401,162	1,888	72.7	300.2	31.1
	>40m	30,026	681,139	2,922	100.8	405.3	75.9
Till system	**Single till**	24,076	63,932	511	10.1	46.7	6.6
	Hybrid till	29,087	103,515	813	21.7	71.6	23.1
	Dual till	34,254	75,062	617	11.3	64.1	7.6
Ownership model	**Public ownership (100%)**	28,891	80,856	710	16.2	56.1	7.3
	Public-private partnership (PPP)	25,142	98,783	587	13.9	64.3	11.2
	Private ownership (100%)	41,260	62,732	552	10.7	63.2	14.8

Selected economic groupings	**Advanced economies**	31,328	118,518	886	26.8	82.2	16.6
	Major advanced economies (G7)	34,846	148,254	1,324	38.1	121.4	25.8
	Euro area	24,530	81,123	396	13.4	54.1	7.5
	European Union	26,140	74,433	390	13.0	50.2	8.1
	Emerging and developing economies	24,756	59,534	506	5.9	41.4	4.0
	Emerging and developing Asia	19,001	161,313	696	14.6	75.8	14.2
	ASEAN-5	33,884	78,269	547	15.1	59.2	7.6
	Sub-Saharan Africa	40,039	15,311	549	3.5	38.6	1.8
	Selected prospect markets						
	BRICS	26,371	68,438	540	6.8	51.2	4.5
	Next 11	28,044	68,423	638	7.2	51.8	4.9
	MINT	38,061	40,586	491	5.3	41.1	3.4
	Emerging aviation markets	26,381	70,987	534	7.0	51.1	5.1
	Major exporters of manufactured goods	30,526	121,646	879	25.1	87.0	15.6

Non-aeronautical activities

Annex 26

Non-aeronautical revenue (US$ per passenger, 2013)

		Retail concessions	Food and beverage	Car parking	Rental car concessions	Advertising
Region	**Africa**	1.98	0.25	0.85	0.33	0.41
	Asia-Pacific	3.06	0.40	0.62	0.25	0.39
	Europe	3.65	0.73	1.70	0.41	0.30
	Latin America-Caribbean	1.42	0.35	0.48	0.17	0.25
	Middle East	4.02	0.41	0.61	0.20	0.24
	North America	0.48	0.41	2.26	0.95	0.34
	World	2.10	0.48	1.52	0.64	0.33
Airport size (passengers)	**<1m**	0.94	0.17	0.74	0.44	0.18
	1-5m	1.19	0.32	1.41	0.79	0.22
	5-15m	1.61	0.38	1.80	0.58	0.25
	15-25m	2.18	0.51	1.76	0.66	0.31
	25-40m	1.89	0.54	1.62	0.61	0.31
	>40m	2.42	0.51	1.24	0.68	0.47
Till system	**Single till**	3.09	0.49	1.12	0.61	0.23
	Hybrid till	1.62	0.56	1.47	0.63	0.43
	Dual till	2.67	0.53	1.42	0.42	0.33
Ownership model	**Public ownership (100%)**	1.58	0.50	1.58	0.75	0.29
	Public-private partnership (PPP)	2.74	0.48	1.48	0.25	0.55
	Private ownership (100%)	3.68	0.42	1.37	0.39	0.25
Selected economic groupings	**Advanced economies**	2.31	0.53	2.04	0.79	0.33
	Major advanced economies (G7)	1.54	0.50	2.25	0.87	0.34
	Euro area	2.64	0.78	1.75	0.52	0.32
	European Union	3.35	0.76	1.73	0.44	0.30
	Emerging and developing economies	1.62	0.37	0.37	0.14	0.32
	Emerging and developing Asia	1.47	0.22	0.22	0.08	0.71
	ASEAN-5	1.14	0.68	0.16	0.02	0.12
	Sub-Saharan Africa	1.74	0.07	0.97	0.35	0.45
	Selected prospect markets					
	BRICS	1.19	0.28	0.41	0.17	0.52
	Next 11	3.75	0.28	0.44	0.23	0.23
	MINT	2.13	0.28	0.40	0.24	0.19
	Emerging aviation markets	1.49	0.39	0.35	0.17	0.36
	Major exporters of manufactured goods	1.95	0.51	1.82	0.78	0.36

Annex 26 (cont'd)

Non-aeronautical revenue (US$ per passenger, 2013)

		Fuel and oil	Aviation catering service	Utility recharges	Property and real estate revenue or rent	Other
Region	**Africa**	0.21	0.19	0.35	1.03	0.74
	Asia-Pacific	0.31	0.16	0.50	2.13	0.53
	Europe	0.19	0.12	0.87	2.11	1.95
	Latin America-Caribbean	0.31	0.04	0.16	0.77	1.75
	Middle East	0.58	0.12	0.39	1.30	0.94
	North America	...	...	...	0.77	0.55
	World	0.27	0.11	0.62	1.45	1.12
Airport size (passengers)	**<1m**	0.25	0.01	0.24	1.12	1.43
	1-5m	0.27	0.19	0.29	1.11	0.83
	5-15m	0.29	0.09	0.49	1.26	0.83
	15-25m	0.20	0.03	0.58	1.73	0.80
	25-40m	0.38	0.10	0.99	1.63	1.33
	>40m	0.26	0.26	1.06	1.20	1.22
Till system	**Single till**	0.30	0.10	0.70	1.40	1.10
	Hybrid till	0.25	0.12	0.29	1.26	0.74
	Dual till	0.21	0.11	0.70	2.00	1.33
Ownership model	**Public ownership (100%)**	0.28	0.06	0.48	1.16	0.84
	Public-private partnership (PPP)	0.26	0.15	0.46	2.21	1.40
	Private ownership (100%)	0.22	0.24	1.31	1.96	2.07
Selected economic groupings	**Advanced economies**	0.21	0.10	0.99	1.66	1.19
	Major advanced economies (G7)	0.10	0.16	1.45	1.38	1.31
	Euro area	0.16	0.06	0.56	2.30	2.08
	European Union	0.17	0.08	0.91	2.16	2.15
	Emerging and developing economies	0.30	0.11	0.23	0.91	0.97
	Emerging and developing Asia	0.46	0.12	0.16	1.14	0.45
	ASEAN-5	0.13	0.23	0.29	0.64	0.50
	Sub-Saharan Africa	0.23	0.19	0.36	1.04	0.81
	Selected prospect markets					
	BRICS	0.34	0.10	0.19	0.84	0.74
	Next 11	0.34	0.00	0.27	1.99	0.98
	MINT	0.32	0.00	0.16	1.08	1.28
	Emerging aviation markets	0.32	0.10	0.17	0.95	0.89
	Major exporters of manufactured goods	0.19	0.12	0.89	1.55	1.20

Annex 27

Duty-free revenue (2013)

		Duty-free concessions revenue per international passenger (US$)	Duty-free concessions as a % of total retail concessions	Sample size
Region	**Africa**	...	...	...
	Asia-Pacific	3.09	75%	24
	Europe	2.77	67%	90
	Latin America-Caribbean	2.68	35%	36
	Middle East	8.97	90%	6
	North America	1.50	35%	33
	World	2.81	61%	193
Airport size (passengers)	**<1m**	0.79	40%	22
	1-5m	2.42	60%	37
	5-15m	1.85	45%	41
	15-25m	5.00	69%	16
	25-40m	2.55	55%	12
	>40m	3.35	67%	9
Till system	**Single till**	2.52	57%	92
	Hybrid till	2.52	58%	22
	Dual till	3.72	71%	57
Ownership model	**Public ownership (100%)**	3.34	68%	134
	Public-private partnership (PPP)	1.45	36%	19
	Private ownership (100%)	2.27	54%	40
Selected economic groupings	**Advanced economies**	2.68	60%	122
	Major advanced economies (G7)	1.41	39%	52
	Euro area	1.37	53%	69
	European Union	1.47	52%	81
	Emerging and developing economies	3.15	62%	66
	Emerging and developing Asia	1.96	72%	10
	ASEAN-5	2.20	68%	6
	Sub-Saharan Africa	...	...	...
	Selected prospect markets			
	BRICS	3.20	59%	21
	Next 11	4.88	88%	13
	MINT	6.39	88%	12
	Emerging aviation markets	4.24	75%	38
	Major exporters of manufactured goods	1.75	52%	122

Annex 28

Commercial activities and infrastructure (2013)

		Average concession retail revenue per retail outlet (US$) (1)	Sample size - number of airports (1)	Retail revenue per sq. meter (US$, per day)	Avg. concession food & beverage revenue per F&B outlet (restaurants) (US$) (2)
Region	**Africa**	238,057	19	6.47	34,500
	Asia-Pacific	823,919	45	22.47	258,702
	Europe	981,040	126	20.55	316,848
	Latin America-Caribbean	141,119	91	5.58	119,571
	Middle East	2,026,630	10	19.20	269,510
	North America	268,940	53	8.05	246,004
	World	629,255	344	15.35	240,640
Airport size (passengers)	**<1m**	27,335	82	0.61	26,777
	1-5m	204,931	101	5.31	90,164
	5-15m	341,315	51	12.46	180,382
	15-25m	900,706	21	18.55	311,618
	25-40m	832,888	10	32.39	136,044
	>40m	895,430	13	33.42	438,459
Till system	**Single till**	653,723	137	14.87	205,952
	Hybrid till	685,551	41	16.12	342,659
	Dual till	682,900	129	17.43	211,197
Ownership model	**Public ownership (100%)**	630,622	244	11.12	247,300
	Public-private partnership (PPP)	803,458	49	18.57	268,137
	Private ownership (100%)	453,313	51	32.12	184,660
Selected economic groupings	**Advanced economies**	917,131	173	20.34	285,923
	Major advanced economies (G7)	512,996	78	20.42	257,921
	Euro area	889,117	89	12.48	347,945
	European Union	844,256	107	18.12	324,117
	Emerging and developing economies	296,075	164	8.49	172,678
	Emerging and developing Asia	317,124	19	9.54	78,586
	ASEAN-5	...	...	...	...
	Sub-Saharan Africa	49,302	15	4.18	10,958
	Selected prospect markets				
	BRICS	292,911	61	5.62	110,437
	Next 11	693,294	35	24.78	83,479
	MINT	312,797	30	11.88	81,695
	Emerging aviation markets	357,286	100	8.31	179,641
	Major exporters of manufactured goods	660,279	162	18.92	293,998

Annex 28 (cont'd)

Commercial activities and infrastructure (2013)

		Sample size - number of airports (2)	Revenue per car parking space (US$, per day)	Food and beverage revenue per sq. meter of F&B space (US$, per day)
Region	**Africa**	10	3.79	1.18
	Asia-Pacific	36	9.04	5.15
	Europe	112	8.86	5.19
	Latin America-Caribbean	142	6.75	2.80
	Middle East	12	6.05	3.11
	North America	51	12.16	4.91
	World	363	10.06	4.63
Airport size (passengers)	**<1m**	126	2.73	0.28
	1-5m	97	5.95	2.08
	5-15m	47	9.24	3.63
	15-25m	20	8.51	5.85
	25-40m	6	21.93	9.76
	>40m	9	12.42	7.53
Till system	**Single till**	157	6.59	3.01
	Hybrid till	38	8.49	5.97
	Dual till	126	9.95	5.67
Ownership model	**Public ownership (100%)**	254	9.72	4.69
	Public-private partnership (PPP)	57	8.90	4.98
	Private ownership (100%)	52	14.43	3.62

Selected economic groupings	**Advanced economies**	156	10.92	5.27
	Major advanced economies (G7)	69	11.83	6.11
	Euro area	79	8.21	5.01
	European Union	97	8.34	5.16
	Emerging and developing economies	201	5.13	3.28
	Emerging and developing Asia	21	4.24	2.13
	ASEAN-5	...	...	...
	Sub-Saharan Africa	8	3.96	0.08
	Selected prospect markets			
	BRICS	79	4.87	3.31
	Next 11	30	5.49	1.28
	MINT	27	6.11	1.07
	Emerging aviation markets	122	5.06	3.45
	Major exporters of manufactured goods	147	10.70	5.03

Annex 29

Non-aeronautical infrastructure (2013)

		Average number of retail outlets (stores/shops)	Average number of food and beverage outlets	Average area of retail outlet (sq. meters)	Average area of food and beverage outlet (sq. meters)
Region	**Africa**	10	4	240	180
	Asia-Pacific	51	27	106	133
	Europe	21	10	185	238
	Latin America-Caribbean	12	5	139	140
	Middle East	14	9	235	234
	North America	30	27	138	217
	World	22	12	149	189
Airport size (passengers)	**<1m**	5	2	276	201
	1-5m	15	8	135	144
	5-15m	35	19	130	175
	15-25m	48	33	154	169
	25-40m	81	59	137	190
	>40m	157	92	94	178
Till system	**Single till**	15	9	180	188
	Hybrid till	34	23	160	182
	Dual till	24	12	140	171
Ownership model	**Public ownership (100%)**	18	12	168	188
	Public-private partnership (PPP)	24	12	148	183
	Private ownership (100%)	39	14	88	200
Selected economic groupings	**Advanced economies**	28	17	150	208
	Major advanced economies (G7)	36	24	130	211
	Euro area	20	10	201	270
	European Union	19	9	200	256
	Emerging and developing economies	17	8	147	160
	Emerging and developing Asia	38	18	96	132
	ASEAN-5	92	56	147	178
	Sub-Saharan Africa	10	3	254	214
	Selected prospect markets				
	BRICS	15	9	201	136
	Next 11	28	12	80	163
	MINT	27	11	79	167
	Emerging aviation markets	21	11	145	160
	Major exporters of manufactured goods	31	18	137	223

Annex 29 (cont'd)

Non-aeronautical infrastructure (2013)

		Retail area per passenger (per day, sq. meters)	Food and beverage area per passenger (per day, sq. meters)	Average number of individual car parking spaces	Passengers per individual car parking space (per day)
Region	**Africa**	0.95	0.37	1,635	3.7
	Asia-Pacific	0.19	0.12	2,174	11.3
	Europe	0.23	0.16	4,317	4.4
	Latin America-Caribbean	0.36	0.17	610	13.6
	Middle East	0.23	0.15	2,078	6.3
	North America	0.07	0.10	10,803	4.2
	World	0.18	0.13	3,679	5.3
Airport size (passengers)	**<1m**	1.56	0.59	313	3.3
	1-5m	0.29	0.17	1,878	3.6
	5-15m	0.17	0.13	5,956	3.9
	15-25m	0.14	0.11	11,777	4.6
	25-40m	0.10	0.09	11,283	8.0
	>40m	0.10	0.10	18,159	8.5
Till system	**Single till**	0.24	0.16	2,513	5.0
	Hybrid till	0.16	0.13	5,413	5.3
	Dual till	0.20	0.12	3,557	6.1
Ownership model	**Public ownership (100%)**	0.17	0.13	3,703	5.2
	Public-private partnership (PPP)	0.22	0.14	4,421	5.3
	Private ownership (100%)	0.19	0.15	2,661	6.7

Selected economic groupings	**Advanced economies**	0.14	0.12	6,933	4.3
	Major advanced economies (G7)	0.10	0.10	10,005	4.0
	Euro area	0.24	0.17	4,741	4.1
	European Union	0.24	0.16	4,358	4.1
	Emerging and developing economies	0.28	0.16	1,007	11.2
	Emerging and developing Asia	0.19	0.13	1,427	15.8
	ASEAN-5	0.20	0.15	1,114	16.6
	Sub-Saharan Africa	1.54	0.48	1,564	3.1
	Selected prospect markets				
	BRICS	0.29	0.12	1,399	10.8
	Next 11	0.17	0.16	1,422	11.0
	MINT	0.21	0.19	844	14.6
	Emerging aviation markets	0.24	0.14	1,164	12.7
	Major exporters of manufactured goods	0.14	0.13	5,866	4.6

Airport capital expenditure (CAPEX)

Annex 30

Airport capital expenditure (CAPEX) breakdown (2013)

		Aircraft movement area	Terminal building(s)	Equipment and vehicles	Other facilities
Region	**Africa**	33.0%	48.6%	10.8%	7.5%
	Asia-Pacific	11.0%	66.5%	3.8%	18.7%
	Europe	21.4%	57.2%	7.3%	14.2%
	Latin America-Caribbean	20.4%	63.5%	3.1%	13.0%
	Middle East	50.9%	39.2%	3.3%	6.5%
	North America	33.5%	50.5%	0.0%	16.0%
	World	27.6%	54.5%	2.7%	15.1%
Airport size (passengers)	**<1m**	34.9%	29.5%	6.8%	28.9%
	1-5m	34.9%	48.3%	3.2%	13.7%
	5-15m	27.3%	53.4%	3.0%	16.4%
	15-25m	28.3%	54.7%	3.3%	13.7%
	25-40m	22.6%	54.1%	5.8%	17.5%
	>40m	26.6%	58.7%	0.1%	14.5%
Till system	**Single till**	25.9%	55.6%	4.7%	13.8%
	Hybrid till	24.9%	51.5%	2.3%	21.2%
	Dual till	22.9%	61.1%	3.5%	12.4%
Ownership model	**Public ownership (100%)**	28.2%	55.0%	2.6%	14.2%
	Public-private partnership (PPP)	17.9%	57.4%	5.0%	19.8%
	Private ownership (100%)	30.1%	48.0%	2.1%	19.8%
Selected economic groupings	**Advanced economies**	29.1%	51.7%	2.3%	16.9%
	Major advanced economies (G7)	30.9%	50.8%	1.7%	16.5%
	Euro area	21.3%	53.5%	9.6%	15.6%
	European Union	22.9%	54.1%	8.7%	14.4%
	Emerging and developing economies	22.4%	65.8%	4.3%	7.6%
	Emerging and developing Asia	12.8%	74.6%	6.3%	6.3%
	ASEAN-5	3.3%	38.5%	1.2%	56.9%
	Sub-Saharan Africa	35.6%	47.3%	9.0%	8.1%
	Selected prospect markets				
	BRICS	15.9%	77.8%	2.6%	3.6%
	Next 11	9.5%	73.1%	3.3%	14.1%
	MINT	17.4%	56.1%	2.4%	24.0%
	Emerging aviation markets	21.5%	70.1%	1.9%	6.5%
	Major exporters of manufactured goods	28.6%	51.7%	2.2%	17.4%

Annex 31

Airport capital expenditure (CAPEX) breakdown: aircraft movement areas and terminal buildings (2013)

		Aircraft movement area		
		Purchase of property, plant and equipment	Construction expenses	Other expenses
Region	**Africa**	22.0%	73.6%	4.5%
	Asia-Pacific	38.4%	54.1%	7.5%
	Europe	19.6%	65.5%	14.9%
	Latin America-Caribbean	2.8%	82.0%	15.1%
	Middle East	7.3%	92.7%	0.0%
	North America	...	...	...
	World	16.6%	72.3%	11.0%
Airport size (passengers)	**<1m**	17.2%	74.7%	8.1%
	1-5m	13.1%	80.2%	6.7%
	5-15m	29.7%	63.7%	6.6%
	15-25m	7.1%	86.9%	6.0%
	25-40m	16.1%	72.6%	11.3%
	>40m	20.6%	78.5%	0.8%
Till system	**Single till**	20.8%	62.7%	16.4%
	Hybrid till	15.3%	68.1%	16.6%
	Dual till	12.1%	82.2%	5.7%
Ownership model	**Public ownership (100%)**	10.8%	78.5%	10.7%
	Public-private partnership (PPP)	20.5%	73.4%	6.1%
	Private ownership (100%)	47.8%	33.9%	18.2%
Selected economic groupings	**Advanced economies**	24.6%	61.4%	14.1%
	Major advanced economies (G7)	31.9%	53.2%	14.9%
	Euro area	19.4%	58.3%	22.3%
	European Union	22.0%	60.5%	17.6%
	Emerging and developing economies	6.4%	86.7%	6.9%
	Emerging and developing Asia	22.4%	76.1%	1.5%
	ASEAN-5	0.3%	80.7%	18.9%
	Sub-Saharan Africa	22.0%	73.6%	4.5%
	Selected prospect markets			
	BRICS	6.8%	90.7%	2.5%
	Next 11	8.4%	85.9%	5.8%
	MINT	5.5%	88.4%	6.2%
	Emerging aviation markets	3.8%	92.3%	3.9%
	Major exporters of manufactured goods	21.5%	60.2%	18.3%

Annex 31 (cont'd)

Airport capital expenditure (CAPEX) breakdown: aircraft movement areas and terminal buildings (2013)

		Terminal building(s)		
		Purchase of property, plant and equipment	Construction expenses	Other expenses
Region	**Africa**	7.8%	10.9%	81.3%
	Asia-Pacific	37.1%	61.7%	1.3%
	Europe	11.2%	79.1%	9.7%
	Latin America-Caribbean	3.4%	56.1%	40.5%
	Middle East	6.5%	93.5%	0.0%
	North America	...	...	...
	World	15.8%	71.3%	12.9%
Airport size (passengers)	**<1m**	14.7%	66.6%	18.7%
	1-5m	10.2%	84.0%	5.8%
	5-15m	10.5%	85.6%	3.9%
	15-25m	42.5%	52.3%	5.2%
	25-40m	3.4%	55.2%	41.3%
	>40m	13.3%	86.3%	0.4%
Till system	**Single till**	27.0%	49.2%	23.8%
	Hybrid till	13.3%	81.9%	4.7%
	Dual till	7.3%	86.2%	6.5%
Ownership model	**Public ownership (100%)**	16.4%	69.9%	13.7%
	Public-private partnership (PPP)	11.9%	85.7%	2.4%
	Private ownership (100%)	18.3%	54.6%	27.2%
Selected economic groupings	**Advanced economies**	25.8%	64.7%	9.5%
	Major advanced economies (G7)	9.9%	81.9%	8.3%
	Euro area	14.0%	70.5%	15.5%
	European Union	15.1%	71.6%	13.2%
	Emerging and developing economies	5.0%	78.4%	16.6%
	Emerging and developing Asia	1.8%	97.7%	0.5%
	ASEAN-5	4.4%	93.9%	1.7%
	Sub-Saharan Africa	5.3%	5.2%	89.5%
	Selected prospect markets			
	BRICS	2.1%	90.7%	7.2%
	Next 11	43.9%	56.1%	0.0%
	MINT	0.7%	99.2%	0.1%
	Emerging aviation markets	2.7%	80.3%	17.0%
	Major exporters of manufactured goods	27.3%	62.0%	10.6%

Annex 32

CAPEX per passenger and per WLU (2013)

		CAPEX per passenger (US$)*	CAPEX per WLU (US$)*	Annual CAPEX as a % of total revenue
Region	**Africa**	4.25	3.81	12.1%
	Asia-Pacific	5.52	4.67	26.4%
	Europe	6.50	5.88	25.3%
	Latin America-Caribbean	4.05	3.69	28.1%
	Middle East	7.82	6.27	49.4%
	North America	6.34	5.38	39.2%
	World	5.95	5.16	29.7%
Airport size (passengers)	**<1m**	5.70	5.25	29.3%
	1-5m	5.03	4.35	41.6%
	5-15m	6.21	5.53	28.8%
	15-25m	5.94	5.34	29.3%
	25-40m	5.65	5.01	24.1%
	>40m	6.56	5.29	35.6%
Till system	**Single till**	6.47	5.59	31.1%
	Hybrid till	3.45	2.95	18.0%
	Dual till	7.60	6.73	33.6%
Ownership model	**Public ownership (100%)**	5.58	4.73	31.3%
	Public-private partnership (PPP)	4.95	4.23	35.3%
	Private ownership (100%)	10.13	9.06	19.8%
Selected economic groupings	**Advanced economies**	6.21	5.31	29.7%
	Major advanced economies (G7)	6.67	5.71	34.2%
	Euro area	5.30	4.67	19.9%
	European Union	6.63	5.91	25.2%
	Emerging and developing economies	5.63	4.97	29.5%
	Emerging and developing Asia	7.14	6.14	35.5%
	ASEAN-5	3.12	2.75	24.0%
	Sub-Saharan Africa	4.36	3.77	12.2%
	Selected prospect markets			
	BRICS	6.60	5.81	31.7%
	Next 11	3.99	3.57	23.7%
	MINT	3.77	3.53	26.2%
	Emerging aviation markets	6.02	5.27	31.4%
	Major exporters of manufactured goods	6.27	5.34	29.9%

*Based on data from the Airport Economics Survey (ACI, 2014), Centre for Asia Pacific Aviation (CAPA, 2015) and Federal Aviation Administration (FAA, 2015)

Annex 33

Terminal CAPEX per passenger and airside CAPEX per movement (US$, 2013)

		Terminal buildings CAPEX per passenger (US$) (1)	Sample size (1)	Aircraft movement areas CAPEX per movement (US$) (2)	Sample size (2)
Region	**Africa**	2.34	12	75.41	10
	Asia-Pacific	2.67	41	60.90	39
	Europe	3.36	117	118.24	111
	Latin America-Caribbean	2.92	96	70.99	86
	Middle East	7.19	6	701.50	5
	North America	2.70	89	124.03	88
	World	2.92	361	119.32	339
Airport size (passengers)	**<1m**	1.85	98	53.53	88
	1-5m	3.95	99	118.99	96
	5-15m	3.32	58	133.08	53
	15-25m	3.14	21	162.13	18
	25-40m	2.38	12	91.06	12
	>40m	2.65	14	114.85	15
Till system	**Single till**	2.80	133	125.88	126
	Hybrid till	1.84	48	79.46	43
	Dual till	4.78	115	135.73	106
Ownership model	**Public ownership (100%)**	2.94	299	116.75	287
	Public-private partnership (PPP)	2.41	27	96.86	20
	Private ownership (100%)	3.75	34	182.67	31
Selected economic groupings	**Advanced economies**	2.79	194	122.90	189
	Major advanced economies (G7)	2.78	111	121.65	110
	Euro area	2.52	79	101.68	76
	European Union	2.74	98	112.79	96
	Emerging and developing economies	3.43	163	105.22	146
	Emerging and developing Asia	2.73	11	66.08	14
	ASEAN-5	1.58	13	15.03	12
	Sub-Saharan Africa	3.53	10	75.41	10
	Selected prospect markets				
	BRICS	3.25	69	63.26	60
	Next 11	4.49	38	61.81	30
	MINT	4.99	31	75.56	28
	Emerging aviation markets	3.47	119	100.13	105
	Major exporters of manufactured goods	2.58	212	114.44	204

Liquidity, debt and profitability

34. Balance sheet measures

35. Selected profitability measures

Annex 34

Balance sheet measures (ratios, 2013)

		Current assets/ current liabilities	Debt/net assets	Total operating revenue/total assets	Net profit before tax/total assets
Region	**Africa**	1.54	1.11	0.19	0.07
	Asia-Pacific	0.89	0.71	0.21	0.08
	Europe	1.02	1.86	0.21	0.04
	Latin America-Caribbean	1.56	0.82	0.16	0.04
	Middle East	2.29	1.31	0.04	0.01
	North America	3.45	2.10	0.12	0.01
	World	1.50	1.61	0.17	0.04
Airport size (passengers)	**<1m**	1.56	0.70	0.14	-0.01
	1-5m	1.61	0.81	0.14	0.02
	5-15m	1.27	1.55	0.19	0.05
	15-25m	0.95	1.98	0.21	0.06
	25-40m	1.09	2.09	0.12	0.02
	>40m	2.41	1.59	0.17	0.05
Till system	**Single till**	1.69	1.88	0.15	0.03
	Hybrid till	1.52	1.25	0.20	0.05
	Dual till	1.03	1.28	0.18	0.04
Ownership model	**Public ownership (100%)**	1.91	1.67	0.15	0.03
	Public-private partnership (PPP)	0.94	1.15	0.26	0.05
	Private ownership (100%)	1.05	1.97	0.18	0.04
Selected economic groupings	**Advanced economies**	1.59	1.72	0.18	0.03
	Major advanced economies (G7)	1.94	2.03	0.16	0.02
	Euro area	0.84	1.65	0.22	0.03
	European Union	0.98	1.94	0.21	0.03
	Emerging and developing economies	1.21	1.04	0.15	0.04
	Emerging and developing Asia	1.28	0.70	0.22	0.06
	ASEAN-5	1.13	1.65	0.34	0.16
	Sub-Saharan Africa	...	...	...	...
	Selected prospect markets				
	BRICS	1.18	0.76	0.16	0.04
	Next 11	1.41	0.48	0.23	0.10
	MINT	1.83	0.88	0.25	0.10
	Emerging aviation markets	1.35	0.85	0.13	0.04
	Major exporters of manufactured goods	1.55	1.69	0.18	0.04

Annex 34 (cont'd)

Balance sheet measures (ratios, 2013)

		Debt-to-EBITDA ratio	Total debt/total assets	Total assets/net assets	Net profit/interest expenses
Region	**Africa**	3.43	0.44	2.63	5.61
	Asia-Pacific	3.80	0.35	2.01	2.84
	Europe	5.48	0.53	3.32	1.04
	Latin America-Caribbean	2.15	0.14	1.77	3.04
	Middle East	19.11	0.28	2.12	5.65
	North America	6.59	0.57	3.13	0.60
	World	5.45	0.47	2.78	1.20
Airport size (passengers)	**<1m**	16.36	0.29	1.48	-3.13
	1-5m	4.37	0.25	1.88	1.28
	5-15m	4.48	0.39	2.39	1.44
	15-25m	5.61	0.51	2.84	1.69
	25-40m	6.83	0.47	3.52	0.71
	>40m	5.27	0.50	2.85	1.29
Till system	**Single till**	6.05	0.49	2.85	1.30
	Hybrid till	4.54	0.48	2.31	0.98
	Dual till	5.11	0.41	2.64	1.52
Ownership model	**Public ownership (100%)**	6.12	0.45	2.60	1.23
	Public-private partnership (PPP)	3.61	0.45	2.55	1.43
	Private ownership (100%)	5.26	0.55	3.68	0.99

Selected economic groupings	**Advanced economies**	5.75	0.54	2.88	1.01
	Major advanced economies (G7)	6.50	0.56	3.27	0.67
	Euro area	5.43	0.52	3.10	0.88
	European Union	5.74	0.56	3.39	0.89
	Emerging and developing economies	4.03	0.26	2.32	2.63
	Emerging and developing Asia	2.31	0.28	1.95	1.32
	ASEAN-5	2.93	0.60	1.93	8.39
	Sub-Saharan Africa	...	...	...	...
	Selected prospect markets				
	BRICS	2.37	0.16	1.97	2.70
	Next 11	1.67	0.20	1.74	5.27
	MINT	2.16	0.22	2.26	4.04
	Emerging aviation markets	3.82	0.21	2.09	3.99
	Major exporters of manufactured goods	5.61	0.53	2.77	1.10

Annex 35

Selected profitability measures (2013)

		ROA Return on assets (net profit/total assets)	ROCE Return on capital employed (EBITDA/total assets minus current liabilities)	ROIC Return on invested capital (net profit + interest expense)/(net assets + long-term debt*)
Region	**Africa**	6.6%	13.3%	9.8%
	Asia-Pacific	6.1%	14.2%	8.7%
	Europe	2.6%	12.7%	6.8%
	Latin America-Caribbean	3.1%	22.1%	11.6%
	Middle East	0.4%	1.7%	5.6%
	North America	1.3%	8.0%	4.3%
	World	2.8%	10.5%	6.3%
Airport size (passengers)	**<1m**	-1.8%	2.3%	-3.4%
	1-5m	1.9%	10.2%	4.8%
	5-15m	3.9%	13.0%	8.1%
	15-25m	4.4%	14.3%	8.4%
	25-40m	1.2%	6.9%	4.6%
	>40m	3.8%	11.0%	6.4%
Till system	**Single till**	2.6%	9.1%	6.4%
	Hybrid till	4.1%	12.0%	7.0%
	Dual till	2.9%	12.1%	6.4%
Ownership model	**Public ownership (100%)**	2.5%	9.1%	5.5%
	Public-private partnership (PPP)	3.8%	14.7%	8.0%
	Private ownership (100%)	3.2%	12.0%	7.5%
Selected economic groupings	**Advanced economies**	2.6%	10.5%	5.5%
	Major advanced economies (G7)	1.5%	9.3%	4.6%
	Euro area	2.0%	12.0%	5.0%
	European Union	2.3%	11.8%	5.7%
	Emerging and developing economies	3.4%	10.5%	12.6%
	Emerging and developing Asia	4.8%	14.0%	8.5%
	ASEAN-5	12.4%	30.3%	20.9%
	Sub-Saharan Africa	8.6%	14.3%	10.6%
	Selected prospect markets			
	BRICS	3.4%	16.0%	11.8%
	Next 11	7.7%	20.7%	14.5%
	MINT	8.6%	28.2%	23.6%
	Emerging aviation markets	3.4%	9.9%	16.1%
	Major exporters of manufactured goods	2.8%	10.8%	5.5%

*Long-term debt or non-current liabilities if long-term debt is not available

Employment

36. Airport employees (ratios)

37. Distribution of airport operator employees by type of activity

38. Insourced activities versus outsourced activities

39. Outsourced employment

Annex 36

Airport employees ratios (2013)

		Employees on airport site per 1 million passengers	Airport operator employees per 1 million passengers	Ratio of airport site employees to airport operator employees
Region	**Africa**	976	183	5
	Asia-Pacific	894	69	13
	Europe	898	101	9
	Latin America-Caribbean	838	61	14
	Middle East	775	96	8
	North America	735	46	16
	World	839	74	11
Airport size (passengers)	**<1m**	1098	221	5
	1-5m	974	110	9
	5-15m	824	90	9
	15-25m	662	48	14
	25-40m	837	65	13
	>40m	847	66	13
Till system	**Single till**	894	82	11
	Hybrid till	834	53	16
	Dual till	840	83	10
Ownership model	**Public ownership (100%)**	808	69	12
	Public-private partnership (PPP)	915	85	11
	Private ownership (100%)	902	87	10

Selected economic groupings	**Advanced economies**	810	57	14
	Major advanced economies (G7)	794	61	13
	Euro area	889	81	11
	European Union	892	89	10
	Emerging and developing economies	900	110	8
	Emerging and developing Asia	879	99	9
	ASEAN-5	994	92	11
	Sub-Saharan Africa	843	151	6
	Selected prospect markets			
	BRICS	687	89	8
	Next 11	1014	90	11
	MINT	1069	84	13
	Emerging aviation markets	823	80	10
	Major exporters of manufactured goods	855	60	14

Annex 37

Distribution of airport operator employees by type of activity (2013)

		Management	Ground handling services	Rescue and fire service	Car parking services
Region	**Africa**	14%	8%	9%	4%
	Asia-Pacific	16%	3%	12%	1%
	Europe	11%	12%	6%	1%
	Latin America-Caribbean	24%	13%	8%	2%
	Middle East	10%	14%	13%	2%
	North America	...	...	...	...
	World	13%	10%	8%	2%
Airport size (passengers)	**<1m**	15%	13%	15%	2%
	1-5m	10%	18%	8%	2%
	5-15m	14%	7%	6%	2%
	15-25m	10%	17%	4%	1%
	25-40m	6%	18%	4%	0%
	>40m	17%	0%	8%	2%
Till system	**Single till**	13%	6%	10%	2%
	Hybrid till	18%	8%	7%	1%
	Dual till	12%	15%	5%	1%
Ownership model	**Public ownership (100%)**	13%	9%	8%	1%
	Public-private partnership (PPP)	13%	12%	5%	2%
	Private ownership (100%)	20%	12%	7%	2%
Selected economic groupings	**Advanced economies**	13%	10%	7%	1%
	Major advanced economies (G7)	13%	11%	4%	2%
	Euro area	14%	13%	7%	1%
	European Union	12%	12%	7%	1%
	Emerging and developing economies	14%	11%	8%	2%
	Emerging and developing Asia	15%	4%	11%	1%
	ASEAN-5	16%	0%	17%	0%
	Sub-Saharan Africa	16%	7%	11%	6%
	Selected prospect markets				
	BRICS	14%	12%	8%	1%
	Next 11	18%	0%	8%	3%
	MINT	19%	0%	8%	3%
	Emerging aviation markets	16%	8%	8%	1%
	Major exporters of manufactured goods	16%	9%	9%	1%

Annex 37 (cont'd)

Distribution of airport operator employees by type of activity (2013)

		Cleaning services	Maintenance services	Air traffic control services	Security services
Region	**Africa**	3%	16%	5%	18%
	Asia-Pacific	5%	12%	2%	24%
	Europe	1%	15%	1%	21%
	Latin America-Caribbean	1%	15%	0%	13%
	Middle East	2%	14%	4%	25%
	North America	...	...	...	...
	World	2%	15%	2%	20%
Airport size (passengers)	**<1m**	3%	13%	2%	13%
	1-5m	2%	12%	3%	21%
	5-15m	3%	16%	2%	20%
	15-25m	4%	13%	1%	23%
	25-40m	1%	5%	1%	18%
	>40m	3%	25%	1%	30%
Till system	**Single till**	4%	13%	2%	21%
	Hybrid till	3%	11%	1%	18%
	Dual till	0%	18%	2%	20%
Ownership model	**Public ownership (100%)**	3%	16%	2%	21%
	Public-private partnership (PPP)	3%	12%	1%	20%
	Private ownership (100%)	1%	12%	0%	19%

Selected economic groupings	**Advanced economies**	2%	12%	1%	16%
	Major advanced economies (G7)	3%	10%	0%	17%
	Euro area	1%	11%	1%	13%
	European Union	1%	11%	1%	19%
	Emerging and developing economies	2%	17%	2%	23%
	Emerging and developing Asia	7%	11%	3%	26%
	ASEAN-5	1%	8%	0%	27%
	Sub-Saharan Africa	3%	12%	5%	23%
	Selected prospect markets				
	BRICS	4%	12%	2%	25%
	Next 11	1%	29%	3%	22%
	MINT	0%	30%	4%	23%
	Emerging aviation markets	2%	18%	3%	25%
	Major exporters of manufactured goods	2%	10%	0%	19%

Annex 37 (cont'd)

Distribution of airport operator employees by type of activity (2013)

		Concession services (shops, F&B, etc.)	Runway, taxiway, apron operations	Info. and communications technology (ICT)	Other activities	Sample size
Region	**Africa**	0%	6%	1%	15%	30
	Asia-Pacific	2%	6%	3%	15%	59
	Europe	3%	8%	2%	18%	171
	Latin America-Caribbean	6%	9%	1%	7%	162
	Middle East	0%	5%	2%	9%	9
	North America	...	...	...	...	...
	World	3%	8%	2%	16%	434
Airport size (passengers)	**<1m**	1%	6%	2%	16%	193
	1-5m	2%	6%	3%	14%	97
	5-15m	2%	6%	3%	18%	53
	15-25m	3%	7%	2%	17%	15
	25-40m	13%	4%	1%	30%	6
	>40m	2%	4%	1%	7%	7
Till system	**Single till**	3%	10%	3%	13%	221
	Hybrid till	1%	7%	3%	21%	37
	Dual till	3%	5%	1%	18%	139
Ownership model	**Public ownership (100%)**	3%	8%	2%	13%	302
	Public-private partnership (PPP)	2%	6%	3%	22%	71
	Private ownership (100%)	2%	6%	2%	15%	60

Selected economic groupings	**Advanced economies**	4%	9%	2%	22%	153
	Major advanced economies (G7)	5%	3%	2%	31%	34
	Euro area	5%	11%	2%	22%	115
	European Union	4%	11%	2%	20%	145
	Emerging and developing economies	2%	6%	2%	11%	273
	Emerging and developing Asia	2%	4%	3%	13%	24
	ASEAN-5	3%	10%	4%	13%	12
	Sub-Saharan Africa	0%	4%	1%	12%	26
	Selected prospect markets					
	BRICS	1%	7%	3%	12%	89
	Next 11	2%	7%	2%	5%	70
	MINT	3%	6%	2%	2%	61
	Emerging aviation markets	2%	7%	2%	8%	165
	Major exporters of manufactured goods	4%	9%	2%	19%	140

Annex 38

Insourced activities versus outsourced activities (2013)

		Proportion of airports with activity outsourced					
		Manage-ment	Ground handling services	Rescue and fire service	Car parking services	Cleaning services	Mainte-nance services
Region	**Africa**	2%	72%	39%	38%	74%	15%
	Asia-Pacific	10%	89%	22%	68%	88%	43%
	Europe	1%	70%	10%	55%	85%	9%
	Latin America-Caribbean	0%	40%	36%	36%	99%	36%
	Middle East	2%	100%	24%	62%	90%	38%
	North America	N/A	N/A	N/A	N/A	N/A	N/A
	World	2%	67%	22%	53%	89%	23%
Airport size (passengers)	**<1m**	9%	44%	22%	28%	81%	21%
	1-5m	29%	63%	29%	39%	89%	29%
	5-15m	2%	70%	23%	47%	88%	31%
	15-25m	3%	81%	46%	47%	82%	44%
	25-40m	8%	69%	26%	78%	100%	82%
	>40m	0%	100%	14%	75%	100%	49%
Till system	**Single till**	9%	81%	7%	64%	86%	11%
	Hybrid till	29%	55%	24%	38%	80%	17%
	Dual till	2%	54%	42%	45%	94%	46%
Ownership model	**Public ownership (100%)**	0%	71%	22%	62%	88%	26%
	Public-private partnership (PPP)	0%	63%	28%	42%	83%	18%
	Private ownership (100%)	7%	48%	17%	28%	96%	19%
Selected economic groupings	**Advanced economies**	2%	83%	17%	65%	93%	13%
	Major advanced economies (G7)	0%	71%	31%	31%	88%	16%
	Euro area	0%	82%	11%	70%	97%	9%
	European Union	0%	76%	10%	61%	88%	10%
	Emerging and developing economies	2%	52%	25%	42%	87%	31%
	Emerging and developing Asia	5%	90%	0%	72%	86%	60%
	ASEAN-5	38%	...	0%	100%	100%	2%
	Sub-Saharan Africa	8%	70%	38%	31%	67%	18%
	Selected prospect markets						
	BRICS	7%	45%	49%	87%	93%	71%
	Next 11	9%	87%	9%	38%	95%	18%
	MINT	29%	81%	0%	15%	97%	15%
	Emerging aviation markets	2%	53%	26%	57%	96%	50%
	Major exporters of manufactured goods	8%	84%	11%	61%	94%	15%

Annex 38 (cont'd)

Insourced activities versus outsourced activities (2013)

		Proportion of airports with activity outsourced				
		Air traffic control services	Security services	Concession services (shops, F&B, etc.)	Runway, taxiway, apron operations	Information and communications technology (ICT)
Region	**Africa**	52%	27%	95%	18%	32%
	Asia-Pacific	38%	63%	72%	37%	28%
	Europe	80%	59%	47%	5%	8%
	Latin America-Caribbean	38%	74%	66%	2%	47%
	Middle East	29%	49%	90%	33%	19%
	North America	...	...	...	...	...
	World	63%	62%	60%	9%	23%
Airport size (passengers)	**<1m**	46%	58%	81%	8%	39%
	1-5m	51%	51%	81%	9%	16%
	5-15m	59%	56%	67%	19%	24%
	15-25m	63%	65%	50%	14%	23%
	25-40m	38%	66%	63%	27%	38%
	>40m	67%	56%	60%	28%	80%
Till system	**Single till**	61%	53%	44%	9%	19%
	Hybrid till	77%	48%	80%	14%	18%
	Dual till	57%	77%	83%	7%	33%
Ownership model	**Public ownership (100%)**	58%	64%	54%	8%	23%
	Public-private partnership (PPP)	83%	54%	67%	13%	15%
	Private ownership (100%)	69%	61%	77%	10%	28%
Selected economic groupings	**Advanced economies**	81%	71%	49%	10%	12%
	Major advanced economies (G7)	85%	41%	90%	26%	12%
	Euro area	84%	76%	37%	5%	3%
	European Union	83%	64%	45%	5%	5%
	Emerging and developing economies	40%	56%	72%	8%	32%
	Emerging and developing Asia	17%	58%	75%	23%	16%
	ASEAN-5	0%	65%	65%	100%	0%
	Sub-Saharan Africa	52%	26%	93%	20%	20%
	Selected prospect markets					
	BRICS	15%	84%	74%	5%	29%
	Next 11	38%	53%	77%	9%	49%
	MINT	40%	51%	80%	6%	50%
	Emerging aviation markets	22%	75%	77%	7%	41%
	Major exporters of manufactured goods	88%	67%	44%	8%	22%

Annex 39

Outsourced activities (2013)

		% Proportion of activities (in terms of airport employees) that are outsourced by airport operator
Region	**Africa**	60%
	Asia-Pacific	54%
	Europe	49%
	Latin America-Caribbean	67%
	Middle East	81%
	North America	N/A
	World	55%
Airport size (passengers)	**<1m**	56%
	1-5m	59%
	5-15m	46%
	15-25m	38%
	25-40m	56%
	>40m	51%
Till system	**Single till**	52%
	Hybrid till	36%
	Dual till	63%
Ownership model	**Public ownership (100%)**	51%
	Public-private partnership (PPP)	49%
	Private ownership (100%)	74%

Selected economic groupings	**Advanced economies**	54%
	Major advanced economies (G7)	59%
	Euro area	54%
	European Union	52%
	Emerging and developing economies	56%
	Emerging and developing Asia	49%
	ASEAN-5	27%
	Sub-Saharan Africa	54%
	Selected prospect markets	
	BRICS	50%
	Next 11	62%
	MINT	59%
	Emerging aviation markets	60%
	Major exporters of manufactured goods	50%

Annex 40

Included below is the questionnaire used to collect the data for this report.

ACI Airport Economics Survey 2014

Please submit the completed questionnaire before August 30th 2014 to:

Tel: +1 514 373 1229 Fax: +1 514 373 1201

INSTRUCTIONS:

The following conventions should be used in reporting values in this questionnaire:

- Please report actual values only (no abridged values);
- When actual observed values are not available, produce estimated values in italics;
- When the actual reported value is nil (zero), include the value "0" in the relevant cell;
- Only when the actual value or an estimate is not available, treat the data item as missing and leave the cell blank.

Note: Certain questionnaire items require respondents to use check boxes and drop-down lists. To respond to these items, please click on the appropriate option.

The items with these features include the corresponding drop lists of unit measures to the right of the reported figures in Section 3.1, check boxes in Section 5 and drop lists with predefined options in Sections 2, 4, 10 and 13.

*****Please do not alter this questionnaire form by adding columns, rows and/or deleting items.*****

Annex 40 (cont'd)

ACI Airport Economics Survey 2014

Part 1 - Contact Information

Airport Name (Please complete one separate form for EACH airport being reported)

3-letter IATA Airport Code - *If the reported figures pertain to more than one airport, please list each airport separated by "/" (e.g., XXX/YYY/ZZZ)*

Contact person

Telephone number

Title (Accountant, CFO, Finance Director, etc.)

E-mail address

Part 2 - General Information

Total Traffic for Financial Years:

		2013	2012
2.1	Passengers:		
2.2	Cargo (metric tonnes):		
2.3	Movements:		
2.4	WLU:		

Work Load Unit is equal to 1 passenger or 100 kg of cargo

2.5	Financial year (please select):	
2.6	Financial figures submitted in:	
2.7	Reporting currency (please select):	
2.8	Suggested exchange rate: 1 US$=	

Part 3.1 - Infrastructure Size (Area)

		Unit of measure
3.1.1	**Total Airport Site Area** *of which:*	
3.1.1.1	Airside Area	
3.1.1.2	Landside area	
3.1.2	**Passenger Terminal(s) Building(s) Area** *of which:*	
3.1.2.1	Airside Area	
3.1.2.2	Landside area	
3.1.3	**Cargo Terminal(s) Building(s) Area**	
3.1.4	**Commercial Activity Area** (inside and outside the terminal building(s)) *of which:*	
3.1.4.1	Food & beverage	
3.1.4.2	Retail Activity Area *of which:*	
3.1.4.2.1	Duty Free Area	

Annex 40 (cont'd)

ACI Airport Economics Survey 2014

Part 3.2 - Infrastructure Units

Please specify the number of:		Count:
3.2.1	Runways (paved landing strips)	
3.2.2	Contact gates with air bridge (jet bridge)	
3.2.3	Remote stands (B737-800 or equivalent)	
3.2.4	Passenger terminals	
3.2.5	Cargo terminals	
3.2.6	Passenger check-in desks/counters	
3.2.7	Self-service kiosks operated by airport	
3.2.8	Individual car parking spaces *(excluding employee parking spaces)*	
3.2.9	Retail stores / shops / boutiques (including Duty Free)	
	3.2.9.1 *of which:* Duty-Free shops	
3.2.10	Restaurants / cafés and other F&B outlets	
3.2.11	Flight information displays (e.g., screens)	
3.2.12	Baggage trolleys	
3.2.13	Toilet units for women - cabins (WC)	
3.2.13	Toilet units for men	
	3.2.14.1 Cabins (WC)	
	3.2.14.2 Urinals	

Part 4 - Pricing, Ownership & Regulation

		Please select:
4.1	What **till** applies to your airport: single, hybrid or dual?	
4.2	Which form of **economic oversight** applies to your airport?	
4.3	What is the **ownership structure** of your airport(s) (i.e., share ownership)?	
4.4	If there is a **private participation/involvement** at your airports, please indicate the type:	
4.5	If applicable, what is the real pre-tax **Weighted Average Cost of Capital (WACC)** allocated by regulators (or specified in concession agreements)?	%
4.6	Does your airport provide an **incentive scheme** within your pricing structure to attract new air services or develop existing ones?	

Annex 40 (cont'd)

ACI Airport Economics Survey 2014

Part 5 - Employment

		Headcount
5.1	**Total personnel employed by airport operator**	
5.2	**Total personnel employed by airport operator** (i.e., employed by other companies and airport operator) (can be estimated by the number of issued airport security passes)	

Please tick the Insourced box OR the Outsourced box for each employment activity and record the corresponding number of employees (if available) as headcounts. Insourced refers to activities where personnel are primarily employed by the airport operator directly. Outsourced refers to activities or personnel that are primarily contracted to a third party. If the actual employee data are not available for outsourced activities, please provide estimates.

Main airport activities			Headcount **Insourced**		Headcount **Outsourced**	Headcount **Total = Insourced + Outsourced**
		Insourced		*Outsourced*		
5.3.1	Airport management					
5.3.2	Ground handling services					
5.3.3	Rescue and fire service					
5.3.4	Car parking services					
5.3.5	Cleaning services					
5.3.6	Maintenance services					
5.3.7	Air traffic control services					
5.3.8	Security services					
5.3.9	Concession services (shops, F&B, etc.)					
5.3.10	Runway, taxiway, apron operations					
5.3.11	Info. and Communications Technology (ICT)					
5.3.12	Other					

Annex 40 (cont'd)

ACI Airport Economics Survey 2014

Part 6 - Airport Revenue

		2013 (Financial year)	**2012** (Previous financial year)
6	**Total Airport Revenue** ***(sum 6.1, 6.2, 6.3, 6.4)***		
6.1	**Operating Aeronautical Revenue** ***(sum 6.1.1, 6.1.2, 6.1.3, 6.1.4)***		
6.1.1	**Aircraft-Related Charges**		
6.1.1.1	Landing charges		
6.1.1.2	Parking charges		
6.1.1.3	Boarding bridge charges		
6.1.1.4	Noise and environmental charges		
6.1.1.5	Navaid charges		
6.1.1.6	Other aircraft-related charges *(e.g., de-icing, etc.)*		
6.1.2	**Passenger-Related Charges**		
6.1.2.1	Passenger charges *(AIF and PFC included)*		
6.1.2.2	Security charges		
6.1.2.3	Transfer / transit charges		
6.1.2.4	Other passenger-related charges *(e.g., Iranian Airports Organisation PRM)*		
6.1.3	**Cargo (or freight) charges**		
6.1.4	**Terminal rentals paid by airlines for space utilization**		
6.1.5	**Other Operating Aeronautical Revenue**		
6.2	**Ground Handling Revenue** ***(sum 6.2.1, 6.2.2, 6.2.3)***		
6.2.1	Ground Handling Concession Revenue *(outsourced - paid by ground handling companies)*		
6.2.2	Ground Handling Charges *(insourced - service provided by airport company)*		
6.2.3	Other Ground Handling Revenue *(e.g., infrastructure related; CUTE; etc.)*		
6.3	**Operating Non-Aeronautical Revenue** ***(sum 6.3.1 to 6.3.3)***		
6.3.1	**Revenue from Concessions** *(excl. 6.2.1 ground handling concession)*		
6.3.1.1	Retail *(includes 6.3.1.1.1 Duty Free)*		
6.3.1.1.1	*of which: Duty Free concessions*		
6.3.1.2	Food and beverage		
6.3.1.3	Car parking		
6.3.1.4	Rental car		
6.3.1.5	Advertising		
6.3.1.6	Fuel and oil		
6.3.1.7	Aviation catering services		
6.3.1.8	Other concession revenue		
6.3.2	**Revenue from Airport-Owned Activities** *(excl. 6.2.2 & 6.2.3)*		
6.3.2.1	Car parking - airport-owned *(excluding 6.3.1.3)*		
6.3.2.2	Property and real estate income or rent *(excluding 6.1.1.6)*		
6.3.2.3	Utility recharges *(e.g., water, electricity, etc.)*		
6.3.2.4	Other revenue from activities undertaken by airport		
6.3.3	**Other Operating Non-Aeronautical Revenue** ***(excluding 6.3.1.8 and 6.3.2.4)***		
6.4	**Non-Operating Income (sum 6.4.1, 6.4.2, 6.4.3, 6.4.4)**		
6.4.1	Interest income		
6.4.2	Subsidies / Grants		
6.4.3	Asset Divestments		
6.4.4	Other Non-Operating Income		

Annex 40 (cont'd)

ACI Airport Economics Survey 2014

Part 7 - Airport Operating Expenses

		2013 (Financial year)	**2012** (Previous financial year)
7.1	**Total Operating Expenses** ***(sum 7.1.1 - 7.1.9)***		
	of which:		
7.1.1	Personnel expenses *(salaries and benefits)*		
7.1.2	Contracted services *(cost of services paid to third parties)*		
7.1.3	Materials, equipment, supplies *(excluding maintenance/contracted serv.)*		
7.1.4	Communications, utilities, energy & waste		
7.1.5	Insurance, claims, settlements		
7.1.6	Maintenance *(excluding contracted services)*		
7.1.7	Lease, rent, concession fee payments		
7.1.8	General and administrative expenses *(excluding personnel)*		
7.1.9	Other items		
7.2	**Capital Costs** ***(sum 7.2.1, 7.2.2, 7.2.3)***		
	of which:		
7.2.1	Interest expenses		
7.2.2	Depreciation/amortization of property, plant & equipment		
7.2.3	Other capital costs		
7.3	**Taxes & Other Fees**		

Part 8 - Income Statement Summary

		2013 (Financial year)	**2012** (Previous financial year)
8.1	**Total Airport Income**		
	of which:		
8.1.1	Operating Aeronautical Income		
8.1.2	Ground Handling Income		
8.1.3	Operating Non-Aeronautical Income		
8.1.4	Non-Operating Income		
8.2	**Total Operating Expenses**		
8.3	**Operating Surplus/Deficit (EBITDA) 8.1 minus 8.2**		
	(Total Airport Income minus Total Operating Expenses)		
8.4	**Capital Costs**		
8.5	**Taxes & Other Fees**		
8.6	**Net Profit / Loss 8.3-8.4-8.5**		
	(EBITDA minus Capital Costs minus Taxes & Other Fees)		

Annex 40 (cont'd)

ACI Airport Economics Survey 2014

Part 9 - Balance Sheet Summary

		2013 (Financial year)	2012 (Previous financial year)
9.1	**Total Assets**		
9.1.1	Current assets		
9.1.1.1	Cash and equivalent		
9.1.1.2	Other		
9.1.2	Non-current assets		
9.1.2.1	Fixed assets (book value)		
	Less accumulated depreciation on fixed assets (9.1.2.1) (negative number)		
9.1.2.2	Other		
9.2	**Total Liabilities**		
9.2.1	Current liabilities		
9.2.1.1	Short-term debt (less than one year)		
9.2.1.2	Other		
9.2.2	Non-current liabilities		
9.2.2.1	Long-term debt		
9.2.2.2	Other		
9.3	**Net Assets** ***(9.1 - 9.2)***		

Part 10 - Accumulated Debt & Credit Rating

		2013 (Financial year)	2012 (Previous financial year)
10.1	Debt outstanding *Short-term + long-term debt*		

		Moody's:	S&P:	Fitch:
10.2	What is the **credit rating** of financial instruments issued by the airport company? (Current)			

Part 11 - Operating Expenses by Functional Area

		2013 (Financial year)	2012 (Previous financial year)
11	**Total Operating Expenses** ***(Total corresponds to 7.1)***		
11.1	Aircraft movement areas and their associated lighting		
11.2	Passengers and cargo terminal facilities		
11.3	Hangar and maintenance areas		
11.4	Approach and aerodrome control *(incl. communication, navigation & surveillance)*		
11.5	Meteorological services		
11.6	Security		
11.7	Crash, firefighting & rescue services		
11.8	Administration		
11.9	Sales and Marketing		
11.10	Information and Communications Technology (ICT)		
11.11	Other		

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Part 12 - Taxes Collected by Airport on Behalf of Government Agencies

		2013 (Financial year)	**2012** (Previous financial year)
12.1	Taxes levied on passengers		
12.2	Taxed levied on airlines		

Part 13 - Capital Expenditure (CAPEX)

		Period for allocated expenditure (from YYYY to YYYY)		
		From:	*To:*	*Approved expenditure:*
13.1	**Approved CAPEX (Total Life of Projects) (the most recent)**			

		2012 actual	**2013** actual	**2014*** planned	**2015*** planned	**2016*** planned	**2017*** planned	**2018*** planned	**2019*** planned	**2020*** planned
13.2	**Total CAPEX by year**									

of which:

		2012 actual	**2013** actual
13.2.1	**Aircraft movement areas**		
13.2.1.1	Purchase of property, plant & equipment		
13.2.1.2	Construction expenses		
13.2.1.3	Other capital expenditure on movement areas		
13.2.2	**Terminal buildings (owned by airport)**		
13.2.2.1	Purchase of property, plant & equipment		
13.2.2.2	Construction expenses		
13.2.2.3	Other capital expenditure on terminal buildings		
13.2.3	**Equipment and vehicles**		
13.2.4	**Other facilities**		

*If the planned expenditures are not available, please provide estimates by year.

13.3 **Comments (please type in the box below):**

Annex 41

Participating airports

Region/Country	Operator	City / Airport
AFRICA		
Botswana	Civil Aviation Authority of Botswana	Francistown (FRW)
		Gaborone (GBE)
		Kasane (BBK)
		Maun (MUB)
Burkina Faso	ASECNA/Delegation aux Activites Aeronautiques Nationales du Burkina Faso	Bobo Dioulasso (BOY)
		Ouagadougou (OUA)
Congo	AERCO - Aéroports du Congo	Brazzaville (BZV)
		Pointe Noire (PNR)
Egypt	Egyptian Holding Company for Airport and Air Navigation (EHCAAN) - CAIRO Airport Company CAC	Cairo (CAI)
	Egyptian Holding Company for Airport and Air Navigation (EHCAAN) - Egyptian Airports Company	Hurghada (HRG)
		Sharm El Sheikh (SSH)
Ghana	Ghana Airports Company Ltd	Accra (ACC)
Madagascar	Aéroports de Madagascar - ADEMA	Antananarivo (TNR)
		Mahajanga (MJN)
		Toamasina (TMM)
Mauritius	Airports of Mauritius Co Ltd.	Plaine Magnien (MRU)
Nigeria	Federal Airports Authority of Nigeria (FAAN)	Abuja (ABV)
		Enugu (ENU)
		Ibadan (IBA)
		Jos (JOS)
		Kaduna (KAD)
		Lagos (LOS)
		Minna (MXJ)
		Port Harcourt (PHC)
		Yola (YOL)
Seychelles	Seychelles Civil Aviation Authority (SCAA)	Victoria (SEZ)
South Africa	Airports Company South Africa	Bloemfontein (BFN)
		Cape Town (CPT)
		Durban (DUR)
		East London (ELS)
		George (GRJ)
		Johannesburg (JNB)
		Kimberley (KIM)
	Primkop Airport Management	Port Elizabeth (PLZ)
		Upington (UTN)
		Nelspruit (MQP)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Tanzania (United Republic of Tanzania)	Tanzania Airports Authority	Arusha (ARK)
		Dar Es Salaam (DAR)
		Mwanza (MWZ)
Togo	Société Aéroportuaire de Lomé-Tokoin (SALT)	Lome (LFW)
Tunisia	TAV Tunisie S.A.	Enfidha (NBE)
		Monastir (MIR)
Zambia	Zambia Airports Corporation Limited	Livingstone (LVI)
		Lusaka (LUN)
		Mfuwe (MFU)
		Ndola (NLA)
ASIA-PACIFIC		
Australia	Brisbane Airport Corporation	Brisbane (BNE)
	Newcastle Airport Ltd	Newcastle (NTL)
	North Queensland Airports Operations Pty Ltd	Cairns (CNS)
		Mackay (MKY)
	Northern Territory Airports Pty Ltd	Alice Springs (ASP)
		Darwin (DRW)
	Queensland Airports Limited	Gold Coast (OOL)
		Townsville (TSV)
	Rockhampton Regional Council	Rockhampton (ROK)
	Sunshine Coast Regional Council	Maroochydore (MCY)
	Sydney Airport	Sydney (SYD)
Cambodia (Kingdom of Cambodia)	Cambodia Airports	Phnom Penh (PNH)
		Siem Reap (REP)
		Sihanouk Ville (KOS)
China (People's Republic of China)	Beijing Capital International Airport Co., Ltd.	Beijing (PEK)
	China West Airport Group	Xi'An (XIY)
	Shanghai Airport Authority	Shanghai (PVG)
Chinese Taipei	Taoyuan International Airport Corporation Ltd.	Taipei (TPE)
Cook Islands	Airport Authority Cook Islands	Rarotonga (RAR)
Fiji	Airports Fiji Limited	Nadi (NAN)
Guam	A.B. Won Pat International Airport Authority, Guam (GIAA)	Hagatña (GUM)
Hong Kong, China (SAR)	Airport Authority Hong Kong	Hong Kong (HKG)
India	Airports Authority of India	Ahmedabad (AMD)
		Aurangabad (IXU)
		Bhavnagar (BHU)
		Bhopal (BHO)
		Bhuj (BHJ)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
India (cont'd)	Airports Authority of India (cont'd)	Calcutta (CCU)
		Calicut (CCJ)
		Coimbatore (CJB)
		Jalgaon (VAJL)
		Madras (MAA)
		Mangalore (IXE)
		Mysore (MYQ)
		Porbandar (PBD)
		Surat (STV)
		Tiruchirapalli (TRZ)
		Tirupati (TIR)
		Trivandrum (TRV)
		Vadodara (BDQ)
	Bangalore International Airport Limited	Bangalore (BLR)
	Cochin International Airport Limited	Cochin (COK)
	Delhi International Airport (P) Ltd	New Delhi (DEL)
	GMR Hyderabad International Airport Limited	Hyderabad (HYD)
Indonesia	PT (Persero) Angkasa Pura II	Banda Aceh (BTJ)
		Bandung (BDO)
		Jakarta (CGK)
		Jakarta (HLP)
		Kualanamu (KNO)
		Padang (PDG)
		Palembang (PLM)
		Pekanbaru (PKU)
		Pontianak (PNK)
		Tanjung Pinang (TNJ)
Japan	Japan Airport Terminal Co., Ltd.	Tokyo (HND)
	Narita International Airport Corporation	Tokyo (NRT)
	New Kansai International Airport Co., Ltd.	Osaka (KIX)
Korea (Rep of Korea)	Incheon International Airport Corporation	Incheon (ICN)
	Korea Airports Corporation	Busan (PUS)
		Jeju (CJU)
		Seoul (GMP)
Malaysia	Malaysia Airports Holdings Berhad	Alor Setar (AOR)
		Bintulu (BTU)
		Ipoh (IPH)
		Kota Bharu (KBR)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Malaysia (cont'd)	Malaysia Airports Holdings Berhad (cont'd)	Kota Kinabalu (BKI)
		Kuala Lumpur (KUL)
		Kuala Terengganu (TGG)
		Kuantan (KUA)
		Kuching (KCH)
		Labuan (LBU)
		Lahad Batu (LDU)
		Langkawi (LGK)
		Limbang (LMN)
		Malacca (MKZ)
		Miri (MYY)
		Mulu (MZV)
		Pangkor (PKG)
		Penang (PEN)
		Redang (RDN)
		Sandakan (SDK)
		Sibu (SBW)
		Subang (SZB)
		Tawau (TWU)
		Tioman (TOD)
Marshall Islands	RMI Ports Authority	Majuro (MAJ)
Mongolia	Civil Aviation Authority of Mongolia	Ulaanbaatar (ULN)
Nepal	Tribhuvan International Airport Civil Aviation Office	Kathmandu (KTM)
New Zealand	Auckland International Airport Ltd.	Auckland (AKL)
	Dunedin International Airport Ltd.	Dunedin (DUD)
	Wellington International Airport Ltd.	Wellington (WLG)
Philippines	Clark International Airport Corporation	Manila (CRK)
	Manila International Airport Authority	Manila (MNL)
Singapore	Changi Airport Group (Singapore) Pte Ltd	Singapore (SIN)
Sri Lanka	Airport & Aviation Services (SL) Ltd.	Colombo (CMB)
Thailand	Airports of Thailand Public Co. Ltd.	Bangkok (BKK)
		Bangkok (DMK)
		Chiang Mai (CNX)
		Chiang Rai (CEI)
		Hat Yai (HDY)
		Phuket (HKT)
Tonga	Tonga Airports Limited	Nuku'Alofa (TBU)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
EUROPE		
Austria	Flughafen Graz Betriebs GmbH	Graz (GRZ)
	Flughafen Wien AG	Vienna (VIE)
	Salzburger Flughafen GmbH	Salzburg (SZG)
Belgium	Antwerp Airport - Mobiliteit en Openbare Werken	Antwerp (ANR)
	Brussels Airport Company nv	Brussels (BRU)
	Liège Airport SA	Liege (LGG)
	Ostend-Bruges International Airport	Ostend (OST)
Bosnia & Herzegovina	Sarajevo International Airport	Sarajevo (SJJ)
Bulgaria	Fraport Twin Star Airport Management AD	Bourgas (BOJ)
		Varna (VAR)
	Sofia International Airport EAD	Sofia (SOF)
Croatia	Dubrovnik Airport Ltd	Dubrovnik (DBV)
	Osijek Airport Ltd	Osijek (OSI)
	Split Airport Ltd	Split (SPU)
	Zadar Airport Ltd	Zadar (ZAD)
Cyprus	Hermes Airports Ltd	Larnaca (LCA)
		Paphos (PFO)
Czech Republic	LETISTE BRNO a.s.	Brno (BRQ)
	Prague Airport	Prague (PRG)
Denmark	Københavns Lufthavne A/S	Copenhagen (CPH)
Estonia	Tallinn Airport Ltd	Tallinn (TLL)
Finland	FINAVIA Corporation	Helsinki (HEL)
France	ADP - Aéroports de Paris	Paris (CDG)
		Paris (ORY)
	Aéroport de Bordeaux-Mérignac	Bordeaux (BOD)
	Aéroport de Strasbourg-Entzheim S.A.	Strasbourg (SXB)
	Aéroports de Lyon SA	Lyon (LYN)
		Lyon (LYS)
	CCI de Bastia et Haute-Corse	Bastia (BIA)
	CCI du Var	Toulon (TLN)
	CCI La Rochelle	La Rochelle (LRH)
	S.A Aéroport de Montpellier Méditerranée	Montpellier (MPL)
	SA Aéroport Marseille-Provence	Marseille (MRS)
	SA Toulouse-Blagnac	Toulouse (TLS)
	Syndicat Mixte de l'Aérodrome Biarritz-Anglet-Bayonne	Biarritz (BIQ)
	VINCI Airports	Nantes (NTE)
Georgia	TAV Airports Holding Co.	Batumi (BUS)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Georgia (cont'd)	TAV Airports Holding Co. (cont'd)	Tbilisi (TBS)
Germany	Flughafen Berlin-Brandenburg GmbH	Berlin (SXF)
		Berlin (TXL)
	Flughafen Bremen GmbH	Bremen (BRE)
	Flughafen Düsseldorf GmbH	Düsseldorf (DUS)
	Flughafen Hamburg GmbH	Hamburg (HAM)
	Flughafen Hannover - Langenhagen GmbH	Hanover (HAJ)
	Flughafen Köln/Bonn GmbH	Cologne (CGN)
	Flughafen München GmbH	Munich (MUC)
	Flughafen Münster/Osnabrück GmbH	Muenster (FMO)
	Flughafen Stuttgart GmbH	Stuttgart (STR)
	Fraport AG	Frankfurt (FRA)
Greece	Athens International Airport S.A.	Athens (ATH)
	Hellenic Civil Aviation Authority (HCAA)	Alexandroupolis (AXD)
		Araxos/Patras (GPA)
		Astypalaia (JTY)
		Chios (JKH)
		Heraklion (HER)
		Kalamata (KLX)
		Kastoria (KSO)
		Kavala (KVA)
		Kefallinia (EFL)
		Kerkyra (CFU)
		Kos (KGS)
		Kozani (KZI)
		Leros (LRS)
		Mikonos (JMK)
		Mytilene (MJT)
		Paros (PAS)
		Rhodes (RHO)
		Samos (SMI)
		Santorini/Thira (JTR)
		Skiathos (JSI)
		Skiros (SKU)
		Syros Island (JSY)
		Thessaloniki (SKG)
		Volos (VOL)
		Zakynthos Island (ZTH)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Hungary	Budapest Airport Zrt.	Budapest (BUD)
Iceland	Isavia - Keflavik Airport	Keflavik (KEF)
Ireland	Dublin Airport Authority plc	Cork (ORK)
		Dublin (DUB)
	Shannon Airport Authority	Shannon (SNN)
Italy	ADR S.p.A	Rome (CIA)
		Rome (FCO)
	Aeroporto Friuli Venezia Giulia S.p.A.	Trieste (TRS)
	Aeroporto G. Marconi di Bologna S.p.A.	Bologna (BLQ)
	Aeroporto Valerio Catullo di Verona Villafranca S.p.A.	Verona (VRN)
	Airgest SpA - Trapani Birgi Airport	Trapani (TPS)
	GESAC s.p.a.	Naples (NAP)
	GESAP S.p.A.	Palermo (PMO)
	SACBO S.p.A.	Milan (BGY)
	So.G.Aer. S.p.A	Cagliari (CAG)
	Società Esercizi Aeroportuali SpA	Milan (LIN)
		Milan (MXP)
Latvia	SJSC Riga International Airport	Riga (RIX)
Lithuania	State Enterprise Lithuanian Airports	Kaunas (KUN)
		Vilnius (VNO)
Macedonia (Fmr Yugo Rep of)	TAV Airports Holding Co.	Ohrid (OHD)
		Skopje (SKP)
Malta	Malta International Airport	Malta (MLA)
Moldova (Rep of)	LLC Avia Invest - Chisinau International Airport	Chisinau (KIV)
Montenegro	Airports of Montenegro	Podgorica (TGD)
		Tivat (TIV)
Netherlands	Amsterdam Airport Schiphol	Amsterdam (AMS)
	Eindhoven Airport	Eindhoven (EIN)
	Rotterdam The Hague Airport	Rotterdam (RTM)
	Schiphol Group	Lelystad (LEY)
Norway	Avinor	Bergen (BGO)
		Oslo (OSL)
		Stavanger (SVG)
Poland	Krakow Airport	Krakow (KRK)
	Polish Airports State Enterprise (PPL)	Warsaw (WAW)
	Poznan Airport Ltd	Poznan (POZ)
	Upper Silesian Aviation Group (GTL S.A)	Katowice (KTW)
Portugal	Aeroportos de Portugal S.A	Beja (BYJ)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Portugal (cont'd)	Aeroportos de Portugal S.A (cont'd)	Faro (FAO)
		Flores (FLW)
		Funchal (FNC)
		Horta (HOR)
		Lisbon (LIS)
		Ponta Delgada (PDL)
		Porto (OPO)
		Porto Santo (PXO)
		Santa Maria (SMA)
Romania	Aeroportul Oradea RA	Oradea (OMR)
	Arad International Airport	Arad (ARW)
	Bucharest Airports National Company	Bucharest (BBU)
		Bucharest (OTP)
	Cluj Avram Iancu International Airport	Cluj (CLJ)
	Constanta International Airport	Constanta (CND)
	Regia Autonoma Aeroportul Sibiu-Turnisor	Sibiu (SBZ)
	Satu Mare International Airport	Satu Mare (SUJ)
Russian Federation	Airports of Regions Managing Company	Ekaterinburg (SVX)
	JSC "Vnukovo Airport"	Moscow (VKO)
	Kazan International Airport, OJSC	Kazan (KZN)
	Northern Capital Gateway LLC	St. Petersburg (LED)
	NOVAPORT LLC	Novosibirsk (OVB)
		Tomsk (TOF)
Serbia	Belgrade Nikola Tesla Airport	Belgrade (BEG)
Slovak Republic	Airport Bratislava, a.s.	Bratislava (BTS)
Slovenia	Aerodrom Ljubljana d.d.	Ljubljana (LJU)
Spain	Aena Aeropuertos S.A.	A Coruna (LCG)
		Albacete (ABC)
		Algeciras (AEI)
		Alicante (ALC)
		Almería (LEI)
		Asturias (OVD)
		Badajoz (BJZ)
		Barcelona (BCN)
		Bilbao (BIO)
		Burgos (RGS)
		Ceuta (JCU)
		Córdoba (ODB)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Spain (cont'd)	Aena Aeropuertos S.A. (cont'd)	Fuerteventura (FUE)
		Girona (GRO)
		Gran Canaria (LPA)
		Granada (GRX)
		Hierro (VDE)
		Huesca-Pirineos (HSK)
		Ibiza (IBZ)
		Jerez (XRY)
		La Gomera (GMZ)
		La Palma (SPC)
		Lanzarote (ACE)
		Leon (LEN)
		Logroño (RJL)
		Madrid (LECU)
		Madrid (MAD)
		Madrid (TOJ)
		Malaga (AGP)
		Melilla (MLN)
		Menorca (MAH)
		Murcia (MJV)
		Palma De Mallorca (PMI)
		Pamplona (PNA)
		Reus (REU)
		Sabadell (QSA)
		Salamanca (SLM)
		San Sebastian (EAS)
		Santander (SDR)
		Santiago de Compostela (SCQ)
		Sevilla (SVQ)
		Son Bonet (SBO)
		Tenerife (TFN)
		Tenerife (TFS)
		Valencia (VLC)
		Valladolid (VLL)
		Vigo (VGO)
		Vitoria (VIT)
		Zaragoza (ZAZ)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Sweden	Jönköping Airport AB	Jönköping (JKG)
Switzerland	Aéroport International de Genève	Geneva (GVA)
	EuroAirport Basel Mulhouse Freiburg	Basel (BSL)
	Flughafen Zurich AG	Zurich (ZRH)
Turkey	Istanbul Sabiha Gokcen International Airport Investment Development and Operation Inc	Istanbul (SAW)
	TAV Airports Holding Co.	Ankara (ESB)
		Gazipasa (GZP)
		Istanbul (IST)
		Izmir (ADB)
Ukraine	Boryspil International State Airport Enterprise (Kiev Airport)	Kiev (KBP)
United Kingdom	Aberdeen International Airport Limited	Aberdeen (ABZ)
	Bristol International Airport plc	Bristol (BRS)
	Gatwick Airport Ltd	London (LGW)
	Heathrow Airport Limited	Glasgow (GLA)
		London (LHR)
	London City Airport Ltd	London (LCY)
	London Luton Airport Operations Ltd	London (LTN)
	Newcastle International Airport Ltd	Newcastle (NCL)
	Southampton International Airport Limited	Southampton (SOU)
LATIN AMERICA-CARIBBEAN		
Argentina	Aeropuertos Argentina 2000	Buenos Aires (AEP)
		Buenos Aires (EZE)
		Catamarca (CTC)
		Comodoro Rivadiva (CRD)
		Cordoba (COR)
		Esquel (EQS)
		Formosa (FMA)
		General Pico (GPO)
		Iguazu (IGR)
		Jujuy (JUJ)
		La Rioja (IRJ)
		Malargue (LGS)
		Mar Del Plata (MDQ)
		Mendoza (MDZ)
		Parana (PRA)
		Posadas (PSS)
		Puerto Madryn (PMY)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Argentina (cont'd)	Aeropuertos Argentina 2000 (cont'd)	Reconquista (RCQ)
		Resistencia (RES)
		Rio Cuarto (RCU)
		Rio Gallegos (RGL)
		Rio Grande (RGA)
		Salta (SLA)
		San Carlos De Bariloche (BRC)
		San Fernando (SFD)
		San Juan (UAQ)
		San Luis (LUQ)
		San Rafael (AFA)
		Santa Rosa (RSA)
		Santiago Del Estero (SDE)
		Tucuman (TUC)
		Viedma (VDM)
		Villa Mercedes (VME)
Bahamas	Nassau Airport Development Company	Nassau (NAS)
Bermuda	Bermuda Government Department of Airport Operations	Bermuda (BDA)
Brazil	Aeroportos Brasil Viracopos S.A.	Campinas (VCP)
	BH Airport	Belo Horizonte (CNF)
	Empresa Brasileira de Infraestructura Aeroportuária - INFRAERO	Altamira (ATM)
		Aracaju (AJU)
		Bagé (BGX)
		Belém (BEL)
		Belem (SBJC)
		Belo Horizonte (PLU)
		Belo Horizonte (SBPR)
		Boa Vista (BVB)
		Campina Grande (CPV)
		Campo Grande (CGR)
		Campos dos Goytacazes (CAW)
		Carajas (CKS)
		Corumbá (CMG)
		Criciúma (CCM)
		Cruzeiro Do Sul (CZS)
		Cuiaba (CGB)
		Curitiba (BFH)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Brazil (cont'd)	Empresa Brasileira de Infraestructura Aeroportuária - INFRAERO (cont'd)	Curitiba (CWB)
		Florianopolis (FLN)
		Fortaleza (FOR)
		Foz Do Iguaçú (IGU)
		Goiania (GYN)
		Ilheus (IOS)
		Imperatriz (IMP)
		Joao Pessoa (JPA)
		Joinville (JOI)
		Juazeiro Do Norte (JDO)
		Londrina (LDB)
		Macaé (MEA)
		Macapá (MCP)
		Maceio (MCZ)
		Manaus (MAO)
		Maraba (MAB)
		Montes Claros (MOC)
		Navegantes (NVT)
		Palmas (PMW)
		Parnaiba (PHB)
		Paulo Afonso (PAV)
		Pelotas (PET)
		Petrolina (PNZ)
		Ponta Porã (PMG)
		Porto Alegre (POA)
		Porto Velho (PVH)
		Recife (REC)
		Rio Branco (RBR)
		Rio De Janeiro (GIG)
		Rio De Janeiro (SBJR)
		Rio De Janeiro (SDU)
		Salvador (SSA)
		Santarem (STM)
		Sao Jose Dos Campos (SJK)
		Sao Luis (SLZ)
		São Paulo (CGH)
		São Paulo (MAE)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Brazil (cont'd)	Empresa Brasileira de Infraestructura Aeroportuária - INFRAERO (cont'd)	Tabatinga (TBT)
		Tefé (TFF)
		Teresina (THE)
		Uberaba (UBA)
		Uberlandia (UDI)
		Uruguaiana (URG)
		Vitoria (VIX)
	INFRAMERICA	Brasilia (BSB)
		Natal (NAT)
	Sao Paulo-Guarulhos International Airport	São Paulo (GRU)*
Chile	SCL Aeropuerto de Santiago	Santiago de Chile (SCL)
Colombia	Operadora Aeroportuaria Internacional (OPAIN)	Bogota (BOG)
	Sociedad Aeroportuaria de la Costa S.A. - SACSA	Cartagena (CTG)
Costa Rica	AERIS Holding Costa Rica S.A.	San Jose (SJO)
Dutch Caribbean	Aruba Airport Authority N.V.	Aruba (AUA)
Ecuador	Corporación Quiport S.A	Quito (UIO)
	Terminales Aeroportuarias de Guayaquil, S.A. - TAGSA	Guayaquil (GYE)
Guadeloupe	Chambre de Commerce et d'Industrie de Pointe-à-Pitre	Pointe-à-Pitre (PTP)
Guyana	Cheddi Jagan International Airport Corporation	Georgetown (GEO)
Jamaica	Airports Authority of Jamaica - AAJ	Kingston (KIN)
	MBJ Airports Limited	Montego Bay (MBJ)
Martinique	Chambre de Commerce et d'Industrie de la Martinique	Fort-de-France (FDF)
Mexico	Aeropuerto y Servicios Auxiliares - ASA	Campeche (CPE)
		Chetumal (CTM)
		Ciudad Del Carmen (CME)
		Ciudad Obregon (CEN)
		Ciudad Victoria (CVM)
		Colima (CLQ)
		Guaymas (GYM)
		Loreto (LTO)
		Matamoros (MAM)
		Nogales (NOG)
		Nuevo Laredo (NLD)
		Poza Rica (PAZ)
		Puebla (PBC)
		Puerto Escondido (PXM)
		Tamuin (TSL)
		Tehuacan (TCN)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Mexico (cont'd)	Aeropuerto y Servicios Auxiliares - ASA (cont'd)	Tepic (TPQ)
		Uruapan (UPN)
	Aeropuertos del Sureste - ASUR	Cancun (CUN)
		Cozumel (CZM)
		Huatulco (HUX)
		Merida (MID)
		Minatitlan (MTT)
		Oaxaca (OAX)
		Tapachula (TAP)
		Veracruz (VER)
		Villahermosa (VSA)
	Grupo Aeroportuario de la Ciudad de Mexico S.A. C.V. (AICM)	Mexico City (MEX)
	Grupo Aeroportuario del Centro Norte (OMA)	Acapulco (ACA)**
		Chihuahua (CUU)**
		Ciudad Juarez (CJS)**
		Culiacan (CUL)**
		Durango (DGO)**
		Ixtapa (ZIH)**
		Mazatlan (MZT)**
		Monterrey (MTY)**
		Reynosa (REX)**
		San Luis Potosi (SLP)**
		Tampico (TAM)**
		Torreon (TRC)**
		Zacatecas (ZCL)**
	Grupo Aeroportuario del Pacífico - GAP	Aguascalientes (AGU)
		Guadalajara (GDL)
		Hermosillo (HMO)
		La Paz (LAP)
		Leon/Guanajuato (BJX)
		Los Mochis (LMM)
		Manzanillo (ZLO)
		Mexicali (MXL)
		Morelia (MLM)
		Puerto Vallarta (PVR)
		San Jose Del Cabo (SJD)
		Tijuana (TIJ)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Netherlands Antilles	Curaçao Airport Partners N.V.	Curaçao (CUR)
	Flamingo Airport - Bonaire International Airport N.V.	Bonaire (BON)
Panama	Tocumen S. A.	Panama City (PTY)
Peru	Aeropuertos del Peru - ADP	Anta (ATA)
		Cajamarca (CJA)
		Chachapoyas (CHH)
		Chiclayo (CIX)
		Izquitos (IQT)
		Pisco (PIO)
		Piura (PIU)
		Pucallpa (PCL)
		Talara (TYL)
		Tarapoto (TPP)
		Trujillo (TRU)
		Tumbes (TBP)
	Lima Airport Partners S.R.L.	Lima (LIM)
Trinidad & Tobago	Airports Authority of Trinidad & Tobago	Port of Spain (POS)
		Tobago (TAB)
Uruguay	Consorcio Aeropuertos Internacionales S.A. - CAISA	Punta del Este (PDP)
	Puerta des Sur, S.A.	Montevideo (MVD)
MIDDLE EAST		
Bahrain (Kingdom of Bahrain)	Bahrain Airport Company	Bahrain (BAH)
Iran (Islamic Republic of Iran)	Iran Airports Company	Isfahan (IFN)
		Tabriz (TBZ)
		Zahedan (ZAH)
Israel	Israel Airports Authority	Eilat (ETH)
		Sde Dov (SDV)
		Tel-Aviv (TLV)
Jordan	Jordan Airports Company PSC	Amman (ADJ)
Oman	Oman Airports Management Company	Muscat (MCT)
		Salalah (SLL)
Saudi Arabia (Kingdom of Saudi Arabia)	General Authority of Civil Aviation	Dammam (DMM)
		Jeddah (JED)
	Tibah Airports Operation Co. Ltd.	Madinah (MED)
United Arab Emirates	Dubai Airports	Dubai (DXB)*
NORTH AMERICA		
Canada	Aeroport de Quebec Inc. Jean Lesage International Airport	Quebec QC (YQB)
	Aéroports de Montréal	Montreal QC (YUL)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
Canada (cont'd)	Calgary Airport Authority	Calgary AB (YYC)
	City of Kelowna Kelowna International Airport	Kelowna BC (YLW)
	Gander International Airport Authority Inc.	Gander NF (YQX)**
	Greater Moncton International Airport Authority Inc.	Moncton NB (YQM)**
	Greater Toronto Airports Authority	Toronto ON (YYZ)
	Halifax International Airport Authority Halifax Stanfield International Airport	Halifax NS (YHZ)
	Prince George Airport Authority Prince George Airport	Prince George BC (YXS)**
	Saskatoon Airport Authority	Saskatoon SK (YXE)
	Thunder Bay International Airports Authority Inc.	Thunder Bay ON (YQT)**
	Vancouver Airport Authority	Vancouver BC (YVR)
	Winnipeg Airports Authority Inc.	Winnipeg MB (YWG)
USA	Albany County Airport Authority	Albany NY (ALB)
	Allegheny County Airport Authority Pittsburgh International Airport	Pittsburgh PA (PIT)
	Board of County Commissioners Palm Beach County Department of Airports	West Palm Beach FL (PBI)
	Boise Airport	Boise ID (BOI)
	Broward County Aviation Department	Fort Lauderdale, FL (FLL)
	Buffalo Niagara International Airport	Buffalo, NY (BUF)
	Charleston County Aviation Authority	Charleston SC (CHS)
	Charlotte Aviation Department	Charlotte NC (CLT)
	Charlotte County Airport Authority	Punta Gorda (PGD)**
	Chicago Department of Aviation	Chicago IL (ORD)
	Cincinnati/Northern Kentucky Intl. Airport	Cincinnati OH (CVG)
	City and County of Denver-Denver International Airport	Denver CO (DEN)
	City of Atlanta Department of Aviation	Atlanta GA (ATL)
	City of Austin Department of Aviation	Austin TX (AUS)
	City of Dallas Department of Aviation - Dallas Love Field	Dallas TX (DAL)
	City of El Paso-El Paso International Airport	El Paso TX (ELP)
	City of Fresno - Airports	Fresno CA (FAT)
	City of Phoenix Aviation Department	Phoenix AZ (PHX)
	City of San Antonio Aviation Department	San Antonio TX (SAT)
	City of San Jose Airport Department Norman Y. Mineta San Jose Intl. Airport	San Jose CA (SJC)
	Clark County Department of Aviation McCarran International Airport	Las Vegas NV (LAS)
	Columbia Metropolitan Airport	Columbia SC (CAE)
	Columbus Regional Airport Authority	Columbus OH (CMH)
	Dallas Fort Worth International Airport	Dallas/Fort Worth TX (DFW)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
USA (cont'd)	Dane County Regional Airport	Madison WI (MSN)
	Des Moines Airport Authority Des Moines International Airport	Des Moines IA (DSM)
	Fairbanks International Airport	Fairbanks AK (FAI)
	Ft. Wayne-Allen County Airport Authority	Fort Wayne IN (FWA)**
	Gerald R. Ford International Airport Board Gerald R. Ford International Airport	Grand Rapids MI (GRR)
	Greater Baton Rouge Airport District	Baton Rouge LA (BTR)
	Greater Orlando Aviation Authority	Orlando FL (MCO)
	Greenville-Spartanburg Airport District	Greer SC (GSP)
	Houston Airport System	Houston TX (HOU)
		Houston TX (IAH)
	Huntsville-Madison County Airport Authority	Huntsville AL (HSV)
	Indianapolis Airport Authority	Indianapolis IN (IND)
	Jackson Municipal Airport Authority	Jackson MS (JAN)
	Jacksonville Aviation Authority (JAA)	Jacksonville FL (JAX)
	John Wayne Airport	Santa Ana, CA (SNA)
	Lee County Port Authority	Fort Myers FL (RSW)
	Long Beach Airport	Long Beach CA (LGB)
	Los Angeles World Airports	Los Angeles CA (LAX)
	Louisville Regional Airport Authority	Louisville KY (SDF)
	Manchester - Boston Regional Airport	Manchester, NH (MHT)
	Maryland Aviation Administration	Baltimore MD (BWI)
	Massachusetts Port Authority	Boston MA (BOS)
	Memphis-Shelby County Airport Authority	Memphis TN (MEM)
	Metropolitan Nashville Airport Authority	Nashville TN (BNA)
	Metropolitan Washington Airports Authority	Washington DC (DCA)
		Washington, DC (IAD)
	Miami-Dade County Aviation Department	Miami FL (MIA)
	Milwaukee County Department of Transportation Airports Division	Milwaukee WI (MKE)
	Minneapolis-St. Paul Metropolitan Airports Commission	Minneapolis MN (MSP)
	Monterey Peninsula Airport District	Monterey CA (MRY)**
	New Orleans Aviation Board Louis Armstrong New Orleans International Airport	New Orleans LA (MSY)
	Norfolk Airport Authority	Norfolk VA (ORF)
	Oakland International Airport Port of Oakland	Oakland CA (OAK)
	Oklahoma City Airport Trust	Oklahoma City, OK (OKC)
	Omaha Airport Authority	Omaha NE (OMA)
	Pensacola International Airport	Pensacola FL (PNS)

Annex 41 (cont'd)

Participating airports

Region/Country	Operator	City / Airport
USA (cont'd)	Philadelphia Division of Aviation Philadelphia International Airport	Philadelphia PA (PHL)
	Phoenix-Mesa Gateway Airport Authority	Phoenix AZ (AZA)
	Port Authority of New York and New Jersey	New York NY (JFK)
		New York NY (LGA)
		Newark NJ (EWR)
	Port of Portland Portland International Airport	Portland OR (PDX)
	Raleigh-Durham Airport Authority	Raleigh-Durham NC (RDU)
	Reno-Tahoe Airport Authority	Reno NV (RNO)
	Rhode Island Airport Corporation	Warwick (PVD)
	Roanoke-Blacksburg Regional Airport	Roanoke VA (ROA)**
	Sacramento County Airport System	Sacramento CA (SMF)
	Salt Lake City Department of Airports	Salt Lake City UT (SLC)
	San Diego County Regional Airport Authority	San Diego CA (SAN)
	San Francisco Airport Commission	San Francisco CA (SFO)
	Sarasota Manatee Airport Authority	Sarasota FL (SRQ)
	Seattle-Tacoma International Airport	Seattle WA (SEA)
	Shreveport Airport Authority	Shreveport, LA (SHV)
	Spokane International Airport	Spokane WA (GEG)
	St. Joseph County Airport Authority	South Bend IN (SBN)**
	St. Louis Airport Authority Lambert St. Louis International Airport	St Louis MO (STL)
	Tallahassee Regional Airport	Tallahassee FL (TLH)
	Tampa International Airport	Tampa FL (TPA)
	Ted Stevens Anchorage International Airport	Anchorage AK (ANC)
	The Greater Asheville Regional Airport Authority	Asheville NC (AVL)
	The South Jersey Transportation Authority	Atlantic City NJ (ACY)
	Tucson Airport Authority Tucson International Airport	Tucson AZ (TUS)
	Wayne County Airport Authority	Detroit MI (DTW)
	Wichita Airport Authority	Wichita KS (ICT)

*Data estimated by Airports Council International - ACI World

Glossary of terms

Note - The following terms are described as they apply in the context of the ACI Airport Economics Report. This list is not exhaustive.

Air bridge (jet bridge) (boarding bridge) – An enclosed, movable connector which extends from an airport terminal gate to an aircraft.

Aircraft movement – An aircraft take-off or landing at an airport. For airport traffic purposes, one arrival and one departure are counted as two movements.

Airside – Parts of an airport accessible to aircraft, including runways, taxiways and ramps. Within a terminal it defines the area nearest the aircraft, the boundary of which is the security check, and customs and passport control for international airports.

Amortization – The gradual extinguishment of the cost of an asset by periodic (annual) charges to expenses, usually applicable to intangible assets (e.g., development costs).

Apron – A defined area on a land aerodrome intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

Capital expenditure – **(CAPEX)** – Funds used by an airport operator to acquire or upgrade physical assets such as property, industrial buildings or equipment. This type of outlay is made by airports to maintain or increase the scope of their operations and is allocated for specific time periods. These expenditures can include everything from repairing a roof to building a new terminal building or runway.

Cash – In accounting it denotes cash on hand (e.g., petty cash and cash not yet deposited to the bank) and demand deposits held in banks and similar accounts that can be used in payment of obligations.

Cash equivalents – Very liquid short-term investments, usually maturing in 90 days or less.

Charges – Levies that are designed and applied specifically to recover the costs of providing facilities and services for civil aviation.

> **Aircraft-related charges** – charges that are related directly to the handling of an aircraft at an airport and are typically applied per aircraft landing/take-off/movement and are based on an aircraft weight/size formula.
> Aircraft-related charges include: landing, parking, boarding bridge, noise and environmental, navaid and others.
>
> **Passenger-related charges** – charges that are related directly to handling passengers at an airport are typically levied on a per passenger basis.
> Passenger-related charges include: passenger charges (including AIF and PFC), security charges, transfer/transit charges and others.

Glossary of terms (cont'd)

Concession – The right to operate a certain commercial activity at the airport, commonly on an exclusive basis and usually at a specified location.

Current assets – Assets that are expected to be consumed or converted into cash in the near future, typically one year or less.

Current liabilities Short-term obligations—such as accounts payable, wages payable or accrued liabilities—that are expected to be settled in the near future, typically one year or less.

Debt service – Principal plus interest paid or to be paid over the life of a particular debt instrument or within a particular reporting period.

Depreciation of assets – The decrease in the value of an asset due to wear and tear through use, action of the elements, inadequacy or obsolescence, normally over a predetermined period of time (depreciation period/book life of the asset).

Dual till – Under the dual till approach, the full cost associated with the airport and its essential ancillary services are allocated between the airport owner/operator and the airport users. The costs allocated to air traffic include only those costs associated with the facilities that are actually used by the aircraft operators and the end-users. No adjustment is made to this cost basis to reflect non-aeronautical revenues accruing to the airport.

Economic oversight – The function by which a state supervises operational and commercial practices of an airport.

Fixed assets – Consist of land, buildings (e.g., runways, terminals, etc.), machinery, tools and equipment of all kinds, trucks, furnishings and so on used in the day-to-day operations of a business. Unlike current assets which are converted by successive steps into cash, the value of fixed assets to a company lies in their use in producing goods and services for sale rather than in their sale value. The expected benefits of the asset usually extend beyond a year and they are not intended for immediate sale.

Flight stage – A flight stage is the operation of an aircraft from take-off to its next landing.

Freight (or mail) – Freight or mail measured in metric tonnes loaded or unloaded at an airport. Has the same meaning as embarking (enplaning) and disembarking (deplaning) passengers.

Gate – Aircraft parking position on the terminal ramp (apron) usually connected to the terminal by a loading bridge. Gates are typically defined to include positions large enough for narrowbody or larger aircraft; smaller positions used for regional jets or turboprops are typically counted separately.

Glossary of terms (cont'd)

Ground handling fees – Fees charged by an airport company for passenger and ground handling services such as passenger check-in, loading and unloading of baggage and freight and aircraft servicing (e.g., aircraft cleaning). Excludes fuelling charges. Ground handling infrastructure fees are charged by an airport company for the use of baggage and cargo handling systems and infrastructure or similar.

Hybrid till – The cost basis is established based on a combination of the single till and the dual till approaches. For example, the airport owner/operator may choose to recover landing costs on the basis of the single till approach while establishing terminal costs on the basis of the dual till approach.

Landing charges/fees – Fees charged to aircraft owners and operators for the use of runways, taxiways, landing strips, runway protection zones and clearways. Does not include fees for parking aircraft.

Landside – The part of an airport farthest from the aircraft, the boundary of which is the security check. At international terminals the boundary is also determined by passport and custom control zones. The landside area includes parking lots, public transportation, access roads and train stations where existing.

Maintenance – refers to any one or combination of overhaul, repair, inspection, replacement, preservation, modification or defect rectification of airport infrastructure (excludes contracted services).

Management

Managing directors and chief executives formulate and review the policies and plan, direct, coordinate and evaluate the overall activities of enterprises or organizations (except special interest organizations and government departments) with the support of other managers, usually within guidelines established by a board of directors or a governing body to whom they are answerable for the operations undertaken and results.

Tasks include:

(a) planning, directing and coordinating the general functioning of an enterprise or organization;

(b) reviewing the operations and results of the enterprise or organization and reporting to boards of directors and governing bodies;

(c) determining objectives, strategies, policies and programmes for the enterprise or organization;

(d) providing overall leadership and management to the enterprise or organization;

(e) establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources;

(f) authorizing material, human and financial resources to implement organizational policies and programmes;

(g) monitoring and evaluating performance of the organization or enterprise against established objectives and policies;

(h) consulting with senior and subordinate staff and reviewing recommendations and reports;

(i) representing the organization at official occasions and board meetings, in negotiations, at conventions, seminars, public hearings and forums;

(j) selecting or approving the selection of senior staff;

(k) ensuring the organization complies with relevant legislation and regulations.

Administrative and commercial managers plan, organize, direct, control and coordinate the financial, administrative, human re-source, policy, planning, research and development, advertising, public relations and sales and marketing activities of enterprises and organizations or of enterprises that provide such services to other enterprises and organizations.

Tasks include:

(a) formulating and administering policy advice, strategic and financial planning;

(b) establishing and directing operational and administrative procedures;

(c) implementing, monitoring and evaluating strategies and policies;

(d) providing advice to senior managers;

(e) directing the development of initiatives for new products, marketing, public relations and advertising campaigns.

Non-current assets – Assets that are expected to benefit the company over an extended period of time (usually more than one year).

Operating aeronautical revenues – Airport income from aeronautical uses by airlines, aircraft owners and FBOs, measured on a net basis after discounts and incentives. Includes charges such as aircraft landing and takeoff fees, aircraft parking charges, passenger service fees, security charges, and in the U.S., terminal rental charges imposed in lieu of passenger charges. Includes ground handling user fees, which are a significant source of aeronautical revenue at some airports.

Operating expenses – Ordinary airport operating costs, including the following: personnel compensation and benefits, communications and utilities, repairs and maintenance, marketing, advertising and promotion, supplies and materials, contractual services, insurance, claims, and settlements. Includes administrative costs and allocated overhead costs. Excludes non-operating costs such as debt service and depreciation.

Glossary of terms (cont'd)

Operating non-aeronautical revenues – Airport operating income that is not derived from the aeronautical use of the airport. Includes revenues from land rental and non-terminal facilities, concessions for food and beverage, retail and advertising, rental cars, public and employee parking, hotel and ground transportation.

Non-operating expenses – Expenses for activities not relating to the core operations of the airport, such as interest charges, pension contributions, capital distributions, extraordinary losses and taxes.

Passengers

Embarked (enplaned) passengers – Passengers whose air journey begins at the designated airport, including passengers who, having arrived by air are continuing their air journey on a flight with a different airline or flight number. Does not include direct transit passengers.

Disembarked (deplaned) passengers – Passengers whose air journey terminates at the designated airport, including those who will continue their air journey on a connecting flight with a different airline or flight number. Does not include direct transit passengers.

Direct transit passengers – Passengers who arrive and depart under a single air ticket, without a stopover, on the same or different aircraft identified by the same airline designator and flight number. Direct transit passengers are counted only once.

Revenues from airport-owned activities – Revenues generated through activities operated directly by the airport company. These include airport-owned car parking, property and real estate income or rent, utility recharges to tenants and all other revenues from activities undertaken by the airport.

Revenues from concessions – Payments that the airport authority charges the owner or manager of an operation to conduct commercial activitities in the airport. Revenues from concessions are generated from commercial activities occuring within terminals and on airport land.

Typically the concessionaire pays a fixed rental or concession fee plus additional income to the airport once a predetermined profit or turnover level has been reached by the concessionaire. Revenues from concessions include the following streams: retail, food and beverage, car parking, rental cars, advertising, fuel and oil, aviation catering services and others.

Runway – A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Single till – Under the single till principle, airport activities (aeronautical and non-aeronautical) are taken into consideration to determine the level of airport charges.

Glossary of terms (cont'd)

Terminal – The part of an aerodrome used for embarking or disembarking passengers or cargo.

Domestic: terminal used primarily for domestic flights (i.e., having exclusively domestic stages).

International: terminal used primarily for international flights (i.e., flights that contain one or more international flight stages) where formalities such as customs, immigration, public health, animal and plant quarantine and similar procedures are carried out

Low-cost terminal: terminal with minimum facilities and amenities used by low-cost carriers

Total operating revenue – The sum of aeronautical and non-aeronautical operating revenue.

Weighted-average cost of capital – A weighted average of the after-tax required rates of return on a company's common stock, preferred stock and long-term debt, where the weights are the fraction of each source of financing in the company's target capital structure.

Country groupings

Advanced economies (36 countries) (IMF) - Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, Korea (Rep of Korea), Latvia, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Chinese Taipei, United Kingdom, USA.

ASEAN-5 (5 countries) (IMF) - Indonesia, Malaysia, Philippines, Thailand, Vietnam.

BRICS (5 countries) - Brazil, Russian Federation, India, Russian Federation, China (People's Republic of China), South Africa.

Emerging and developing Asia (29 countries) (IMF) - Bangladesh, Bhutan, Brunei Darussalam, Cambodia (Kingdom of Cambodia), China (People's Republic of China), Fiji, India, Indonesia, Kiribati, Laos, Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nepal, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, Vietnam.

Emerging and developing economies (153 countries) (IMF) - Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia (Republic of Armenia), Azerbaijan, The Bahamas, Bahrain (Kingdom of Bahrain), Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia & Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cape Verde, Cambodia (Kingdom of Cambodia), Cameroon, Central African Republic, Chad, Chile, China (People's Republic of China), Colombia, Comoros, Congo (Dem Rep), Congo, Costa Rica, Cote D'Ivoire, Croatia, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran (Islamic Republic of Iran), Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kuwait (State of Kuwait), Kyrgyz Republic, Laos, Lebanon, Lesotho, Liberia, Libya, Lithuania, Macedonia (Fmr Yugo Rep of), Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia, Moldova (Rep of), Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Russian Federation, Rwanda, Samoa, São Tomé and Príncipe, Saudi Arabia (Kingdom of Saudi Arabia), Senegal, Serbia, Seychelles, Sierra Leone, Solomon Islands, South Africa, South Sudan, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Syria, Tajikistan, Tanzania (United Republic of Tanzania), Thailand, Timor-Leste, Togo, Tonga, Trinidad & Tobago, Tunisia, Turkey, Turkmenistan, Tuvalu, Uganda, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, Yemen (Republic of Yemen), Zambia, Zimbabwe.

Country groupings

Emerging aviation markets (19 countries) (ACI) - Brazil, Chile, China (People's Republic of China), Chinese Taipei, Colombia, India, Indonesia, Macau, China, Malaysia, Mexico, Peru, Philippines, Qatar, Russian Federation, Saudi Arabia (Kingdom of Saudi Arabia), South Africa, Turkey, United Arab Emirates, Vietnam.

Euro area (17 countries) (IMF) - Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovak Republic, Slovenia, Spain.

European Union (28 countries) (IMF) - Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom.

Major advanced economies (G7) (IMF) - Canada, France, Germany, Italy, Japan, United Kingdom, USA.

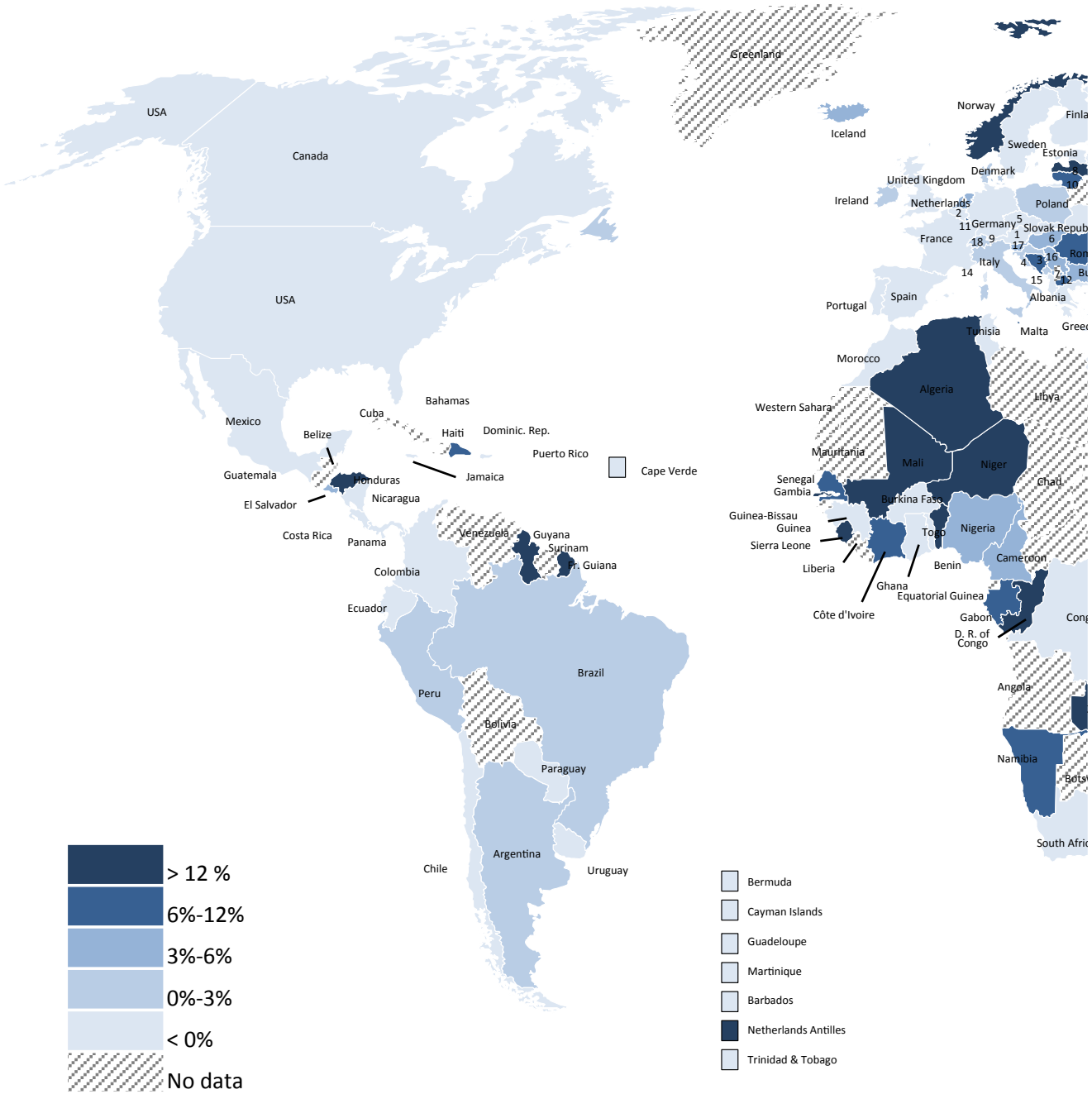
Major exporters of manufactured goods (22 countries) (UNCTAD) - Austria, Belgium, Canada, China (People's Republic of China), Chinese Taipei, France, Germany, Hong Kong SAR, Ireland, Italy, Japan, Korea (Rep of Korea), Malaysia, Mexico, Netherlands, Singapore, Spain, Sweden, Switzerland, Thailand, United Kingdom, USA.

MINT (4 countries) (Fidelity Investments) - Indonesia, Mexico, Nigeria, Thailand.

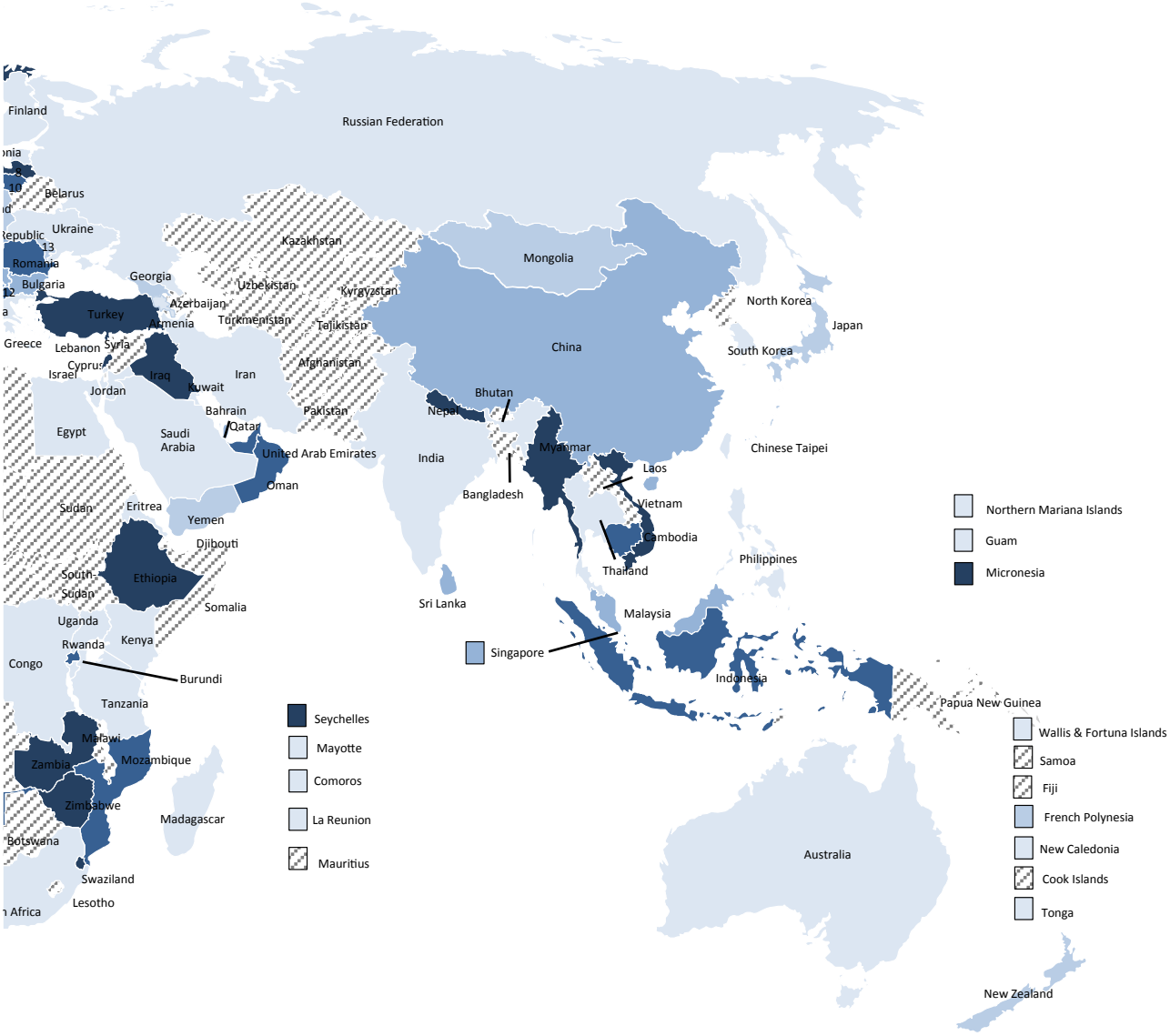
Next 11 (11 countries) (Goldman Sachs) - Bangladesh, Egypt, Indonesia, Iran (Islamic Republic of Iran), Mexico, Nigeria, Pakistan, Philippines, Korea (Rep of Korea), Turkey, Vietnam.

Sub-Saharan Africa (45 countries) (IMF) - Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Cameroon, Central African Republic, Chad, Comoros, Congo (Dem Rep), Congo, Cote D'Ivoire, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, South Africa, South Sudan, Swaziland, Tanzania (United Republic of Tanzania), Togo, Uganda, Zambia, Zimbabwe.

Worldwide cargo growth (2013/2012 %)



1 Austria
2 Belgium
3 Bosnia & Herzegovina
4 Croatia
5 Czech Republic
6 Hungary
7 Kosovo
8 Latvia
9 Liechtenstein
10 Lithuania
11 Luxembourg
12 Macedonia
13 Moldova
14 Monaco
15 Montenegro
16 Serbia
17 Slovenia
18 Switzerland



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