



Strengthening Africa's Economic Performance

www.thebrenthurstfoundation.org

BRENTHURST DISCUSSION PAPER 9/2007

◆ www.thebrenthurstfoundation.org ◆

Air Hubs: A Checklist for African States

Greg Mills and Luis Membreno*

Executive Summary

Lessons from other countries show that the creation of an air hub is fundamentally dependent on an 'open skies' policy. Attracting other airlines to use the hub helps to establish a suite of regional and international connections. Such liberalisation should not be tied to reciprocity. Success is also linked to location, to being first among regional peers to create a hub, and to having both domestic exports and a tourism market. A hub goes hand in hand with the development of local business. Airport income from shops and restaurants is an important earner and helps to keep landing fees low, thereby attracting additional aircraft. The absence of liberalisation is cited as an ongoing impediment to the creation of such a hub in South Africa, where Cape Town (for reasons of altitude) is seen as a natural hub for ongoing connections to Latin America and Johannesburg for Southern Africa.

Introduction

Virtually every African state is today apparently keen on replicating the success of Dubai and Singapore, among others, in creating an 'air hub' – a single major regional airport designed for international transit traffic.

World's Top Ten Busiest Airports: Passengers and Cargo, 2005

	Airport	Total passengers	Airport	Total cargo (tonnes)
1.	Atlanta, Hartsfield	85,907,423	Memphis	3,598,500
2.	Chicago, O'Hare	76,510,003	Hong Kong	3,433,349
3.	London, Heathrow	67,915,403	Anchorage	2,553,937
4.	Tokyo, Haneda	63,282,219	Tokyo, Narita	2,291,073
5.	Los Angeles	61,489,398	Seoul	2,150,140
6.	Dallas/Fort Worth	59,176,265	Paris, Charles de Gaulle	2,010,361
7.	Paris, Charles de Gaulle	53,798,308	Frankfurt-Main	1,962,927
8.	Frankfurt-Main	52,219,412	Los Angeles	1,938,430
9.	Amsterdam, Schiphol	44,163,098	Shanghai	1,856,655
10.	Las Vegas	43,989,982	Singapore	1,854,510

But there is less clarity on 'how' this might happen: exactly what conditions and legislation best lend themselves to the creation of such a hub?

* Dr Greg Mills heads the Johannesburg-based Brenthurst Foundation. At the start of 2008 he will be on attachment to the Government of Rwanda as 'Strategic Adviser to the President'. Luis Membreno is an economist and former presidential adviser based in El Salvador.

Here there are a number of pointers from Singapore, El Salvador and Dubai.

The Singapore Story

The story of the Singapore hub is inextricably linked with the rise of Singapore Airlines, today the second-largest airline by market capitalisation, ranking among the top 15 carriers worldwide in terms of revenue passenger kilometres.

But the Singapore story is almost one that did not happen, for two reasons:

Firstly, when looking at a map of South-East Asia in terms of air traffic flows from Europe, in the assessment of the Singaporeans during the 1970s, it made most sense to go to Bangkok. But the Thai airports were not, in the Singaporeans' words, 'up to standard' at the time, hence the creation of the hub on the island.

Secondly, external consultants wanted to expand the city airport of Paya Lebar, into which by the late 1970s some \$800 million had already been invested. The Cabinet reluctantly agreed – but the decision was later overturned. At the 25th anniversary of what became the new airport, the man responsible for overturning the decision, then Prime Minister Lee Kuan Yew, told how he changed the original plan. He believed that Paya Lebar's expansion would be limited by noise and air pollution, given its proximity to the city centre, while moving to the former British airbase at Changi meant that aircraft would instead approach the island over the sea.

Furthermore, the 1972 decision to expand Paya Lebar was fortuitously stalled by the 1973 oil crisis, which reduced the immediate need for a second runway. Prime Minister Lee asked the then chairman of the Port of Singapore Authority to head a team to look into the implications of a move to Changi, resulting in the decision to move there. Land reclamation works at the site of the new airport began in June 1975, clearing and filling about two square kilometres of swamp land.

Changi Airport was ready in July 1981 at a cost of \$1.5 billion. In its first year, it handled eight million passengers and 200,000 tonnes of cargo. Today, it caters for over 4,000 weekly flights operated by 81 airlines to over 185 cities in 58 countries, along with 35 million passengers (making it the 22nd busiest airport in the world) and nearly two million tonnes of cargo annually.

El Salvador

In 1976 El Salvador decided to invest in better airport facilities at Cuscatlan International Airport outside the capital, San Salvador. Starting operations in 1980, the airport progressed to become, by far, the best facility in Central America, despite the outbreak of civil war in El Salvador and in neighbouring Nicaragua and Guatemala during the 1980s.

The story of the development of El Salvador as a hub is also directly related to that of the local airline – TACA (Transportes Aéreos del Continente Americano – Air Transport of the American Continent). TACA started operations in 1931, originally being founded in Honduras by a New Zealander, Lowell Yerex. The airline was bought by Salvadoran businessmen in the 1960s. Today it flies to 50 different countries, and is an amalgam of five regional airlines: Aviateca (Guatemala), Lacsá (Costa Rica), NICA (Nicaragua), TACA (El Salvador) and TACA de Honduras (Honduras).

In 1986 the management of TACA decided on the use of El Salvador as a hub for its operations due to the following factors:

- ◆ firstly, the geographical location of El Salvador for operations between the United States and Mexico, and the whole of Central America;
- ◆ secondly, the operation of TACA as a Salvadoran-based and -owned airline;
- ◆ thirdly, the presence in El Salvador of the best regional airport in the region. This increased business flows to the country, in spite of the ongoing civil war during the 1980s;
- ◆ fourthly, the ideal location of El Salvador's airport – located virtually at sea level; operating 365 days a year; and, unlike the rest of the region, comparatively unaffected by poor weather conditions;
- ◆ fifthly, the huge emigration of Central Americans to the United States, including Salvadorans, which created an important demand for air transport services. Such flows have increased over time, despite the signing of a peace agreement to end the civil war in El Salvador in 1992;
- ◆ sixthly, the post-war expansion of TACA and the acquisition in 1992 of all of the other Central American airlines, which gave TACA the potential to become the premier regional airline; and
- ◆ seventhly, the growth in tourism from Canada, the United States and Europe especially into Guatemala and Costa Rica, which increased the demand for regional air traffic.

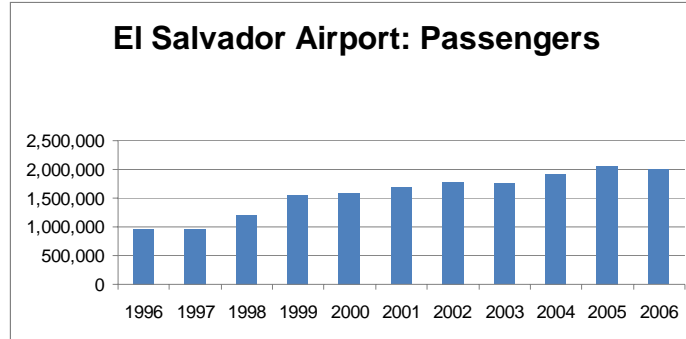
El Salvador is the hub for TACA's operations for Central America, North America, the Caribbean and, to some extent, to South America. TACA has also developed another hub in Costa Rica (Juan Santamaría International Airport), but, due to its limited capacity, it remains a small operation, while another airport operates in Lima, Peru (Jorge Chávez International Airport) for all TACA's operations in South America.

Apart from TACA (which flies to all of Central America, Mexico, Miami, New Orleans, Houston, Dallas, Los Angeles, San Francisco, Oakland, Washington DC, New York, and Chicago in the United States, and Toronto in Canada), there are also ten other international airlines that fly to El Salvador from the United States, Mexico and Panama. TACA enjoys partnerships with TAM Linhas Aéreas, Avianca, United Airlines, Iberia Airlines, Aerosur, Air France and Lufthansa.

El Salvador's international airport has experienced two major expansions: the first in 1996, the second two years later. The state-owned and -operated airport is currently undergoing a new expansion phase, which at present is at the design stage.

The airport moves two million people annually and also operates an important world-class base of maintenance services for airplanes from all over the world. Cargo has not developed as quickly, as the airport currently moves only 2,600 tonnes annually. This is due to the small export business of the country, and explains why TACA has now closed its cargo operations – though this volume is expected to grow rapidly in the next few years as the fruits of Salvador's economic reforms are realised.

El Salvador's hub also provides services to South Americans, as TACA has direct flights between the Lima hub in South America and El Salvador for people travelling to North America, Central America and the Caribbean islands. TACA flies to Cuba and the Dominican Republic in the Caribbean and is planning to expand its operations to Puerto Rico and to other countries.



One of the advantages for South Americans travelling to all the destinations offered by TACA is that they do not have to fly into the United States to make a connection, something many Latin Americans try to avoid, especially after 9/11. This also avoids the problem, for many Latin Americans, of having to obtain a US visa.

Another advantage is that flying within the region on direct flights, with short waiting time at hubs, is something that businessmen and tourists appreciate very much. Also, TACA has a very new fleet of Airbuses¹ and achieves an exceptional 'on-time' arrivals rate of 92 per cent.

The future of the Salvadoran hub seems to be one of significant expansion due to various factors. Central America's economies are integrating faster and deeper with the global economy; more tourism is flowing into the region; greater trade is expected; and many multinationals are buying important stakes in large regional enterprises, ranging from banks to cement companies along with many other businesses. Foreign regional traffic is likely to rise. Additionally, the presence of many retired Americans and Canadians taking up residence in Costa Rica or Panama generates further demand for air travel services.

Although Costa Rica and Panama compete with El Salvador as the hub for South America, neither of them competes as a hub for North America and for the north of Central America. TACA uses Costa Rica as a hub for South America, but the relatively poor airport facility in San José, Costa Rica's capital city, provides an opportunity for El Salvador to compete for the South American market, which explains why TACA operates direct flights from Costa Rica and El Salvador to Lima, Peru.

The future expansion of El Salvador's hub is directly related to the new investments planned to expand the airport facilities. The new design is expected to be ready in the first half of 2008, with construction anticipated to start in 2009.

¹ As of August 2006 the TACA fleet included: 4 Airbus A321-200s (plus 5 on order); 6 Airbus A320-200s (plus 15 on order); 7 Airbus A319-100s (plus 6 on order); and 11 Embraer 190s (all on order).

Dubai: From Ports to Airports

Although pearling was the main source of income for the emirate of Dubai until the 1930s, its rulers had quickly learned the value of its location. In 1901 Dubai was declared a free port, and as early as 1960 Dubai International Airport was opened.

Using its hydrocarbon windfall (oil was discovered in the mid-1960s), Dubai devised various schemes to promote trade, investment, and non-oil manufacturing and service industries. Port Rashid, today the busiest trans-shipment port in the Persian Gulf, was opened in 1971; Dubai Dry-docks in 1979; Dubai Aluminium (Dubal) in 1980; and Jebel Ali port, completed in 1983, was boosted by the decision two years later to co-locate a free trade zone. Jebel Ali Free Zone is now one of the busiest in the world. Even today, its ports remain a cornerstone of Dubai's non-oil economy, with eight million containers passing through them in 2005, up from just one million in 1991.

Like Singapore, Dubai moved from shipping into aviation. Dubai adopted a liberal open skies policy in the 1970s, allowing other carriers unfettered access, although it was overshadowed by Bahrain (and its airline, Gulf Air) as the most important regional aviation hub. This changed with the launch of the government-financed Emirates airline in October 1985, initially operating with only a single Boeing 737 and an Airbus leased from Pakistan. Today Emirates flies to 94 destinations in 60 countries on six continents from its Dubai hub, and has plans to handle 170 million passengers in 2025 as the world's leading international airline.

Emirates' strategy of winning passengers for long-distance flights between Europe and the Far East and using Dubai as its hub has been facilitated by a substantial expansion of Dubai International Airport, with obvious results. Whereas in 1986 this desert metropolis airport still handled only 3.7 million passengers, by 1998 this had risen to 9.7 million, and to 28 million (and one million tonnes of freight) in 2005, most of whom were travelling on to other destinations. In 2005 plans were announced to construct a second airport in the Jebel Ali region (known as Dubai World Central International Airport) with the capacity to handle 120 million passengers plus 12 million tonnes of freight annually.

Originally it was thought that long-haul aircraft would seal the fate of Dubai, as they could dispense with the stopover on the Persian Gulf that had previously been necessary on the routes from Europe to South-East Asia. Yet as Tim Clark, the head of Emirates, put it in 2001: 'Our geographic position offers a surprising potential – we are right in the middle between London, which is 5,500 kms away, and Singapore, 5,800 kms away, while Africa in the south and the CIS states in the north provide much of our passenger volume. A billion people live within a radius of 1,600 kms from Dubai.'

Ten Pointers for Africa

There are, overall, ten lessons from the experience in creating air hubs in Singapore, El Salvador and Dubai.

1. It is beneficial (though not imperative) to have a competitive and well-connected domestic airline. This does not have to be a low-budget airline, however. Singapore has positioned itself with a 'premium' airline that has more spacious seating and better service. However, hubs cannot be created by protecting domestic airlines –

indeed, in the words of one Singaporean specialist, 'If you really want to be a hub, you have to welcome anybody and everybody and not protect your own carrier.'

2. Thus liberalisation – an 'open skies' policy – is imperative. Attracting other airlines to use the hub helps to establish a suite of regional and international connections. Liberalisation includes so-called 'fifth' (the ability to pick up passengers for onward connections in other countries) and 'sixth' freedoms (the right to carry passengers or cargo from a second country to a third country by stopping in one's own country).² The absence of liberalisation is viewed as an ongoing impediment to the creation of such a hub in South Africa, where Cape Town (for reasons of altitude) is cited as a natural hub for ongoing connections to Latin America and Johannesburg for Southern Africa.

Liberalisation should not be tied to reciprocity. In the late 1980s, Singapore Airlines was keen to have access to Harare for onward connections to Latin America, preferring Zimbabwe over what was then apartheid South Africa. This endeavour failed, as the Zimbabwe authorities wanted Singapore to fly only Boeing 707s into Harare, the same as Air Zimbabwe used, not the 747s or Airbuses that Singapore then operated. Dubai's 'open skies' policy, by which every airline of the world is allowed to land and pick up and/or discharge passengers, is only seldom enjoyed by Emirates in return. Conversely, the absence of an open skies policy in Africa's big market, South Africa, provides an opening for other African countries, especially in picking up passengers for onward routings.

Moreover, instead of attempting to cut low-cost carriers (LCCs) out of the market, the airports that have succeeded in becoming hubs, especially Singapore, have sought to facilitate their growth, realising both that the LCCs' operating model is different from 'full service carriers' (regarding meals, assigned seating and access to air bridges, for example) and that they bring major advantages in terms of passenger throughput volumes. Rather than trying to avoid them, Singapore has accepted that LCCs are a fact of business life. As Singapore's minister of transport observed in 2005, 'So it is better that we have our own LCCs and we work with them and the other LCCs of other countries to further grow the market. This way, the pie will grow, and in the process, our economy will benefit greatly from such growth.'

3. Airport costs, passenger safety and service reliability are important. Airports especially are time-sensitive businesses, and labour instability can easily undo reputation and efficiency. A positive industrial relations climate emphasises that success lies in people and their management.

4. Location helps, though not as much as the ability to pick up other traffic, which depends on the extent of the aforementioned alliances, liberalisation and

² The first freedom is considered to be the right to overfly a country without landing. The second freedom is the right to stop in a country for refueling or maintenance on the way to another, without transferring passengers or cargo. With the advent of long-haul aircraft, this right is seldom used today, except by cargo carriers. The third freedom is the right to carry passengers or cargo from one's own country to another; while the fourth freedom is the right to carry passengers or cargo from another country to one's own. Both these are usually the outcome of bilateral agreements. The seventh freedom is the right to carry passengers or cargo between two foreign countries without continuing service to one's own country. The United Kingdom and Singapore have agreed, from 30 March 2008, to allow unlimited seventh freedom rights. The eighth freedom is the right to carry passengers or cargo within a foreign country with continuing service to or from one's own country. The ninth freedom is the right to carry passengers or cargo within a foreign country without continuing service to or from one's own country.

international interoperability. For example, Emirates has struck bilateral agreements with Australia and Singapore to this end.

5. Current assets can (and should) be successfully springboarded into new ones, all the time envisioning these as 'national projects' with the necessary entrepreneurial basis. In Dubai's case 'What is good for the airport and good for the airline is also good for the country', as Sheikh Ahmed bin Saeed Al-Maktoum, head of the Emirates Group, puts it. Or as the late Sheikh Rashid bin Saeed Al-Maktoum, the founder of modern Dubai, was reportedly fond of saying, 'What's good for business is good for Dubai'.

6. Transport is a critical enabler of tourism and trade, though the hub also depends not just on being a gateway, but also a service provider for domestic exports. A hub goes hand in hand with the development of local business. As one Singapore specialist has noted, 'developing countries aspiring to build air hubs need to have the right economic conditions for trade, tourism and investments in the first place. Otherwise, new airport infrastructure and other factors won't count for much.'

Singapore has enjoyed an advantage, given its domestic manufacturing, which has boosted the airline cargo business. Dubai's air expansion has been linked to the development of local tourism, which now delivers more than five million visitors annually – not bad for a desert area with little apparently going for it. Dubai's target for 2015 is 15 million tourist and business visitors. This is why the country has to give the impression not only of passenger safety, but also of being tourist friendly. Also, a high percentage of airport income is from restaurants and shops; indeed, Singapore uses this income to subsidise landing fees, but benefits from the movement of additional aircraft, given its other service industries, including aircraft maintenance.

7. The rise of other competitors and hubs demands a continuous need to reassess and change tack. For example, as mentor minister Lee Kuan Yew pointed out in October 2007 on touring the new \$1.7 billion Terminal 3 at Changi, competition for airports and airlines is 'ceaseless': 'You come up with a new terminal and somebody is going to come up with a new airport and the old airports will also come up with new terminals. The key is who has got the location? Who is able to attract more flights and more customers?' Terminal 3 is designed to handle 70 million passengers annually, twice Changi's current load. 'It's a ceaseless who-can-do-better', as Lee put it.

8. A small domestic base or small geographic size should not handicap hub development. For example, Singapore used novel features aboard its aircraft to build a brand (it was the first airline to offer economy-class travellers free drinks, headsets and a choice of meals in the 1970s); while both Dubai and Singapore have used (perhaps Dubai more than Singapore) their airlines to brand their countries in a positive, modern, forward-thinking manner.

9. Government funds have played a key role in getting and staying ahead of competitors. The Singapore government's Air Hub Development Fund and Growth Incentive Scheme have both been used to improve Changi's cost competitiveness and traffic connectivity.

10. It is best to get in first and early, because it is difficult to envisage two regional hubs operating successfully side by side. This is why, for example, Kuala Lumpur has found it difficult to compete as a hub, with Bangkok and Singapore already operating.

If Singapore, El Salvador and Dubai are anything to go by, the story of successful air hubs is a story partly of the growth of national airlines, and fundamentally of the need to liberalise in order to expand and compete internationally.

© The Brenthurst Foundation