AIRPORTS COUNCIL INTERNATIONAL

Policy Brief

Creating fertile grounds for private investment in airports

2018 | **01**

This ACI World Policy Brief has been prepared by ACI World in partnership with ACI Asia-Pacific and ACI Latin America-Caribbean with the assistance of InterVISTAS Consulting Inc. The research incorporates inputs from a broad range of aviation industry experts. ACI World acknowledges the assistance of InterVISTAS Consulting Inc. in preparing this Policy Brief.

Published in Montreal, Canada

ACI World
Suite 1810
800 Rue du Square Victoria
Montreal, Quebec, H4Z 1G8
Canada

www.aci.aero

Creating fertile grounds for private investment in airports

The infrastructure gap

Traffic to double by 2033

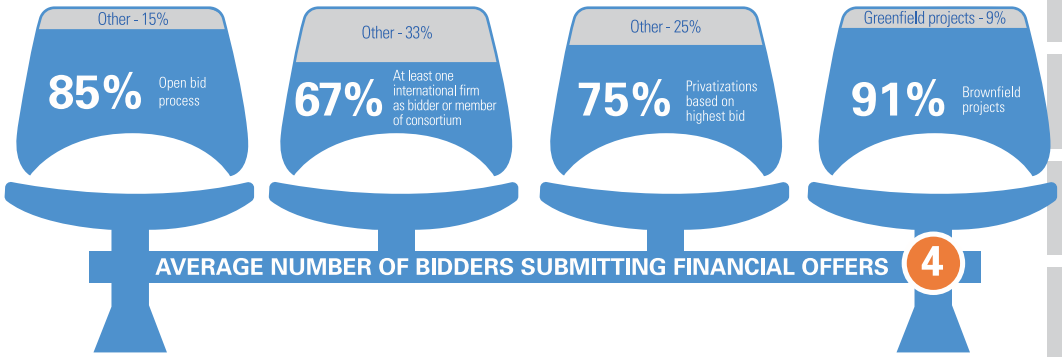
2018	2022	2033	2040
8.7	10.7	17.0	22.3

Based on a sample of 50 countries alone, planned airport investments from 2018-2022 fall short. Required investments are in excess of US$433 billion.

US$355 BILLION (PLANNED)

US$78 BILLION (GAP)

Privatization processes – global facts and figures



Average duration of privatizations (in years)

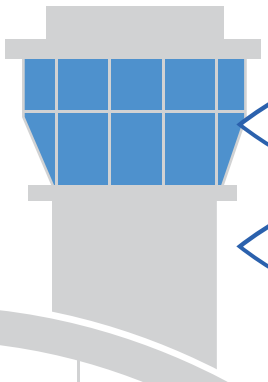
- ↘ 9 Management contracts
- → 35 BOT
- ↗ 64 Trade sales/ leases

Incentives for private investment to fill the infrastructure gap

Of the world's 100 busiest airports for pax,

51

have some form of private sector participation.



57% PAX TRAFFIC AT PUBLIC AIRPORTS

43% PAX TRAFFIC AT PRIVATE AIRPORTS

INVESTORS EXPECT:

- Clear and consistent legal frameworks prior to privatization.
- Reasonable returns on investments reflecting risk and CAPEX outlay.

KEY FINDINGS:

- **Airports need to invest in infrastructure to meet future demand.** Global traffic is expected to be more than 22 billion passengers by 2040 and to grow at an average annual rate of 4.5%.
- **Airports welcome future growth prospects but the investment needed outpaces the investment planned.** The G20's Global Infrastructure Outlook reports that, to meet the global traffic demand that ACI World estimates at 10.7 billion passengers by 2022, a sample of the airport investment plans of 50 countries totals US$355 billion in the 2018–2022 period—but their actual investment needs are more than US$433 billion.
- **Privatization is becoming more common and airport size matters.** Of the top 100 airports for passenger traffic, the number with private sector participation grew to 51 in 2017, five more than in 2016. Of the top 500 airports in 2017, 39% had private sector participation—a 1% increase over 2016.
- **The privatization model used depends both on government objectives and the requirements of the private operator/investor(s) the government hopes to attract.** A balance needs to exist between transferring the risk of financing large capital expenditures from governments and taxpayers to private sector investors, on one hand; and private sector requirements to recover the costs of operating airports and generate risk-proportionate returns on investment, on the other. Whether airports are transferred individually or in airport networks can also affect the privatization model selected.
- **Many privatization models exist,** but they can be viewed as variations on three themes: management contracts, build-operate-transfer (BOT) models and trade sale/leases. Since every privatization embodies a unique combination of government goals and private investor requirements, no single privatization model fits all circumstances. In a sub-sample of 172 airports, most privatizations used BOT models (78%), trade sale/leases accounting for 14% and management contracts 8%.
- **Airport networks with private sector participation handle high levels of traffic.** Private investors are attracted by various airport management opportunities: single airports, multiple airports in a metropolitan area, airport networks, and specific terminals within an airport. Globally, 24 airport networks have private sector participation. Their 268 airports handled more than 856 million passengers in 2017.
- **An increase in CAPEX often follows privatization.** After a privatization, capital expenditures are often injected to allow rapid upgrading of facilities. In almost all case studies, private investors finance CAPEX from the start, producing rapid improvements in capacity and service levels. On a per-workload unit (WLU) basis, airports with private sector participation invested 14% more in CAPEX compared to their public counterparts and 12% more than the global average.
- **The investment decision relies upon a consistent regulatory framework.** In some cases, the airport economic regulatory framework is unclear, or is amended unexpectedly after privatization occurs. This creates uncertainty for investors and is an additional barrier to financing infrastructure sustainably. The risk can be mitigated by pre-determining airport charges levels, based on any of several mechanisms. When legal and regulatory frameworks remain transparent and consistent, especially as regards setting aeronautical charges, the sustainability of CAPEX financing improves.
- **An inherent traffic risk exists in the airport business.** This must be factored in when considering and designing privatization and regulatory frameworks. Case studies show that significant traffic declines can occur because of an airline collapsing or economic crisis, etc. The risk level must be fully assessed when determining a reasonable return for investors.

ACI POLICY RECOMMENDATIONS:

GOVERNMENTS NEED TO IDENTIFY CLEARLY THEIR OBJECTIVES FOR AIRPORTS

- A range of objectives may lead a government to consider privatization as an option. As some objectives may conflict, the government's specific policy objectives and their relative weighting should guide the choice of privatization model.

GOVERNMENTS SHOULD ENSURE A CLEAR AND CONSISTENT LEGAL FRAMEWORK EXISTS PRIOR TO PRIVATIZATION

- Bidding processes should be clearly defined, transparent and competitive, and allow government and private investors to exchange information to provide certainty on the project's planning, execution and economic sustainability. The legal framework and any economic regulation should be defined before privatization, to ensure cost recovery and a reasonable return on investment.
- Governments should ensure an appropriate level of communication exists with key stakeholders—including aviation stakeholders, unions and economic development and tourism authorities—about the rationale underlying the privatization process.
- Governments should ensure they comply with all relevant obligations of States specified in the Chicago Convention and its Annexes and that ICAO's policies and key principles are observed.

GOVERNMENTS SHOULD CONSIDER AIRPORTS' WIDER ECONOMIC BENEFITS

- While financial pressures on governments often make them keen to privatize, they should consider the critical role airports and aviation play in connecting any region to the global economy. The catalytic effects of improved connectivity on a region's trade, tourism, foreign investment and locational decisions have significant impacts on the national economy. Governments should consider privatizing regional networks of airports and seek a balance between short-term returns and longer-term, wider economic benefits.

PRIVATIZATION MODELS MUST INCLUDE INCENTIVES FOR INVESTORS

- Governments need to consider incentives to attract potential national and foreign investors and provide the clarity investors need on the issues they face.
- Investors expect a reasonable return to incentivize future investments in airport facilities and operations. They should be able to run an airport as a business and generate returns on investment from both its aeronautical and its commercial revenues.
- Concessionaires need flexibility regarding both the nature and the timing of capital expenditures to adapt better to market demand and economic challenges.
- Applying the widely used dual or hybrid till regime induces cost efficiencies and innovations in the airport's commercial business.
- The complexity of covering the high costs small airports face because of their low throughput makes it advisable when privatizing an airport network to ensure cross-financing among airports.

GOVERNMENTS SHOULD MATCH THE CONCESSION'S LIFESPAN TO THE MODEL

- There is an appropriate lifespan for each form of privatization. A short term may be appropriate for a management concession because the operator makes no investment. When seeking a specific investment by means of a BOT model, the span should be sufficient to recover the investment and produce a reasonable return on capital. When the objective is for the private sector to operate, maintain and invest over a long period, a much longer-term agreement is necessary.

GOVERNMENTS SHOULD CONSIDER A MULTI-STAGE BIDDING PROCESS

- A three-stage bidding process is advisable for BOT concessions, because it lets the vendor test market interest and provides time for consortiums to be formed. First, a request for information (ROI) lets bidders submit comments on the BOT reference design and—if allowed—suggest suitable alternative specifications. Next, a request for qualifications (RFQ) gathers qualified proponents. Finally, a request for proposals (RFP) is issued to select the best offer from a shortlist of bidders. The bid process for sale/lease models should use the latter two stages.

1. INTRODUCTION: TRENDS IN AIRPORT PRIVATIZATION

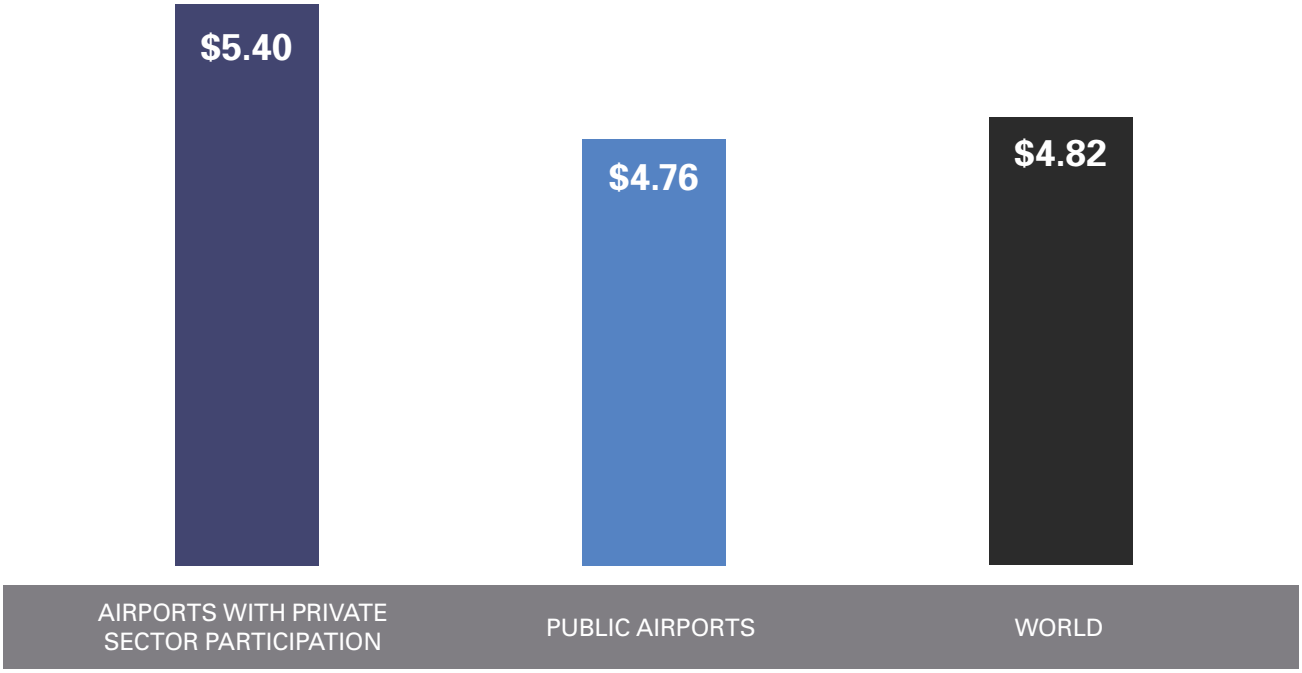
Air traffic continues to grow rapidly. By 2040, global traffic is expected to be more than 22 billion passengers and to grow at an average annual rate of 4.5%. Global annual domestic passenger traffic will grow 3.9% annually, doubling traffic every 17 years. International annual passenger traffic will grow 5.4%, doubling traffic every 12 years. Given the complexities involved in planning, getting approvals and constructing new infrastructure, by the time the new infrastructure is ready for use, its traffic could easily be twice what it was when the project was conceived.

Many airports are near, at, or even exceeding their design capacities, causing congestion, higher costs, lower levels of service and frustrated demand. Existing airport infrastructure cannot handle expected growth. Substantial investment is required, soon, to allow the aviation industry to meet growing demand.

The medium-term investment needed for airports is enormous. ACI World estimates global traffic will total about 10.7 billion passengers in 2022. The G20's Global Infrastructure Outlook, which assesses investment trends and needs for 50 nations, projects that their airport investments in the 2018–2022 period will be US$355 billion—but puts their actual investment need at more than US$433 billion. So there is a high risk that airport infrastructure requirements will not be met. ACI North America reports in its Infrastructure Needs 2017 that U.S. airports' 2018–2022 capital needs will be nearly US$100 billion: $20 billion per annum. Annually, airports in North America generate about $10 billion to fund infrastructure projects, so a $10 billion yearly investment shortage in airport infrastructure exists.

Investment in airport infrastructure is critical to the global economy. If governments cannot afford to invest, other sources must be tapped to accommodate traffic growth. This has been a driving force behind airport privatizations. ACI World estimates that, on a per-WLU basis, airports with private sector participation invested 14% more in CAPEX in the five years from 2012 to 2016 than their public counterparts and 12% more than the global average.

CHART 1: AVERAGE CAPEX PER WORKLOAD UNIT (WLU) AT PUBLIC VS. PRIVATIZED AIRPORTS (US$, 2012–2016)



Source: ACI World Airport Economics Database (2018)

Privatization is one way to fund needed infrastructure investment. Privatization is one option for governments—they may choose not to privatize their airports and fund airport investment themselves. ACI World does not suggest that airport privatization is a necessary policy choice. The decision whether to privatize is subject to social, economic, political and other factors unique to each nation and each airport and is the sole prerogative of the government that owns/operates the airport(s).

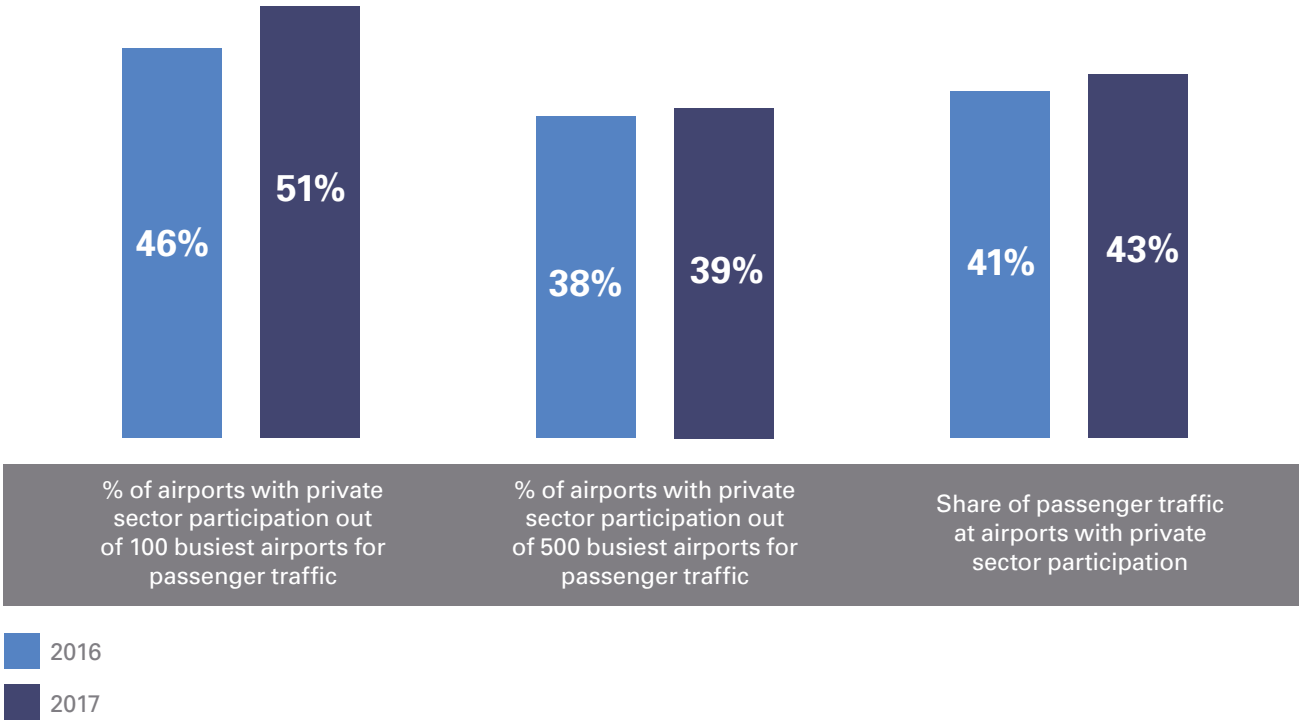
Many airports, regardless of their ownership structure, require more capital investment to accommodate growing passenger and cargo traffic. The decision on where the capital must come from to meet this demand is a separate issue. This Policy Brief aims only to offer guidance on matching goals and processes to maximize desired outcomes, should governments adopt airport privatization as policy.

The world now has more than 30 years of experience with airport privatization, so it is appropriate to examine past privatizations to determine the best practices for guiding future privatizations. However, the term "privatization" in the airport context can mean different things to different people.

Our previous Policy Brief on airport privatization noted that, by 2016, 614 airports had been privatized. In 2017, the airports with private sector involvement saw their share of global passenger traffic grow 2% over the previous year, to 43%, making private investors even keener to fund the airport sector.

Of the top 100 airports for passenger traffic, the number with private sector participation grew to 51 in 2017, five more than in 2016. Of the top 500 airports in 2017, 39% had private sector participation—a 1% increase over 2016.

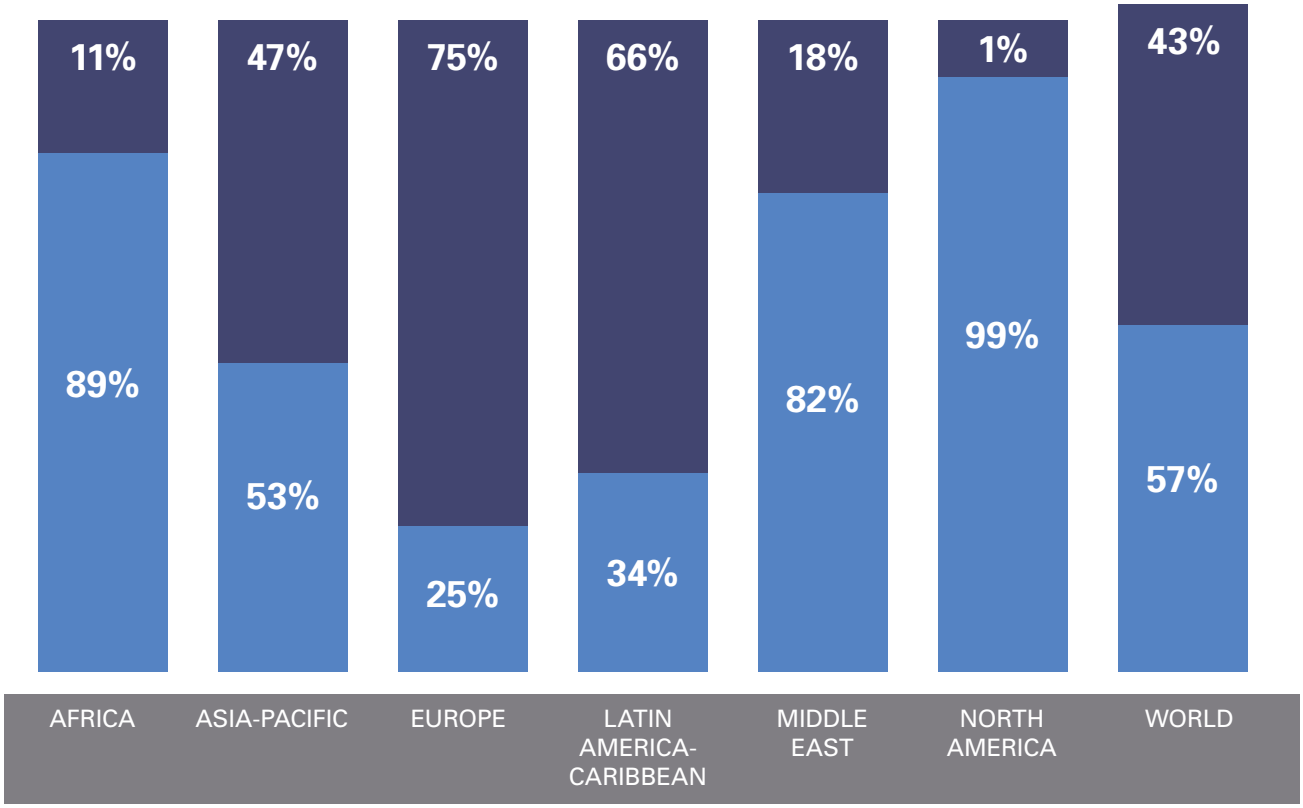
CHART 2: PRIVATIZATION TREND HIGHLIGHTS (2016–2017)



Source: ACI Inventory of Privatized Airports (2018)

Europe remains the region with the highest percentage of passengers (75%) handled by airports with private investor participation. In the Latin America-Caribbean region in 2017, passenger numbers travelling through airports with private sector participation increased more than 6% over 2016.

CHART 3: DISTRIBUTION OF PASSENGER TRAFFIC BY OWNERSHIP STRUCTURE AND REGION (2017)



Source: ACI Inventory of Privatized Airports (2018)

2. GOVERNMENTS' OPTIONS FOR PRIVATIZING AIRPORTS

For this policy brief, we focus on three key models of privatization, differentiated by private investors' degrees of responsibility for the airport and/or their expectations.

1) Management contracts

Privatization by management contract entails no set capital investment in the airport by the private party. In this case, the government retains ownership of the land, buildings and infrastructure, and also retains responsibility for investment decisions and financing investments. The private party only takes over the management of the publicly owned facility and operates it for a set period, usually under a short-term contract—for example, five years. Throughout the contract, the private party may provide guidance on potential investments—particularly those related to improving commercial, non-aeronautical revenues—but ultimately the government chooses how and when investments will be made. Tenders (open or invited) are generally used in awarding management contracts. The contractor pays the government a fee for the ability to manage and collect revenue—usually commercial revenue—from the airport's operations.

2) Build-operate-transfer (BOT) model (and variations thereof)

The build-operate-transfer (BOT) model and its variations are used when a specific investment in the airport is needed, but the government is unwilling or unable to invest in or construct the capital asset required, such as a new terminal. The BOT project is specific and can be built and operated separately from the rest of the airport, though this does not always happen. The BOT model contract is longer-lived than the short-term management contract, but its span is dependent on the cost-recovery time the private investment needs. The BOT model allows the government to look to the private sector for both capital investment and operating expertise. While BOT concessions are often prompted by an absence of sufficient funds to replace an aging terminal and/or to expand facilities to handle traffic growth, the concessionaire generally makes payments to the government, up-front, on-going or both. Under this form of privatization, the government may or may not invest in the capital project along with the private party. BOT models are often put out to tender, in either an open or invited process. The process involves at least two rounds: one to short-list viable bidders and one to obtain binding bids. The government usually retains ownership of the airport land, but in some cases it is transferred to the private party.

3) Divestiture by trade sale/lease

In this form of privatization, the government divests the airport and ownership of the land either is transferred to the private sector (in the case of a freehold) or remains with the government but the private party—usually a consortium—leases it for a long period. For example, the major airports in Australia were privatized under a long-term lease of 50 years, plus an option to renew the lease for up to an additional 49 years. Divestiture is made via private sale or lease, or via an initial public offering (IPO).

3a Initial public offering (IPO)

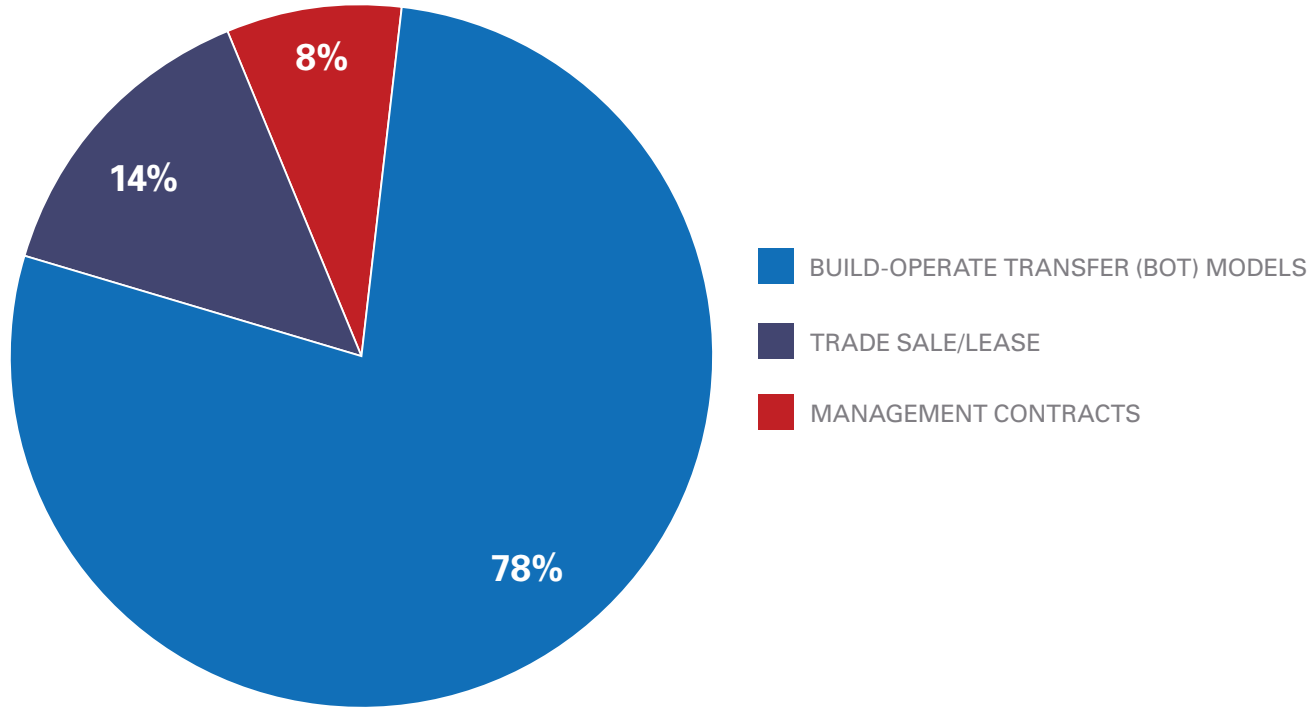
In an IPO, shares of the airport company are sold on stock exchanges, either only on a local exchange or also on other exchanges internationally. Depending on how the IPO is structured and the ownership regulations in place before the sale, ownership of the airport company becomes dispersed among many different parties, some with voting shares and some without. A difficulty with any IPO is to set the correct share price for the public offering: in many cases, shares are initially undervalued and the seller does not obtain the true value from its offering. However, the converse can also happen: the share price may initially be overvalued and stock market investors will not purchase the shares. But these missteps can be avoided—for instance, by reserving a portion of the shares to account for under-valuation. Reserving shares allows the government to sell them for higher market trading prices after the IPO.

3b Private sale or lease

In a private sale or lease, the airport is usually sold after a bidding process. This can be performed publicly (open process) or through an invited tender (closed process). Much like bidding under the BOT model, the open sale/lease bidding process has at least two stages. These allow the government to reduce the number of bidding parties (usually consortiums) to a few serious candidates and then to choose the winning bid after obtaining binding RFPs. In a closed process, the government may have already chosen the party with which it wishes to transact and the sale process is a negotiated sale.

In a sub-sample of 172 airports, most privatizations used BOT models (78%), trade sale/leases accounting for 14% of the transactions and management contracts 8%.

CHART 4: **DISTRIBUTION OF MAJOR PRIVATIZATION MODELS (2017)**



Source: ACI Inventory of Privatized Airports (2018)

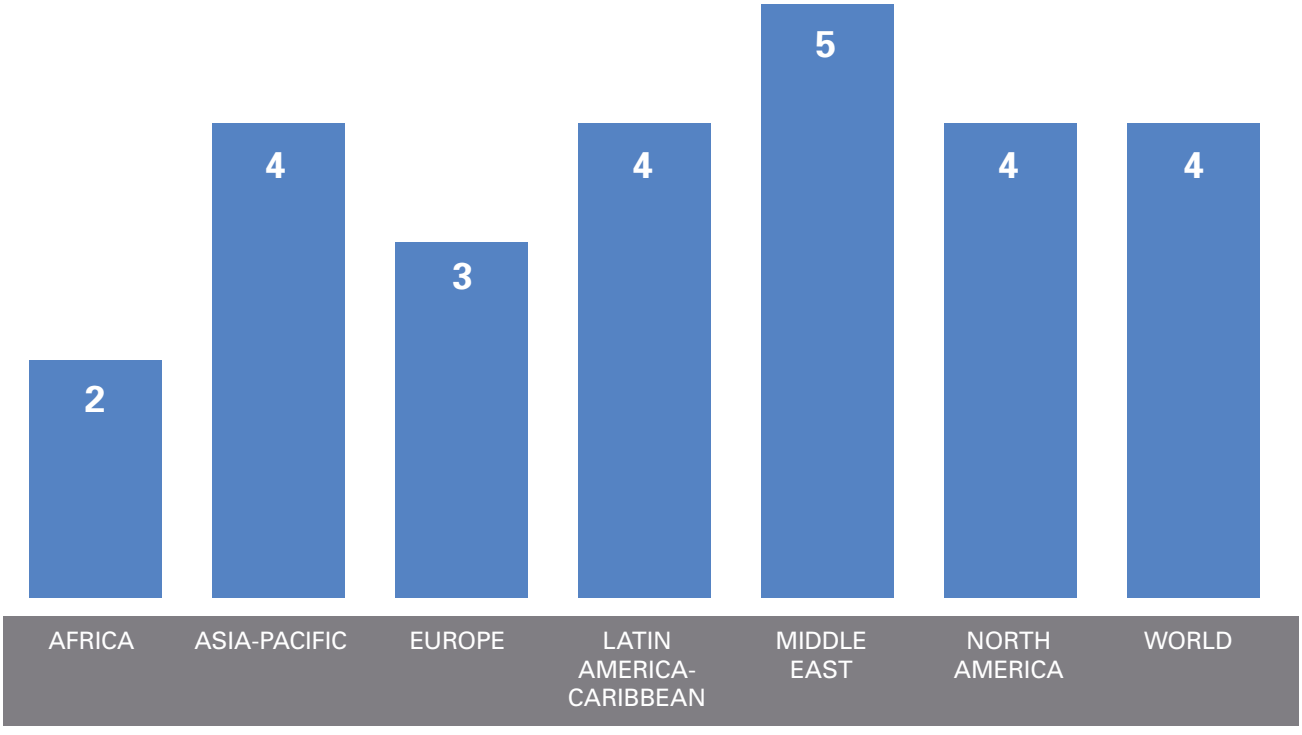
3. THE PRIVATIZATION PROCESS UP CLOSE

Tendering and bidding mechanisms for airport privatizations deliver a number of benefits. They enhance competition between suppliers; ensure the acquisition process is transparent and accurate; allow more time for negotiation; and capitalize on new market entrants and entrepreneurship. There are others.

To understand clearly how privatization is performed in practice, data for this analysis was gathered from a number of sources on how airports have been privatized. Most data used in this analysis comes from the ACI privatization database, the data being augmented by additional research from the World Bank PPI database (covering airport privatization projects in developing nations) and online research to provide information on non-World Bank database airports. Among the elements of the data acquired are the number of bidders in each privatization and the proportion of deals where price was the main bidding criterion. Various data elements were researched, but not all were available for each airport. The results presented are based on a statistically significant sub-sample of privatized airports globally.

Several observations can be made related to the bid process and concession contracts. Globally, where information was available (127 airports), the average number of bidders at the final bid stage for concession contracts was four. For concessions in the Asia-Pacific, Latin America-Caribbean and North America regions, the average was also four, but concessions in Africa averaged two bidders.

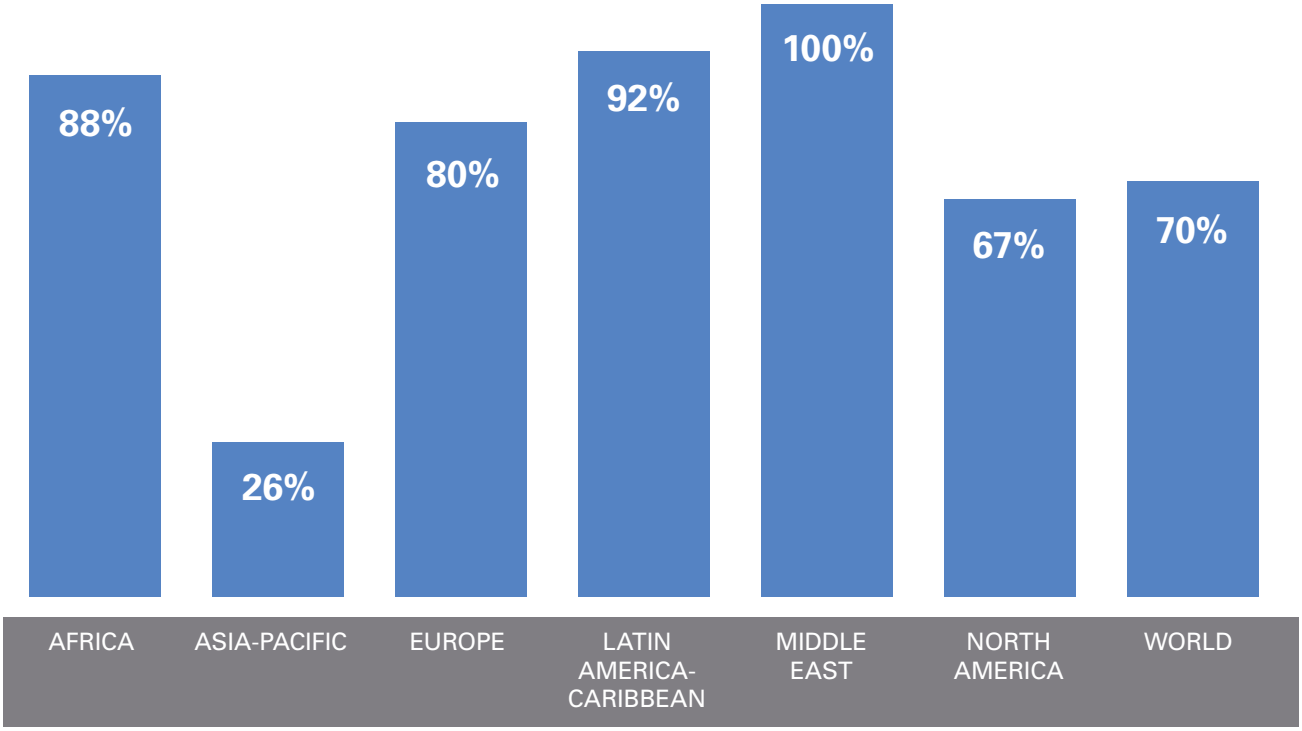
CHART 5: AVERAGE NUMBER OF BIDDERS IN A CONCESSION (MODE)



Note: Sample size is 127 airports
Source: World Bank PPI Database, ACI Inventory of Privatized Airports, online research

Where information was available on the winning bidders (at 255 airports), 69% of the winning bids were classified as international, indicating that one or more international partners participated in those privatizations. Many different factors may have produced the average low participation of international investors in Asia-Pacific privatizations, ranging from capital market size to government policies lacking clear regulatory provisions regarding international participation.

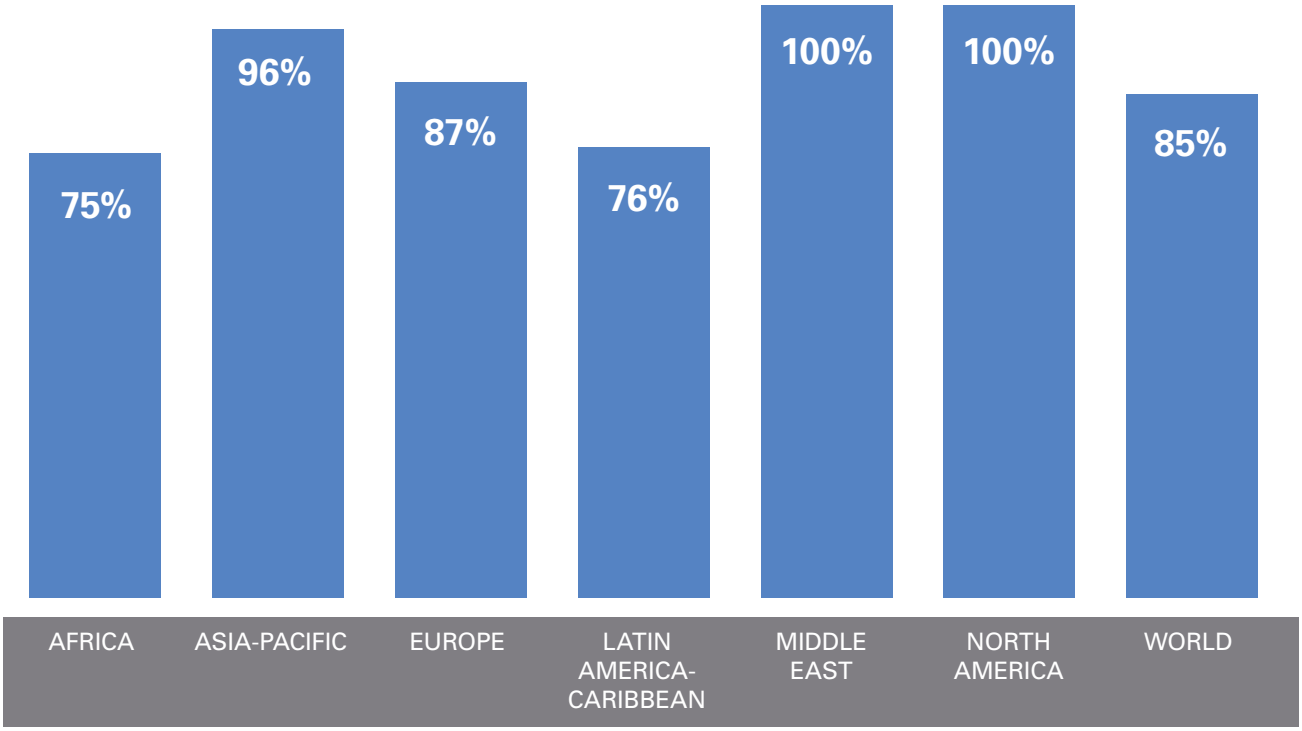
CHART 6: SHARE OF PRIVATIZATIONS WITH PARTICIPATION OF INTERNATIONAL BIDDERS BY REGION



Note: Sample size is 255 airports
Source: World Bank PPI Database, ACI Inventory of Privatized Airports, online research

Most airports used an open bid process (85%, based on a sample of 93 airports). Governments in the Latin America-Caribbean and Africa opted for closed/invited bids more than those in other regions.

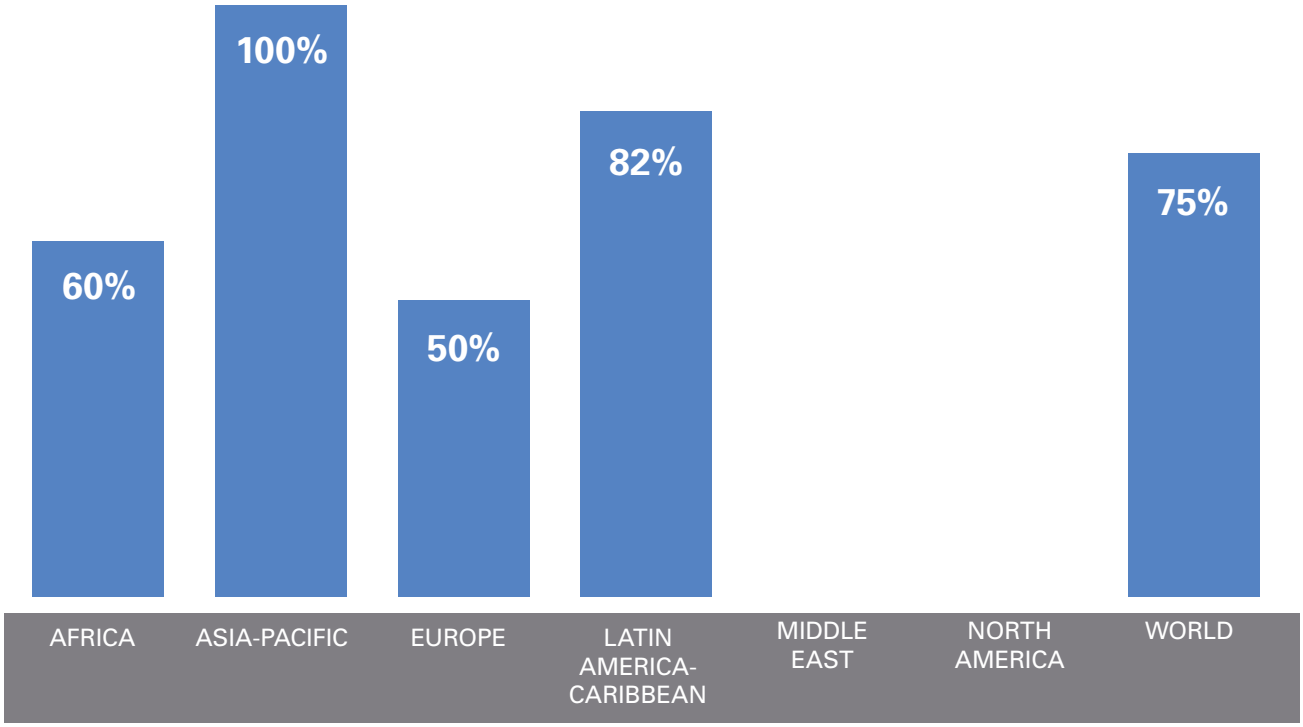
CHART 7: SHARE OF PRIVATIZATIONS WITH AN OPEN BID PROCESS BY REGION



Note: Sample size is 93 airports
Source: World Bank PPI Database, ACI Inventory of Privatized Airports, online research

Based on a sample of 120 airports, the most common bid evaluation method for qualified bids was by highest price (producing prices which would allow taxpayers and government to receive a return for past investments made in the airport). This was true for half the cases in Europe, and in all cases in Africa. For qualified bids, other criteria included the highest level of revenue sharing with the government; the highest level of new investment; and the lowest cost of construction or operation. Other criteria also existed.

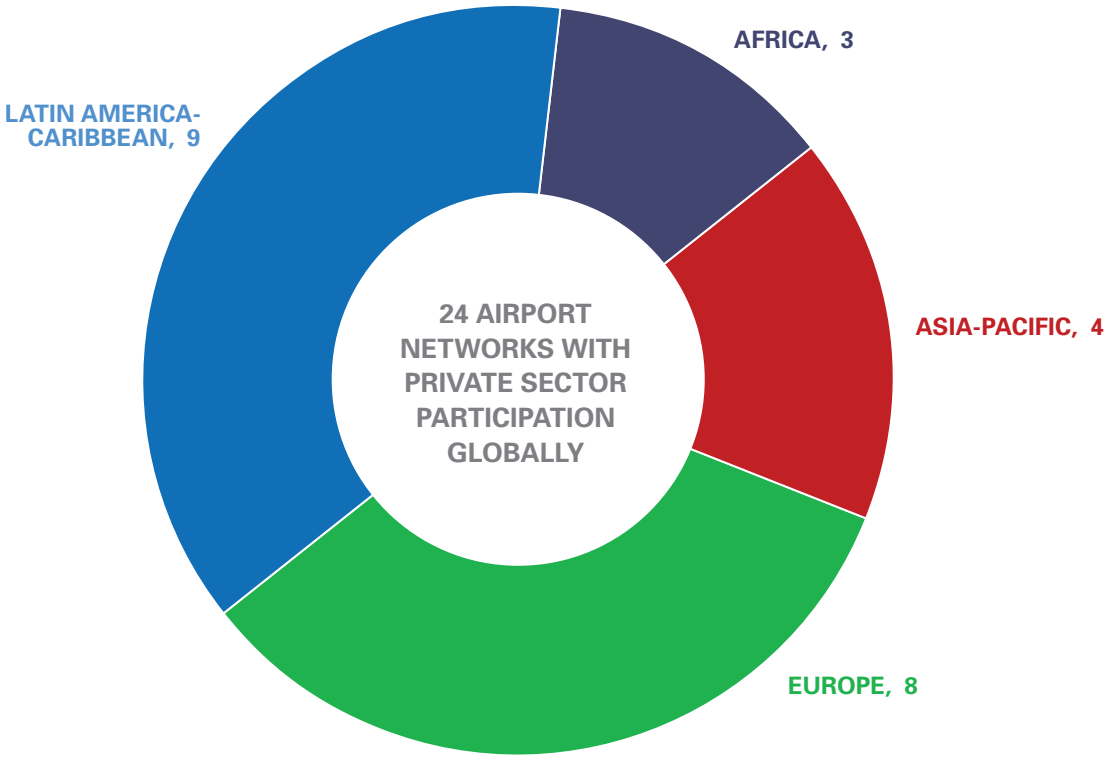
CHART 8: SHARE OF BID PROCESS PRIVATIZATIONS WITH HIGHEST PRICE FOR QUALIFIED BIDS AS THE CRITERION



Note: Sample size is 120 airports; no privatization bid in the Middle East had highest price as the criterion. No data was available for North America.
Source: World Bank PPI Database, ACI Inventory of Privatized Airports, online research

There are 24 airport networks globally which have private sector participation. Latin America-Caribbean and Europe have the largest numbers of privatized airport networks—nine and eight respectively. Asia-Pacific has four and Africa three. The 24 airport networks contain a total of 268 airports, which together handled more than 856 million passengers in 2017. Of those 268 airports, 168 (63%) handled less than one million passengers a year.

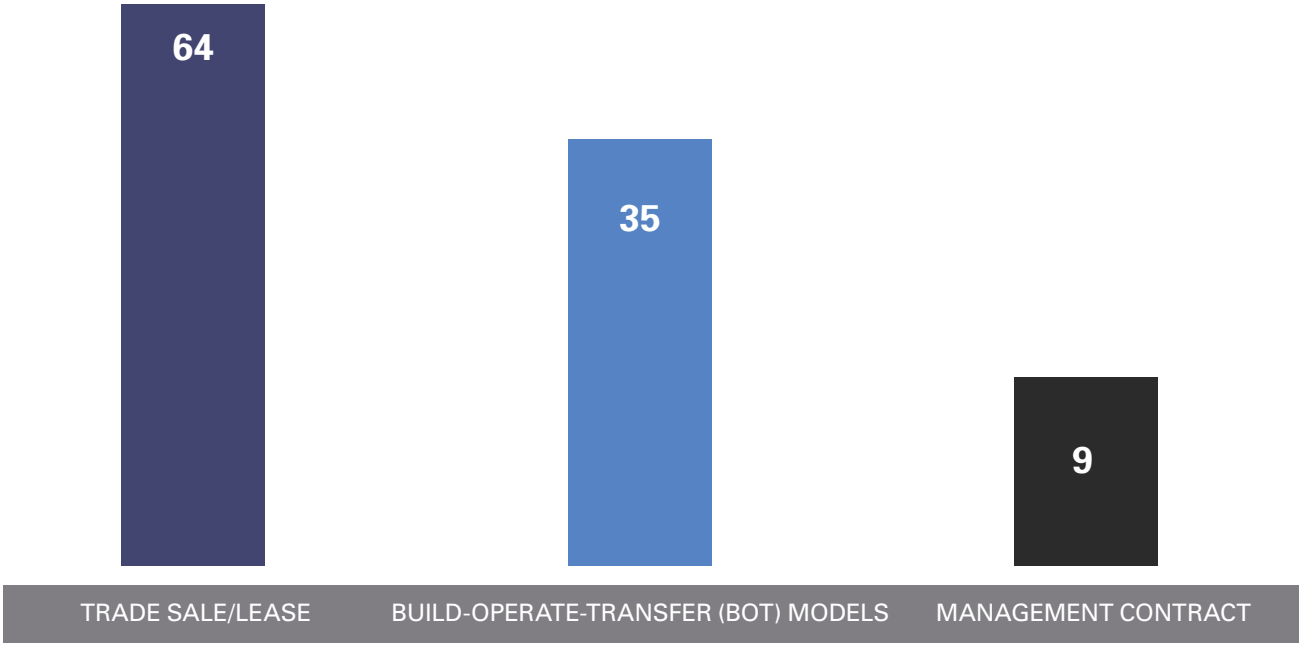
CHART 9: NUMBER OF AIRPORT NETWORKS WITH PRIVATE SECTOR PARTICIPATION BY REGION (2018)



Source: ACI Inventory of Privatized Airports, ACI Inventory of Airport Networks

The length of concession contract varied among the three privatization models. Based on a sub-sample of 172 airports, the average length of management contracts is 9 years, the average life of build-operate-transfer models is 35 years and the average duration of trade sale/leases is 64 years.

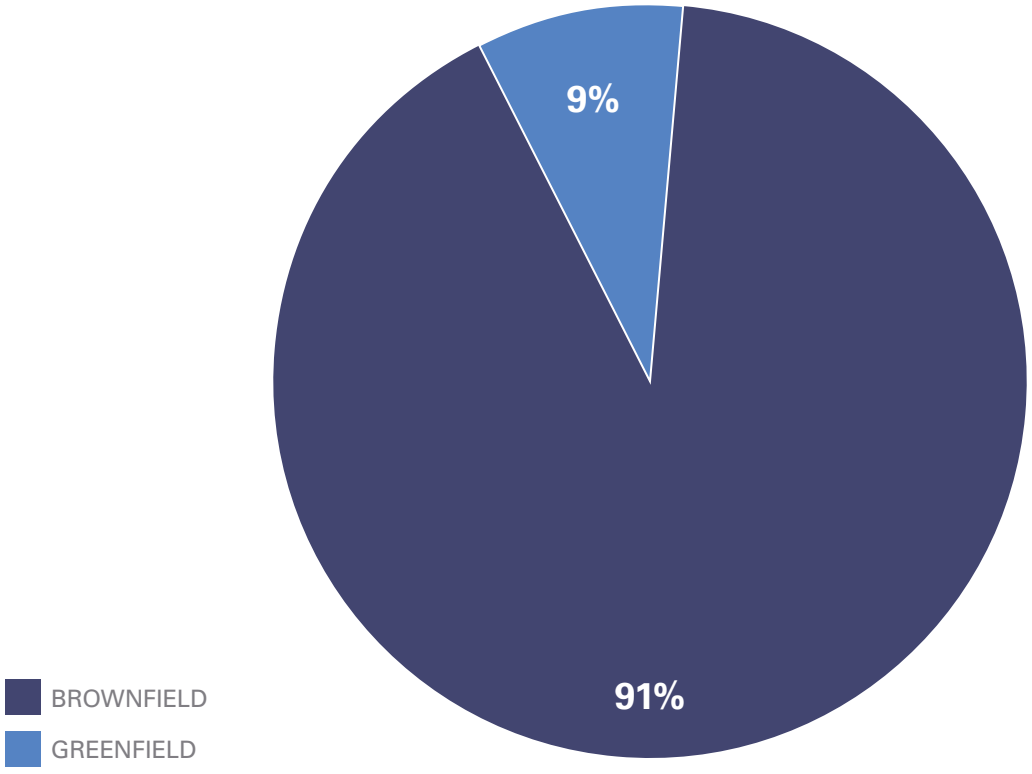
CHART 10: AVERAGE LENGTH OF CONTRACT BY PRIVATIZATION MODEL (YEARS)



Source: World Bank PPI Database, ACI Inventory of Privatized Airports, online research

Based on a sub-sample of 130 airports, there were many more brownfield projects at existing airports than greenfield projects for new airports: 91% were brownfield and 9% greenfield.

CHART 11: BROWNFIELD VERSUS GREENFIELD PROJECTS



Source: World Bank PPI Database, ACI Inventory of Privatized Airports, online research

Specific characteristics and circumstances should be considered when analysing privatization outcomes. The different objectives, privatization models, levels of risk, asset values, amounts of CAPEX involved, etc. in different deals make it difficult to compare data. Similarly, the impact of privatization on airport charges is varied and complex. Over time, regardless of the ownership structure and the form of economic regulation adopted, the most important drivers of aeronautical charges have been investment in capital assets and market dynamics. Because all deals are so specific, a more meaningful way to illustrate the characteristics and outcomes of airport privatizations is to identify case studies for privatizations at specific airports in different regions. Seven such case studies are included in Chapter 5.

4. INCENTIVIZING THE PRIVATE SECTOR TO INVEST IN AIRPORTS

1) Designing an appropriate legal framework

As enterprises, airports inherently have associated risks. These are related to economic conditions; traffic development; airline performance; operating and financing the airport; exchange rates; and other uncontrollable factors, such as natural events. The risks are present regardless of an airport's management and ownership model. For airports under public sector ownership, the taxpayers often bear the risks, either directly or indirectly. Governments may be able to self-insure airports, reducing the costs associated with investment risks because the cost of capital for government debt is lower than for private sector debt. Any privatization bid made in conditions of regulatory and legal certainty is likely to be higher than if the bidder is uncertain what regulations will apply. If uncertainty exists, the risks are higher, the potential for returns may be lower and so investors will make lower bids.

Investors consider several factors when deciding whether to invest in an airport or an airport network. To attract private investment, governments need to address these factors by designing appropriate legal frameworks. These should provide:

- **Appropriate contract length**

  The length of the contract needs to correspond to the level of risk and investment required. When the government's objectives are simply to improve management efficiency and increase traffic to obtain wider economic benefits, but to retain responsibility for financing infrastructure, a medium-term management concession may be appropriate. A management concession does not require a long-term contract for a private sector operator to earn a return, because the operator makes no investment. However, when the objective is for the private sector to make a specific investment, a BOT model may be appropriate. Here, the concession's lifespan has to be sufficient for the investor to recover the costs of the investment and generate a reasonable return. This span is likely to be long — for example, 30 years — but the concession need not be very long-term. When the objective is for the private sector to operate, maintain and invest over a long period, in which investments can only generally be anticipated, an even longer-term agreement is necessary and it should contain end-of-lease provisions for recouping necessary but undepreciated investments late in the concession's initial life.

- **A clear and stable legal framework, including a proportionate regulatory framework if needed.**

  Investors prefer certainty to uncertainty. If potential investors know the legal framework governing airports to be privatized, including whether and how airport charges will be governed, they can take that into account in developing bids. If the legal framework is not clearly defined, it is possible major changes to the framework will be made mid-way through the concession, creating a serious risk the investor's financial model will not remain valid until the contract ends. Having certainty in this area is in the interest of both the public and the private sectors.

  - To ensure each revenue source is treated in a clear manner, the revenue streams must be highly visible. When legal and regulatory frameworks are clear on determination of aeronautical charges, the sustainability of CAPEX financing is much improved. Depending on the airport's risk level and market profile, it may be useful to pre-determine the level of charges and provide adjustment mechanisms based on inflation, service quality, regulatory constraints, capital expenditure triggers and/or other exogenous factors. Airlines can then enter into agreements with the airport in full knowledge of the market's economics and dynamics.

- To meet the longer-term needs of present and future passengers, the legal framework must recognize the critical link between airport capacity investment and charges. Traffic growth needs to be accommodated by enhancing capacity and this must be paid for. If airport charges rise after a privatization which increases infrastructure investment, this does not mean the privatization caused the higher charges. The investment is probably driving the higher charges and this would still apply if the government made it instead.
- The investor's ability to recover operating and capital expenses and earn a return on the capital employed must reflect the risk-reward trade-off the investor faces. To incentivize future investments in airport facilities and operations, investors expect reasonable returns — so they should be allowed to run the airport as a business in its own right. To do so they should be able to generate returns on investments from both its aeronautical and its commercial business.
- A dual or hybrid till provides an appropriate incentive for bidders. Consistent with its first policy brief on airport ownership, ACI World estimate that airports which use a dual or a hybrid till handle two-thirds of the traffic at airports with private sector participation, while single till airports hand only one-third.
- Any required economic regulation should be proportionate to the potential for abuse of market power. In various circumstances[1], light-handed or no regulation on airport charges is appropriate. Heavy-handed regulations impose unnecessary costs and may impede efficiency. This is particularly true where airport competition exists, or where the airport operator is not in a position to exert its market power because of the prevailing power of the dominant carrier(s). Similarly, the regulator should not intervene or should only do so in limited fashion so that airports and airlines can negotiate commercial agreements on charges levels.
- In operating and managing private airports, investors need flexibility to be able to react to changes, capitalize on opportunities and grow the business. Private operators of airports should be given extensive flexibility on the nature and timing of capital expenditures so they can adapt better to market demand and macroeconomic challenges.

- **A transparent and competitive bidding process.**

  If the rules are unclear, or change, it is likely fewer prospective bidders will want to participate in the bidding, because the risks are higher. Fairness and adequate communication are beneficial to both sides. So, bidding processes should be clearly defined, transparent and competitive, and should allow for exchanges of information between the government and private investors to provide certainty on the project's planning, execution and economic sustainability. For example, any land acquisition and environmental clearance required should be completed by the end of the bidding process and preferably before any financial bids are submitted.

- **A balanced bid evaluation method.**

  Bids judged solely on offered amounts of any specific currency pose risks to bidders and governments alike. Such judgments do not account for bid quality, post-privatization service levels, or managerial competence. Not all potential airport bidders have equal airport operating and investing experience and expertise. If a bid-

1 A clear example is the privatization of the airports in the United Kingdom 30 years ago; most of the airports were privatized without economic regulation being imposed and only some airports (e.g., Heathrow, Gatwick, Stansted and Manchester) were subject to such regulation. Privatization of the airports in Australia provides a similar example: many smaller airports were not subject to economic regulation following privatization.

selection process is governed solely by price, the best overall bid for meeting all of the government's objectives may be excluded. A danger also exists that a naïve bidder will win, but subsequently will be unable to deliver the promised services. In such cases the government may need to take back the reins or make a regulatory accommodation. A two- or three-stage bidding process which offers a balance between price and quality measures is more likely to attract optimal bids.

- **Continued access to preferred infrastructure financing programs.**

  Many governments provide infrastructure financing support to private operators for capital investments in key infrastructure sectors. Continued access to existing, preferred infrastructure financing programs such as infrastructure bonds and/or long-term loans is certainly an incentive to private investors. These programs lower prospective investors' financing costs and hence their perceived overall risk levels. This can lead to higher bid prices; but since one objective for privatization is to transfer responsibility for financing infrastructure from the public sector to private investors, a balancing may be needed — particularly for smaller airports that have limited revenue opportunities[2].

- **Access for foreign owners to larger capital markets.**

  In nations with limited capital markets, foreign investment can be crucial. Even in nations with larger capital markets, access to still larger foreign capital markets can potentially lower the overall cost of capital. Strategic benefits may also arise from foreign specialty firms' airport operating and development expertise. In some cases, governments have structured financial arrangements to preserve a "golden share" for the state, allowing governments to address any perceived issues regarding foreign control of strategic national assets.

- **Recognition that privatizations may need to cluster airports to allow for cross-financing.**

  The complexity of covering the high costs small airports face because of their low throughput makes it advisable when privatizing such airports to cluster them into networks. This allows cross-financing of infrastructure investments, maximizing the economic and social benefits small airports offer to their communities and regions.

2 There can be a clear economic rationale for continued government funding of smaller airports serving public interest objectives. Private investors are not likely to see increased profits from such public interest benefits, but the public sector enjoys those external benefits and should be willing to pay to achieve them.

5. CASE STUDIES

Case study: Guayaquil International Airport *A privatization for a future airport*

José Joaquín de Olmedo International Airport is located just five kilometres from the centre of Guayaquil, the most populous city in Ecuador. It has no room to expand, so a replacement airport will eventually be needed. The existing airport's private operator is allowed to bid for the concession to build, operate and transfer the new airport.

THE PRIVATIZATION AT A GLANCE

Current ownership structure:

- Corporacíon América of Argentina (50%);
- Deller Group (50%).

Key features:

- Build/renovate, operate and transfer existing airport;
- 20-year concession contract (5 additional years added to original contract);
- Commitment to invest US$140 million in the first 30 months of the contract—an increase from initial amount;
- 50.25% of gross revenue per annum allocated to a fund that will be used to invest in new airport infrastructure, in addition to US$2 million annual concession fee;
- Payments to the government go only to a fund dedicated to the construction of the new airport (approximately US$400 million dollars expected by end of contract);
- Current concession holder is allowed to participate in bidding process for the new airport—for a 35-40 year contract—and has certain benefits (e.g., it is allowed to propose an initial bid and airport design).

Privatization objectives:

- Transform, improve, manage and maintain the existing airport—new terminal, control tower, cargo facilities, commercial facilities;
- Regain IATA level C status;
- Generate funds only to be used to build the new airport.

THE PRIVATIZATION PROCESS

Legislation in 2000 enabled municipalities to manage and maintain federally operated airports, either by themselves or through a privatization process. The Municipality of Guayaquil took responsibility for the existing airport as well as the planned new airport and created the Guayaquil Airport Authority to lead the concession process.

A two-stage process was used:

- First, an open invitation for technical bids was extended to potential proponents, which had to have experience in operating airports with at least 5 million passengers. International bidders were welcome. The operator had to commit to invest US$70–90 million in the first 30 months of the 15-year agreement for the existing airport. A minimum price of 20% of gross revenue was set. Eleven participants applied for the tender documents and seven participated in the bid process.
- Second, three proponents were invited to participate in the RFP stage and submit financial bids, which had to include a deposit of roughly US$50 thousand. Corporacíon América of Argentina offered the highest bid (50.25% of airport gross revenue in concession payments) and was awarded the concession on that basis. Payments to the government went to a fund dedicated to the construction of the new airport, to enable a pool of capital to develop prior to its construction beginning.

The contract allowed the government to propose an increase in the level of investment made by the concession contract holder. If the contract holder agreed, the government could extend the length of the concession contract (it was lengthened within the first year of the agreement), increase the airport charges, or make a payment to the contract holder. This allowed flexibility in the level of investment made at the airport.

Proponents were informed that, during the 15-year term, if certain conditions were met that made construction of a new airport viable (including

international passenger traffic volume reaching 3 million per year), a new concession contract would be tendered, including building the new airport and operating it for a 35–40 year period.

THE REGULATORY FRAMEWORK

The regulatory framework focuses on ensuring the airport operator can finance the capital investment needs and cover its costs, including generating a reasonable return on investment.

Aeronautical charges are set in the concession contract and can only be increased annually based on inflation. Inflation was based on the consumer price indices of the U.S. (80%) and Ecuador (20%), to prevent large increases should Ecuador's inflation rate be excessive.

Summary of regulatory features:

- Dual till;
- Annual inflation adjustment permitted;
- Reviewed every five years.

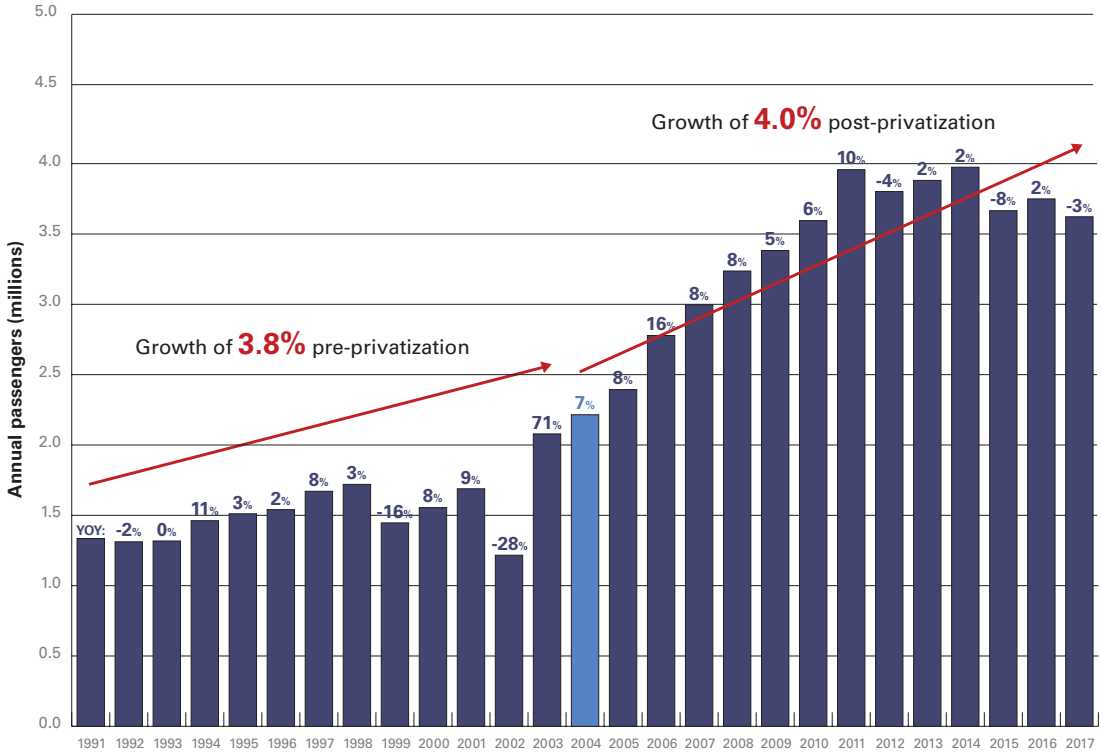
POST-PRIVATIZATION VALUE CREATION

1) TRAFFIC

Accelerated growth. At Guayaquil, traffic has grown 4.5% annually on average since privatization, versus 3.8% annually on average in the 13 years before privatization.

CHART 12: ANNUAL PASSENGER TRAFFIC AT GUAYAQUIL INTERNATIONAL AIRPORT (1991–2017)

GUAYAQUIL Annual growth of **3.9%** overall



Source: ACI World Airport Traffic Database 2018

2) CAPEX

Address shortcomings in the existing airport while preparing to invest in the new one. The privatization has led to investment and improved service quality prior to the new airport privatization beginning. The operator invested about US$140 million in upgrades early in its term. Since the transfer, the airport has regularly won various awards.

Additionally, more than US$200 million had accumulated in the trust fund by 2016. With about US$25 million more being added annually, the trust fund should have roughly US$300 million available when construction begins, potentially in 2019. The required capital investment is not yet known, but some estimate US$1 billion for Phase 1.

3) AIRPORT CHARGES

Airport charges are set by the government and reviewed every three years. They can increase annually, with inflation.

4) QUALITY

An award-winning operation. The concession model specified a level of service requirement and the need to update stakeholders on performance.

In 2016, Guayaquil Airport was honoured with three ACI Airport Service Quality awards: best airport in Latin America and the Caribbean; best airport in the world in the 2–5 million passenger category; and best airport in Latin America and the Caribbean in the 2–5 million passenger category. It has won numerous other ASQ awards in recent years.

LESSONS LEARNED

- Using a pre-qualification process and requiring a bid deposit helps ensure that only serious, experienced bidders will participate. Transparency in the process is also important.
- A clearly stated economic regulation plan helps potential bidders develop realistic bids based on the market conditions they will face.
- Allocating the privatization receipts to a fund that will be used to invest in new airport infrastructure lets the government maximize the wider economic benefits that the new airport will generate in increased air connectivity, tourism and economic development, allowing advance planning for needed capital investments.

Case study: Grupo Aeroportuario del Pacífico (GAP), Mexico *A regional airport network privatization*

Grupo Aeroportuario del Pacífico (GAP) holds a 50-year concession at 12 Mexican airports, which handled 36 million passengers in total in 2017. AMP, a consortium of AENA (the Spanish airports operator) and CMA (a Mexican investment group), owns 15% of the company; the remaining 85% is a free float. The GAP airports were privatized along with two other airport networks in Mexico, Grupo Aeroportuario del Centro Norte (OMA) and Aeropuertos del Sureste de México (ASUR), following a harmonized privatization process. Each was privatized via an initial 15% sale to a strategic partner, followed by the government selling its remaining 85% stake. The government required each network to include profitable and unprofitable airports. The privatizations obliged operators to upgrade infrastructure, maintain operations and improve quality and efficiency standards at as many Mexican airports as possible.

THE PRIVATIZATION AT A GLANCE

Current ownership structure:

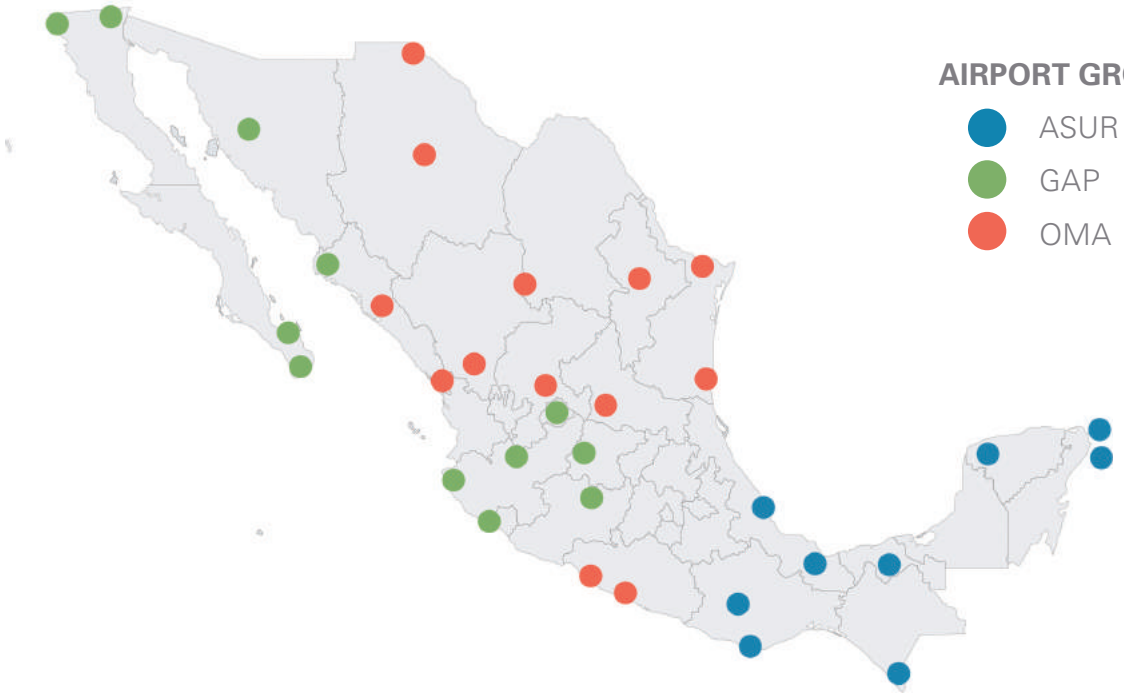
- 15% Aeropuertos Mexicanos del Pacífico (AMP);
- 85% Free float.

Key features:

- Scope: upgrading, operating and continuously developing the 12 airports;
- 50-year concession contract granted in 1998;
- US$261 million up-front concession fee paid to the government;
- Annual fee of 5% of annual revenues is paid to the government;
- Capital expenditures of US$280 million between 2015 and 2017.

Privatization objectives:

- Improve the Mexican airports' competitive position, service quality, growth prospects and efficiency;
- Provide for international expertise in airport operations through the tender process;
- Allow private capital to be used to fund needed airport expansion.



THE PRIVATIZATION PROCESS

The Mexican government privatised the GAP group of 12 airports using a two-tranche process:

- An initial sale of 15% of the airport company to a consortium, which was required to have a strategic partner, a member with international airport operating experience and a Mexican partner/investor. This sale was made by means of an open bidding process, which lasted approximately 1 year. The selected consortium paid US$261 million in an up-front concession fee.
- The government divested its 85% stake seven years later through an IPO process. The shares were sold on the Mexican Stock Exchange and the New York Stock Exchange, the Government receiving all proceeds.
- The airports will be returned to the government at the end of the concession term, for no payment.

THE REGULATORY FRAMEWORK

Airport charges are set under price cap regulation. A dual till model is used. The tariffs are based on the maximum amount of revenue per workload unit allowed under the price cap, and the sum of the specific charges (i.e., passenger charges, landing charges, etc.) cannot exceed this limit. The price cap is set every five years. It is determined based on investment, forecast traffic (workload units), and operating costs. The price cap formula ensures the airport operator can finance the airports' capital investment needs, cover its costs and generate a reasonable return on investment.

Summary of regulatory features:

- Dual till;
- Price cap model was in place before privatization.

POST-PRIVATIZATION VALUE CREATION

1) TRAFFIC

Continued growth. Traffic at the top four airports in the group has grown 5.1% annually on average since privatization, compared with 4.3% annually on average in the eight years before privatization.

2) CAPEX

Master development plans ensure commitments to invest. As part of the concession contract, GAP is required to submit every five years a master development plan for each of the 12 airports. The development plan outlines the investments to be made during the period. Once the government approves the development plan, the regulated investments become an obligation for the operator, and there are penalties if those investments are not made within the period. Between 2008 and 2017, over US$740 million was invested in the 12 Mexican airports.

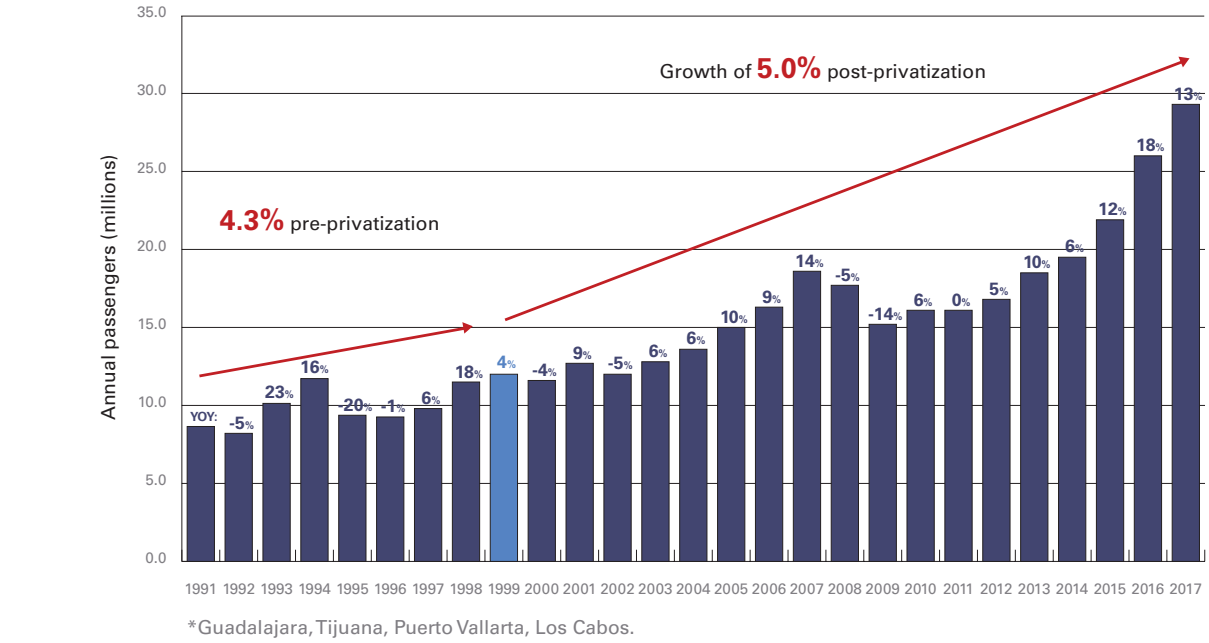
3) AIRPORT CHARGES

Airport charges are set within the regulated price cap. Aeronautical revenue per passenger has increased over the past 10 years by approximately 5.1% per annum, within the regulated price cap, in order to support infrastructure investments. The government approves the increases in airport charges.

4) QUALITY

Los Cabos Airport was ranked second-best airport in the 2017 ACI Airport Service Quality Awards for the Latin America-Caribbean region. Puerto Vallarta was among the top five Latin America-Caribbean airports in 2013.

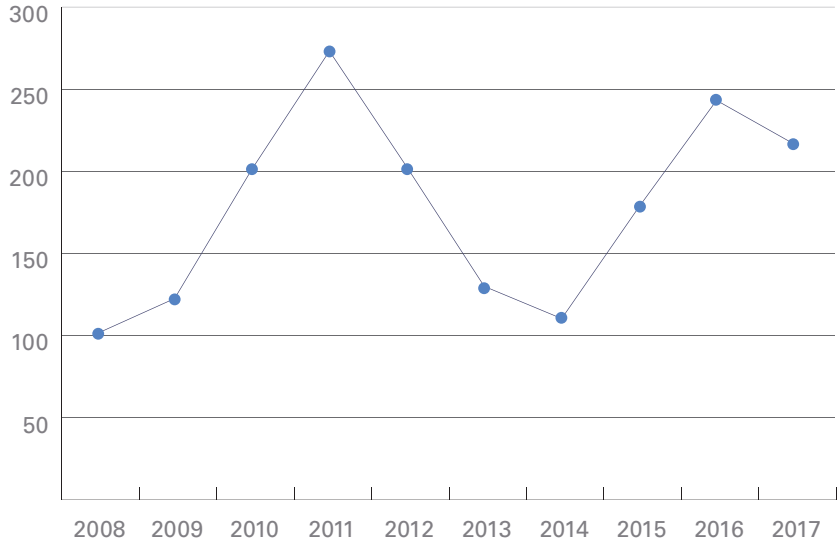
CHART 13: ANNUAL PASSENGER TRAFFIC AT GAP FOUR LARGEST AIRPORTS (1991–2017)



*Guadalajara, Tijuana, Puerto Vallarta, Los Cabos.

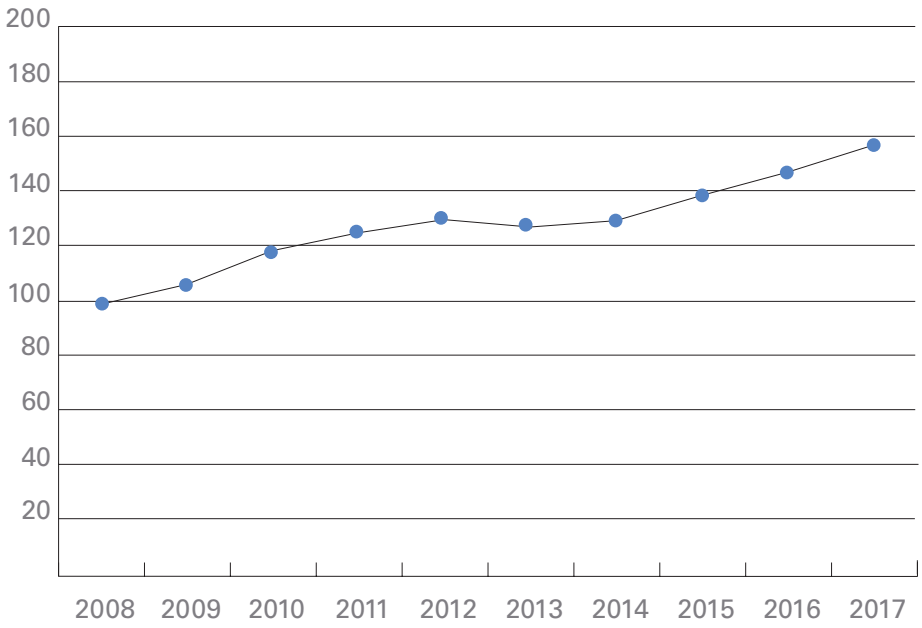
Source: ACI World Airport Traffic Database 2018

CHART 14: INDEX OF CAPEX PER PASSENGER AT GAP AIRPORTS (2008–2017)



Source: GAP Annual Report (2017)

CHART 15: INDEX OF AERONAUTICAL REVENUE PER PASSENGER AT GAP AIRPORTS (2008–2017)



Source: GAP Annual Report (2017)

LESSONS LEARNED

- The privatization process should be consistent across different airport networks. If a government chooses to privatize multiple networks, consistency helps the administrative process and ensures a level playing field.
- Privatization of a network of airports ensures the continuity and economic viability of smaller airports. The Government created airport networks containing a mix of airport sizes, ensuring smaller airports could also gain from private sector efficiencies and investments.
- While the Government clustered small airports with larger ones so the former could enjoy the benefits of private sector efficiencies and investments, it kept control of the smallest airports.
- Have a clear and concise plan for the bidding process: this helps bidders plan their partnerships.
- Having a clear regulatory framework enabled a balanced and fair outcome both for the government as owner and for the concessionaire as operator.

Case study: LaGuardia Central Terminal *A BOT with three-stage bid process*

The LaGuardia Gateway Partners (LGP) consortium has a 34-year lease to design, build, finance and operate a new central terminal at LaGuardia Airport (New York), as well as to operate the existing central terminal during the construction period. The central terminal handled over 14.5 million passengers in 2017. The new central terminal, once completed, will be a common-use facility offering various food, beverage and retail options for passengers.

THE PRIVATIZATION AT A GLANCE

Partnership structure:

- Vantage Airport Group (developer/equity sponsor/operator);
- Skanska (developer/equity sponsor);
- Meridiam (developer/equity sponsor).

Key features:

- Scope: design, build, finance and operate a new central terminal at LaGuardia Airport (New York) as well as operate the existing central terminal during the construction period;
- 34-year concession contract;
- No up-front fee paid to the Port Authority of New York and New Jersey;
- Capital expenditures in excess of US$4 billion.

Privatization objectives:

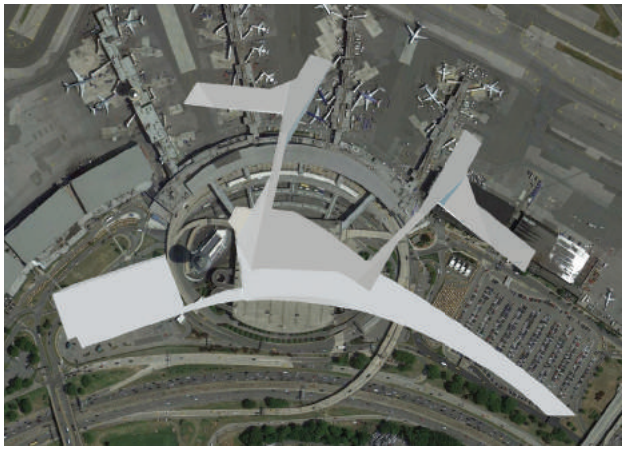
- Build key infrastructure at the airport;
- Innovation in design and operation of the new terminal.

THE PRIVATIZATION PROCESS

The Port Authority used a mix of BOT and concession models to finance and deliver the new central terminal. The operation of the existing central terminal was transferred as part of the concession.

The bidding took place in a three-stage process over a five-year period:

- Request for information (ROI)—The ROI stage allowed the Port Authority to test the market and let bidders start forming consortiums, informed by their basic understanding of what the project would be. The ROI included a questionnaire for potential bidders to complete, as well as an interview with the Port Authority. This initial stage was an open process, which attracted more than 20 bidders.
- Request for qualifications (RFQ)—Some 15 bidders participated in the RFQ stage, which also was an open process.
- Request for proposal (RFP)—The four bidders selected from the RFQ stage were required to submit binding bids within approximately nine months. The RFP included an interactive process which allowed bidders to discuss the potential design (and suggest alternative designs that met specified processing and other requirements) and review the proprietary data they needed to build their submissions. However, bidder outreach to the eight airlines operating at the terminal was not permitted during the procurement.



THE REGULATORY FRAMEWORK

Airport charges are determined via commercial contracts with the airlines. Once permitted, LGP consulted with the airlines operating at the terminal and gained the support of all airlines. Airline charges

are set under an agreed upon, hybrid till rate-setting methodology, which reduces charges by sharing a segment of non-aeronautical revenues. Increases in charges are permitted to cover needed new capital expenditures that meet certain pre-defined criteria.

Summary of regulatory features:

- Hybrid till;
- Consultation with airlines is required.

POST-PRIVATIZATION VALUE CREATION

Operation of the airport terminal was transferred to LaGuardia Gateway Partners on 1 June 2016. Completion of construction of the new terminal (performed while the existing terminal remains open) is expected in 2022. In the existing central terminal, airline charges increase each year by the same percentage the consumer price index increases. As construction is not yet complete, the main value creation from this privatization has yet to be fully realized. The new terminal will streamline the passenger flow process, offer passengers additional food and retail options and create a connection between the airport's other terminals.

LESSONS LEARNED

- When using a BOT model, a three-stage process is recommended, because it allows the vendor a chance to test the market's interest, the bidders a chance to review reference designs and suggest alternative specifications (if allowed), and time for bidding consortiums to be formed.
- Having an open dialogue during the RFP stage allowed both the vendor and the bidders to refine their understanding of the project and develop bids which would satisfy both parties.

Case study: Brazzaville, Pointe Noire, and Ollombo Airports

Vendor advisor instrumental to the bid process

Egis and SEGAP (Egis' partnership with Marseille Provence CCI) hold a 25-year concession contract to develop, maintain, and operate three airports in the Republic of the Congo—Brazzaville, Pointe Noire, and Ollombo. The Government of the Republic of the Congo had recently invested in new terminals and other infrastructure but decided to seek outside operational expertise to develop the airports further and improve their efficiency.

THE PRIVATIZATION AT A GLANCE

Current ownership structure:

- 29.5% Egis;
- 25.5% Marseille Provence CCI;
- 15.0% Republic of Congo;
- 30.0% Private Congolese Investors.

Key features:

- Scope: upgrading, operating and maintaining the three airports in the Republic of the Congo;
- 25-year concession contract;
- Concession fee is paid every three months and is based on a percentage of revenue;
- An additional fixed fee is paid to the government every six months.

Privatization objectives:

- Improve operational efficiency by using international experience;
- Improve operational standards, including security and level of service;
- Further develop the airports, including their non-aeronautical activities.

THE PRIVATIZATION PROCESS

Aided by a private sector advisor, the Government of the Republic of the Congo identified three potential bidders to participate in the bid process. The invited bid process involved an RFP stage and then final negotiations between the winning bidder and the government. The bidders were judged mainly on their technical proposals, as major investments were not the government's main objective. The operator is required to achieve a level of service defined by specified operational metrics, and to retain some of the government employees previously working at the airports.

THE REGULATORY FRAMEWORK

Airport charges are set by agreement with the Government. A single till model is used. Charges are reviewed every five years and include discussions of the short-term investment plans for the airports.

Summary of regulatory features:

- Single till;
- Government approval of charges.

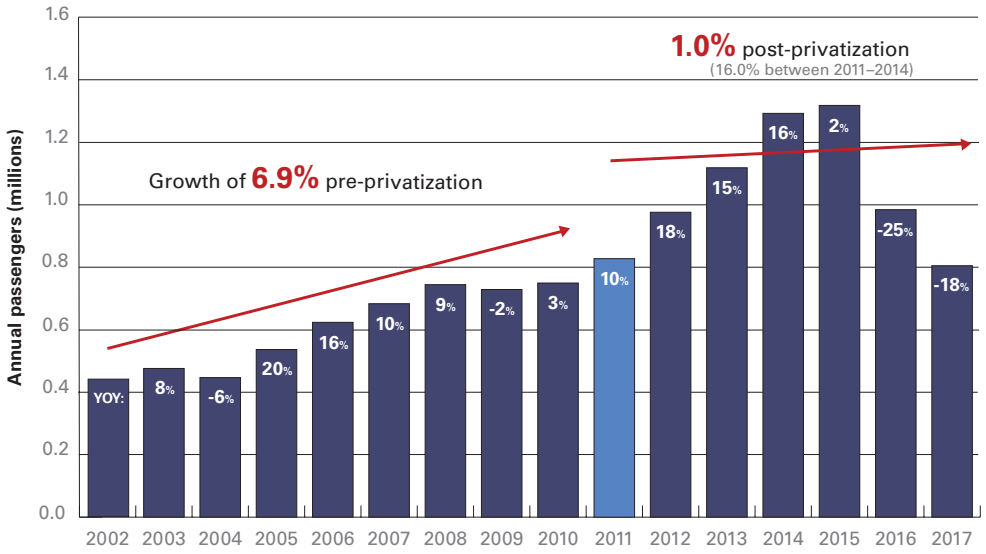
POST-PRIVATIZATION VALUE CREATION

1) TRAFFIC

Brazzaville airport achieved strong traffic growth (12.3% compound annual growth) until 2016. That year traffic fell by 25% and it fell by another 17% in 2017, in part because of the region's ties to the petrochemical industry, which slowed its activities as a result of falling oil prices. Due to this unforeseen drop in traffic, investment in a new cargo facility was delayed, with government agreement. At Pointe Noire, traffic had grown until 2015 but fell 22% in 2016.

CHART 16: ANNUAL PASSENGER TRAFFIC AT BRAZZAVILLE INTERNATIONAL AIRPORT (2002–2017)

BRAZZAVILLE Annual growth of **4.1%** overall

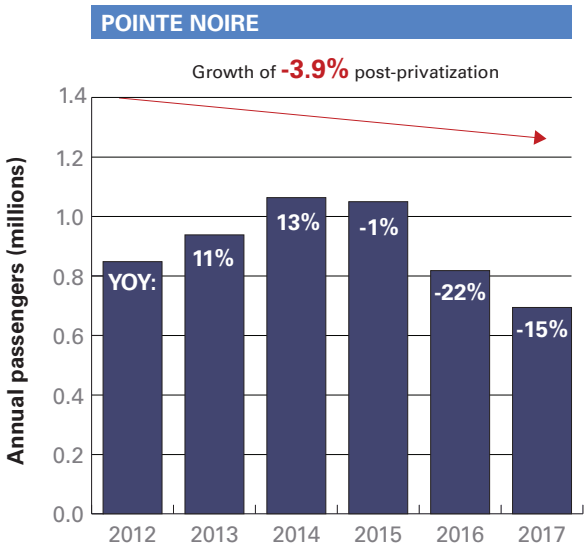


Source: ACI World Airport Traffic Database 2018

2) CAPEX

Capital investments totalling approximately US$25 million were made between 2011 and 2016, mainly towards improvements at Pointe Noire. Areas of focus included the reorganization and modernization of the airport cargo areas, improving utilities, enhancing apron capacity and resurfacing the runway (now complete). With the government's approval, the operator is now holding off on investment because of the massive loss of traffic. The investment program will resume when the economy recovers.

CHART 17: ANNUAL PASSENGER TRAFFIC AT BRAZZAVILLE INTERNATIONAL AIRPORT (2012–2017)



Source: ACI World Airport Traffic Database 2018

3) AIRPORT CHARGES

Airport charges were stable in the first five years of the concession contract. Following the significant and unexpected drops in traffic, the government allowed an increase in airport charges.

4) QUALITY

The concession agreement includes a Level of Service KPI which the operator must fulfil. The airports plan to participate in the ACI Airport Service Quality Survey to improve service quality and customer experience. Tourist information offices have been introduced at the Brazzaville airport, improving access for arrivals to the Congo.

LESSONS LEARNED

A government privatizing one or more airports can benefit from the broad privatization expertise of an advisor experienced in finance and aviation, as was the case here. This advice can be instrumental in ensuring the process is clearly defined for bidders. It also reassures bidders—especially in this region, given the region's higher operational risks. In regions prone to traffic and other volatilities, a greater risk exists of airport operations becoming unsustainable. This threatens investment, because returns are imperiled by significant traffic declines, as happened here. So, ensuring flexibility in operational and capital planning is important. Recognizing the volatility of the Congo economy and its heavy reliance on the oil industry, the concession agreement provided this flexibility. Without it, the privatization may not have happened.

Case study:
Mactan-Cebu International Airport
Two-stage bid process: technical, then financial

Mactan-Cebu International Airport is the second-busiest airport in the Philippines. In 2013, just before its privatization, the airport handled almost 7 million passengers in a facility with a design capacity of 4.5 million passengers. The government privatized the airport in order to address the capacity issue, improve efficiency and raise service quality.

THE PRIVATIZATION AT A GLANCE

Current ownership structure:
- 60% Megawide Corporation (Philippines);
- 40% GMR Group (India).

Key features:
- Scope: upgrading, operating and continuously developing the airport;
- 25-year concession contract;
- US$326 million (plus 12% VAT) up-front concession fee paid to the government;
- Level of service requirements tied to ACI's Airport Service Quality (ASQ) ratings.

Privatization objectives:
- Address the existing low quality of service and improve operational efficiency;
- Increase the level of commercial activity and airport revenues;
- Address capacity limitations with minimum risk to the government;
- Optimize sale proceeds within the context of broader privatization and policy objectives.

THE PRIVATIZATION PROCESS

In December 2012, the Government initiated a bidding process for the operation, maintenance and development of the airport.

The first stage was an RFQ that required submission of a technical bid. Consortiums wishing to bid had to include an experienced airport operator with a minimum of three years' experience with an airport serving at least 5 million international passengers. Philippine law limited foreign ownership to 40%. Seven bidders responded.

The second stage was an RFP that required submission of a financial bid. All seven proponents passed the technical bid stage and were invited to bid. The decision was based on the highest premium over the estimated capital cost of the investment required (about 19 billion Philippine pesos).

The winning bid of Megawide/GMR offered a premium of PHP 14.4 billion (about US$326 million plus 12% VAT). This was slightly above the second-highest bid, by Filinvest/Changi, of just under PHP 14 billion.

The bids included a commitment to renovate the existing Terminal 1 and to construct a Terminal 2, while maintaining an ASQ rating of 3.5 out of 5 to ensure acceptable quality of service.

THE REGULATORY FRAMEWORK

The passenger terminal charges and the aeronautical charges are based on a formula defined in the concession agreement. Increases in passenger terminal and aeronautical charges are possible and are provided for in the concession agreement, ensuring certainty for the investor. Potential increases are tied to the investments in the new terminals and other improvement investments. Additionally, the concession agreement contains an inflation adjustment mechanism, by which charges will increase by 10% every five years to adjust for inflation. Non-aeronautical revenues are not regulated under the dual till model.

Summary of regulatory features:
- Dual till;
- Increase on subsequent CAPEX spend;
- Inflation adjustment every five years;
- Regulatory model is defined in the concession contract.

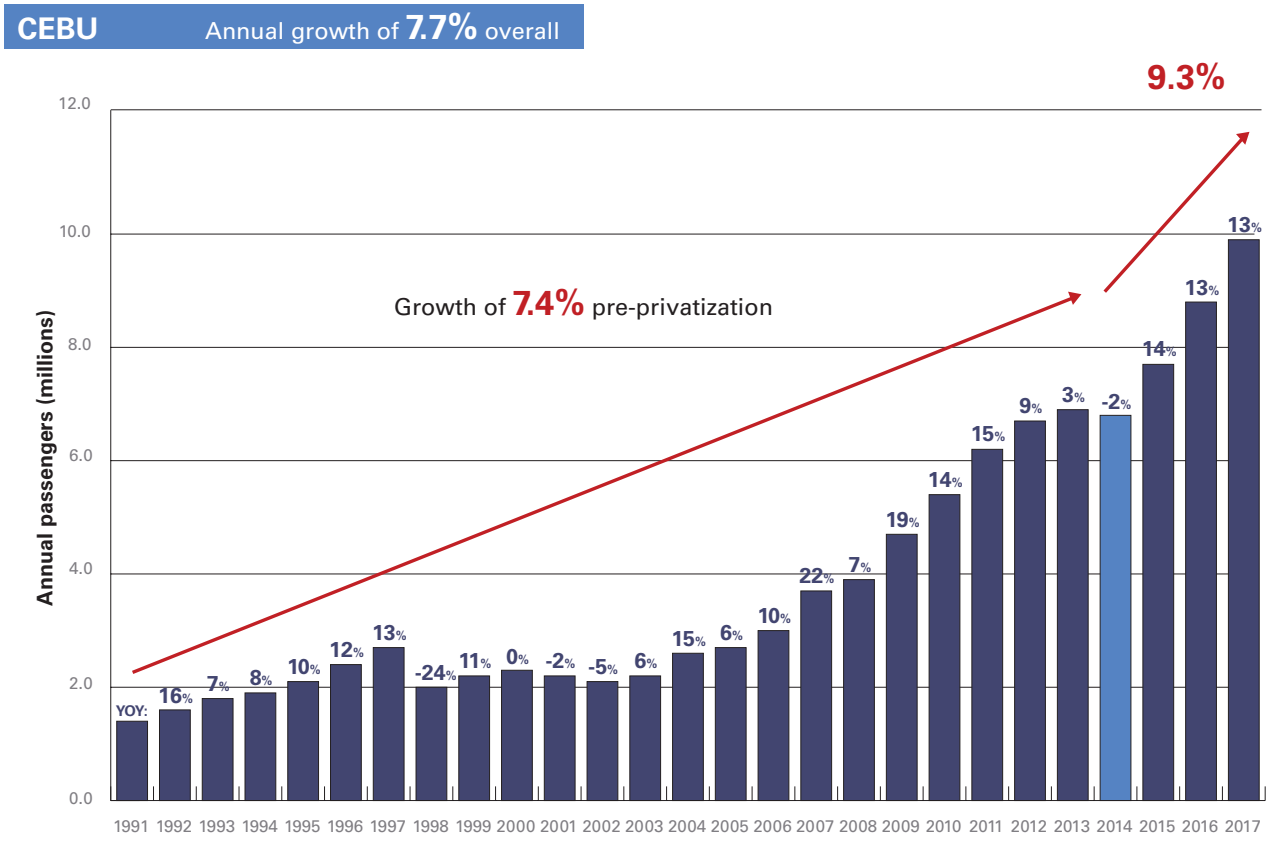
POST-PRIVATIZATION VALUE CREATION

1) TRAFFIC

Traffic has grown 14% annually on average since privatization, compared with 7.4% a year in the 23 years before privatization. Improvements have been made to Terminal 1 and the new Terminal 2 is set to open by 1 July 2018.

The operator is aggressively marketing the airport in overseas markets such as China, South Korea, Japan and North America. In 2017, six new airlines started service to Cebu, offering domestic and international services. The operator is also actively engaged with the tourism industry to promote Cebu as a destination.

CHART 18: ANNUAL PASSENGER TRAFFIC AT CEBU INTERNATIONAL AIRPORT (1991–2017)



Source: ACI World Airport Traffic Database 2018

2) CAPEX

Construction and development of Terminal 2 and refurbishment of Terminal 1 is expected to cost about PHP 19 billion (US$375 million). The concession agreement specified that the facility be roughly 42,000 square metres, but the operator decided to construct it at 65,000 square metres to provide more space, comfort and convenience.

Moreover, even though the concession agreement indicated that renovations to Terminal 1 were only required following the completion of Terminal 2, the operator went ahead with many operational enhancements to the existing terminal in order to lessen congestion, since the facility was already operating at well beyond its design capacity. This included adding self-service check-in kiosks; a Veripax passenger reconciliation system; new baggage systems; an expanded immigration area; new transfer desks; and new signage, lighting and seating.

3) AIRPORT CHARGES

The passenger terminal charge prior to the start of the concession agreement was PHP 200 per person for domestic flights and PHP 550 for international flights. When the concession agreement was signed, charges increased to PHP 300 and PHP 750 for domestic and international, respectively. The increases in charges are tied to the investments in the new terminals and other improvements at the airport. Once Terminal 2 is completed, the domestic and international charges can be raised by PHP 41 and PHP 63 respectively.

4) QUALITY

This privatization initiative was recognized at the 2015 IJGlobal Asia Pacific Awards as the "Best PPP deal in the Asia-Pacific Region" and was deemed the "2015 Best Transport Deal" in Asia-Pacific by Thompson Reuters' Project Finance International digital news service.

LESSONS LEARNED

- Pre-determination in the concession agreement of the scope within which airport charges can vary and deregulation of the non-aeronautical business have incentivized bidders, despite the investment's high risk.
- The focus on growth led the operator to work closely with the tourism industry to promote tourism and air services development.

Case study: Malaysia Airports Holdings Berhad (MAHB) *A national airport network privatization via a traded company*

In the 1970s and 1980s the Malaysian Government created numerous public corporations and invested heavily in them to achieve the goals of the "New Economic Policy" (NEP) established in 1971. This resulted in significant deficits, and a significant increase in public debt as a percentage of GDP. The public sector grew from 29% of GNP at the launch of the NEP to 58% by 1981[3]. Following the success of privatization in the western world in the mid-80s, Malaysia embarked on a privatization policy to reduce public sector involvement in services in many sectors of the economy, including airports.

THE PRIVATIZATION AT A GLANCE

Current ownership structure:

- As of 31 March 2018, MAHB was 33.2% owned by Khazanah Nasional Berhad, a strategic investment fund of the Government of Malaysia; 10.6% owned by the Government of Malaysia-linked investment companies; Employees Provident Fund, which had a 10.1% stake; and Permodalan Nasional Berhad, which had a 0.5% stake. The balance was owned by private investors.

Key features:

- Listed on the Main Board of Bursa Malaysia (Malaysia's Stock Exchange).
- Foreign investors: about 40% of MAHB is owned by foreigners collectively but each with individual minority holdings. The Government can exercise its golden share if needed.
- Operates under a 25-year operating agreement, which began in 2009 and is due to expire in 2034. In December 2016, MAHB was granted an approval in principle from the Government to extend the operating agreement for an additional 35 years, to 2069.
- The Government retains control of national airport development policy and is responsible for airport development capital expenditures. MAHB, which acts as an airport operator, is responsible for airport operational capital expenditures.
- Passenger service charges (PSCs) are subject to five-year periodic review and are allowed to be increased in line with the compounded consumer price index (CPI) rate.
- A concession fee (user fee charges) is paid to the Government of Malaysia and is based on a percentage of revenues. In 2017, user fee charges ranged from 11.27% to 11.55% of group gross revenues (aeronautical and non-aeronautical) generated by "the use of airport infrastructure, assets provided by or financed by the Government of Malaysia or land belonging to the Government." The concession fee increases by 0.25% per annum and can increase further depending on any commercially viable development capital expenditures spent by the Government per the operating agreement[4].

Privatization objectives:

- Manage Malaysia's airport system as a whole, ensuring small and remote airports would still be operated.
- Reduce government expenditure and direct involvement in the economy.

3 Yaacob and Naidu (1997), p.43.
4 Malaysia Airports, Annual Report 2017, pp. 213 and 225.

THE PRIVATIZATION PROCESS

- MAHB was corporatized in 1992 and opened to private investment in 1999 as a group of 39 of the 41 former government-operated commercial airports in Malaysia. MAHB was incorporated as a public limited company and was listed on Bursa Malaysia under the name Malaysian Airports Holdings Berhad (MAHB). The Government of Malaysia initially sold 48% of the shares to the public in 2000, retaining 52% for itself. In 2004 it transferred its remaining shares (50%) to Khazanah Nasional Berhad, the strategic investment fund of the Government of Malaysia charged with holding, managing and investing in strategic commercial assets. Over time, the shareholding of the government through Khazanah has declined and as of March 2018, Khazanah held only 33.2% of the total shares. However, it remains the single largest owner of MAHB shares. The next largest shareholder is Employees Provident Fund, with 10.1%[5].
- The 39 airports in Malaysia operated by MAHB comprise five international airports, 16 domestic airports and 18 remote airports (short take-off and landing ports). PSCs are only collected from passengers departing from international and domestic airports. No PSCs are imposed on passengers departing from the remote airports. The majority of the low-traffic, small domestic airports and all 18 remote airports are unprofitable.
- The decision to privatize the airports as a network was made in order to enable cross-subsidy from the profitable large airports to the unprofitable small domestic and remote airports and thus ensure connectivity throughout the country, as well as to provide other economic and social benefits.

THE REGULATORY FRAMEWORK

- The PSC is set by the Government every five years by benchmarking to the compounded consumer price index (CPI) rate. The Government compensates MAHB when the PSC rate is set below the benchmark. Historically, MAHB's PSCs have grown more slowly than PSCs at peer airports elsewhere. The newly created regulatory agency, MAVCOM, is assessing options for reviewing the regulatory framework, in consultation with aviation stakeholders.
- In accordance with the policy objective set by the Government, MAHB cross-finances the smaller domestic airports and remote airports. In 2017, approximately 17% of the pre-tax profit generated by the profitable large airports was used to cross-finance the losses incurred by smaller domestic and remote airports.

5 Statement of Shareholdings, Malaysia Airports Annual Report, 2017, p. 364-365.

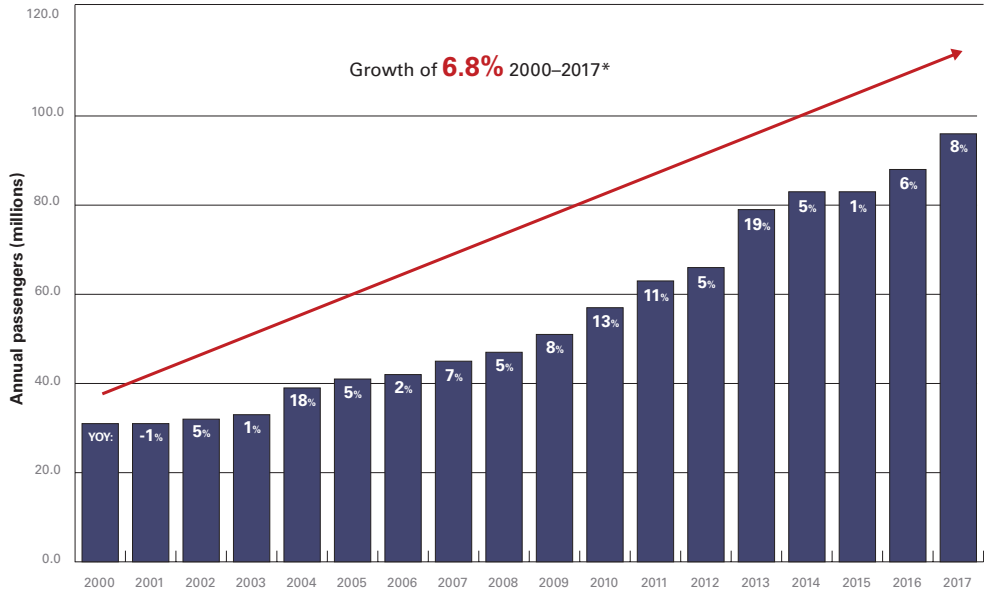
POST-PRIVATIZATION VALUE CREATION

1) TRAFFIC

Continued growth. For the MAHB airports as a group, traffic has grown 6.8% a year on average since 2000. For Kuala Lumpur International Airport (KLIA), the largest airport in the group, traffic has grown 7.5% annually since privatization, compared with 6.8% annually in the seven years prior to privatization.

CHART 19: ANNUAL PASSENGER TRAFFIC AT CEBU INTERNATIONAL AIRPORT (1991–2017)

MAHB total all airports



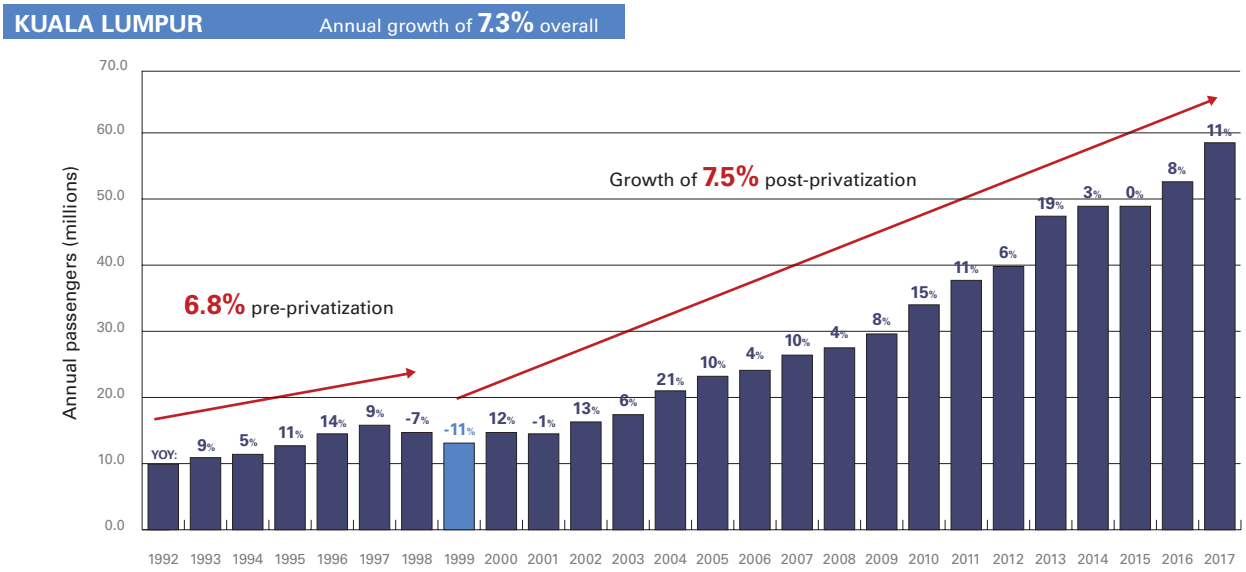
*MAHB was formed in 1999.

Source: ACI World Airport Traffic Database 2018, MAHB (2015-2017). Excludes Turkey.

2) CAPEX

MYR 4 billion (US$1 billion) was invested to build KLIA2, the second terminal at KLIA. The annual operational capital expenditure for airports will likely have to rise by at least 30% over the next three years to meet the investment needs of the airport network. The KLIA Aeropolis development of three core clusters (Air Cargo & Logistics, Aerospace & Aviation and MICE & Leisure) at key airports KLIA, Subang Airport (SZB) and Penang International Airport (PEN) is expected to incur US$50 million in infrastructure capital expenditure in the next three years.

CHART 20: ANNUAL PASSENGER TRAFFIC AT KUALA LUMPUR INTERNATIONAL AIRPORT (1992–2017)



Source: ACI World Airport Traffic Database 2018, MAHB (2015–2017).

3) AIRPORT CHARGES

The benchmark-set charges have remained competitively lower at KLIA and the other MAHB airports. In its 2017 Annual Report MAHB notes that, according to the latest LeighFisher benchmark of airport charges, Kuala Lumpur airport charges are only 38% of the average of those at the top 50 international airports.

4) QUALITY

Award-winning operations. The MAHB group has won numerous awards over the years, including Langkawi Airport being placed third for Best Airport by Size (2–5 million passengers) in the ACI 2016 ASQ Awards.

KEY OBSERVATIONS

- The airport operator has kept airport charges low because of competitive pressure from airports and airlines and for specific transport policy objectives.
- The airport network model enables the profitable major airports to cross-finance the losses incurred by the smaller domestic and remote airports. This can greatly benefit smaller airports in the network and the communities they serve.
- If the Government decides to introduce a new regulatory framework over the provisions in the current operating agreement when charges are already competitive, careful design of the new regulatory framework should provide an opportunity to further enhance regulatory certainty for investors, ensuring sustainable financing of future capital expenditure.

Case study: Aeroporti di Roma *Regulatory stability and clarity is key*

Aeroporti di Roma (AdR) operates two airports in Rome: Fiumicino (Italy's busiest airport and Europe's tenth-busiest airport in 2017) and Ciampino (an international airport with low-cost carrier operations). Atlantia S.p.A owns 99.4% of AdR, with the remaining shares owned by regional authorities and other investors (AdR, 2018). The Italian government began the privatization of the Rome airport system in 1997, with full privatization occurring in 2000.

THE PRIVATIZATION AT A GLANCE

Current ownership structure:

- 99.4% Atlantia S.p.A.;
- 0.25% Citta' Metropolitana di Roma Capitale;
- 0.1% Comune di Fiumicino;
- 0.265% Others.

Key features:

- Scope: operating and continuously developing Fiumicino and Ciampino, the two airports in Rome;
- 45-year concession contract;
- US$1.3 billion payment to the government in the tender process for the majority stake in the airports;
- Annual capital expenditures:
  - 2003–2012: US$90 million;
  - 2013–2017: US$300 million.

Privatization objectives:

- Continued development of Rome's airports;
- Optimize sale proceeds within the context of broader privatization and policy objectives.

THE PRIVATIZATION PROCESS

The Italian government privatized the airports in a two-tranche process:

- An initial divestiture of 45% of the government stake through an IPO. The shares were sold on the Italian Stock Exchange.
- In 2000, 51% of the remaining shares were sold via a tender process, with the company Leonardo S.p.A. winning the tender (accruing the government approximately US$1.3 billion). That company then held a public offering to increase its shareholding to 96%. The remaining shares are held by regional authorities and third-party investors. At the end of the concession contract in 2044, the end-of-lease provisions state the Italian government will pay the leaseholder the residual value for investments made during the lease.

THE REGULATORY FRAMEWORK

Although economic regulation was supposed to be introduced upon privatization, no agreement was achieved in 2000. Accordingly, airport charges were not tied to costs, traffic, investment, or other quality standards until 2012. In 2012 a clear and stable regulatory framework was implemented, with airport charges set under price cap regulation with a dual till model valid until concession expiry. Tariffs are set based on costs, inflation, planned investments, traffic, and environmental and service level requirements. The charges forecasts are reviewed every five years, the reviews being based on updated investment plans and traffic forecasts, as well as a mark-to-market update of allowed cost of capital, after consultation with users; then actual charges are set annually based on actually incurred capex. The price cap in place at the airports is to ensure that the operator can finance capital investments while covering its costs and can generate a reasonable return on investment.

Summary of regulatory features:

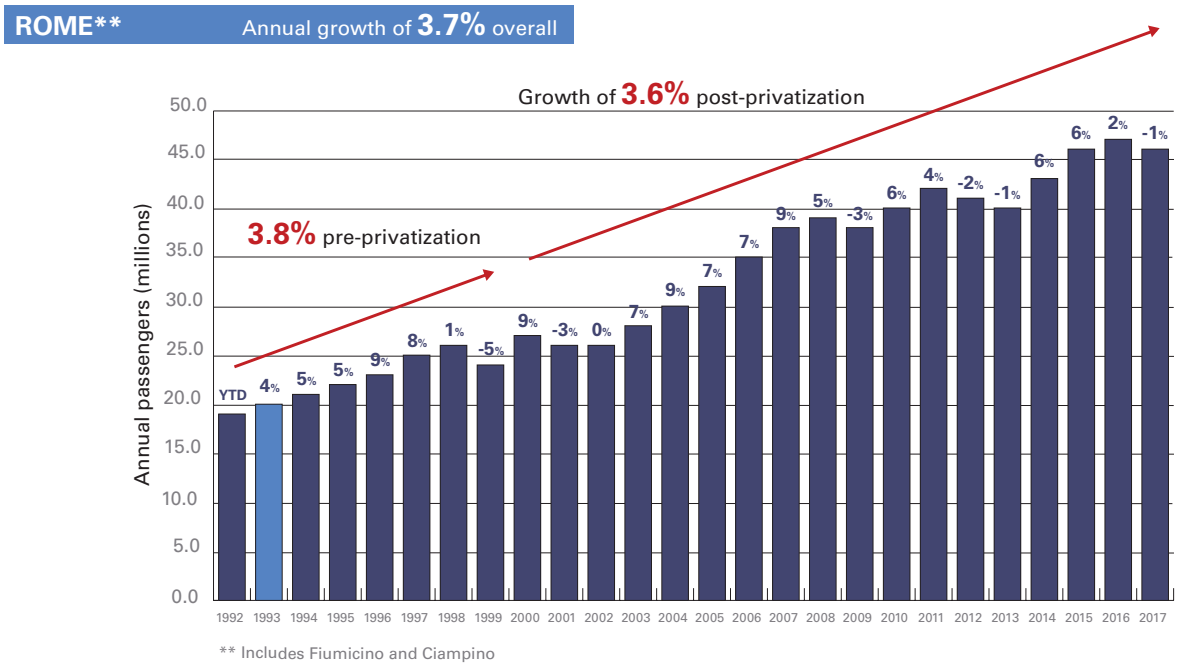
- Dual till;
- Price cap formula includes operating and capital costs, inflation, traffic forecasts, an allowed return, and bonuses/penalties related to environmental and level-of-service requirements;
- The regulatory framework was not in place before privatization—this led to a lack of investment by the operator due to uncertainty.

POST-PRIVATIZATION VALUE CREATION

1) TRAFFIC

Continued growth. Combined traffic has grown 3.6% annually on average since privatization and 2.4% annually on average in the years following the introduction of the new regulatory agreement.

CHART 21: ANNUAL PASSENGER TRAFFIC AT AEROPORTI DI ROMA (1992–2017)



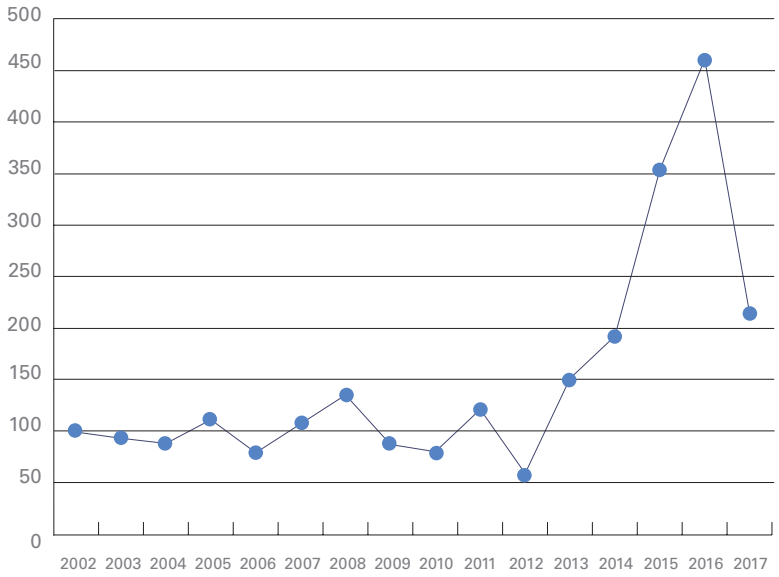
** Includes Fiumicino and Ciampino

Source: ACI World Airport Traffic Database 2018

2) CAPEX

The pitfall of unclear regulations. Because the operator was not sure whether the level of airport charges in place would cover the cost of investments or produce a reasonable rate of return, the airports in Rome lacked major investment immediately following privatization. (It should be noted that the airports were privatized in good condition.) Between 2003 and 2012, annual average CAPEX was US$90 million. However, when economic regulation of airport charges was implemented at the airports there was a large increase in CAPEX, to an annual average of US$300 million between 2013 and 2017. Investments include runway maintenance and terminal redevelopment. The stability of how charges were now set gave the operator the confidence to make more investments in the airports, in the knowledge that it would able to cover its costs while achieving a reasonable rate of return.

CHART 22: **INDEX OF CAPEX PER PASSENGER AT AEROPORTI DI ROMA; 2002=100 (2002–2017)**

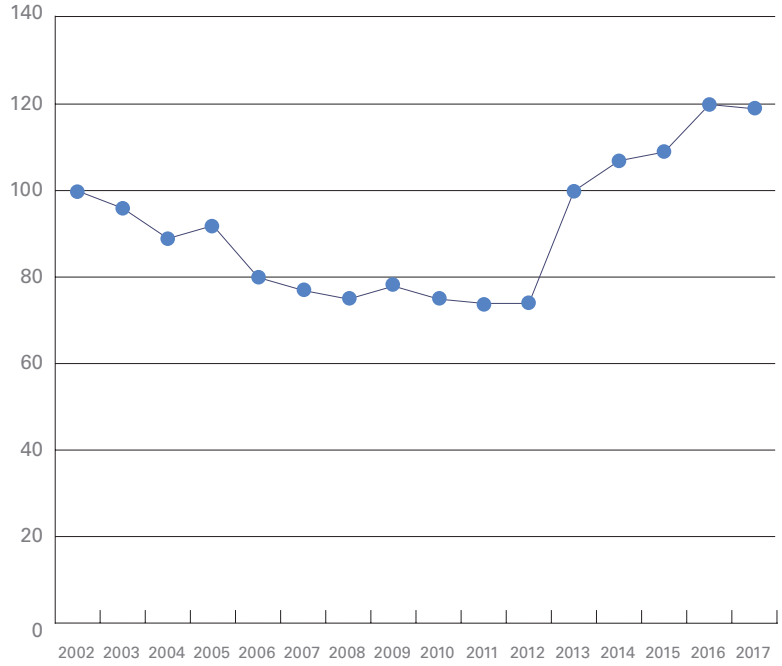


Source: Aeroporti di Roma (AdR)

3) AIRPORT CHARGES

Charges levels were allowed to rise after years frozen below cost. Charges at the airports remained stagnant or decreased until 2009, when an inflationary increase was allowed. In 2012, the government introduced the economic regulatory model, which was a dual till price cap. Since 2012 there has been an increase in charges, but because charges were held low for many years the increase was needed to catch up to inflation. It was also tied to a major increase in capital expenditures. The new airport charges levels approximated the average level applied by European airports with similar traffic volumes and/or market profiles. Over the period from 2002 to 2017, real (net of inflation) aeronautical revenue per passenger increased on average by 1.2% per annum.

CHART 23: INDEX OF REGULATED (AERONAUTICAL) REVENUE PER PASSENGER AT AEROPORTI DI ROMA; 2002=100 (2002–2017)



Source: Aeroporti di Roma (AdR)

4) QUALITY

The World's Most Improved Airport. AdR has won a number of awards over the years, and most recently Fiumicino won the 2017 ACI Airport Service Quality award for the best European airport over 40 million passengers per year. Additionally, the concession contract requires a number of service-level standards to be met. Based on 2017 performance, Fiumicino met or exceeded all but one of the main service quality indicators and saw improvement over 2016 in all but one indicator. At Ciampino, the service quality indicators are generally at or above the minimum required levels, with the exception of wait times for baggage.

LESSONS LEARNED

- When regulation is required, clear and stable economic regulation is essential for the private operator. This should include a transparent and clear framework stating how charges will be regulated. A lack of clarity concerning the regulatory framework will increase risk, put into doubt the operator's ability to earn a return on investment and will limit or even preclude needed investment.

NOTES

Airports Council International
2018

Published by:
Airports Council International World

For further information, contact:
Stefano BARONCI, Director Economics, Airports Council International World

AIRPORTS COUNCIL INTERNATIONAL

ACI World
Suite 1810
800 Rue du Square Victoria
Montreal, Quebec, H4Z 1G8
Canada

www.aci.aero

For more information or to access comprehensive airport data reports, please visit **aci.aero/publications/new-releases**