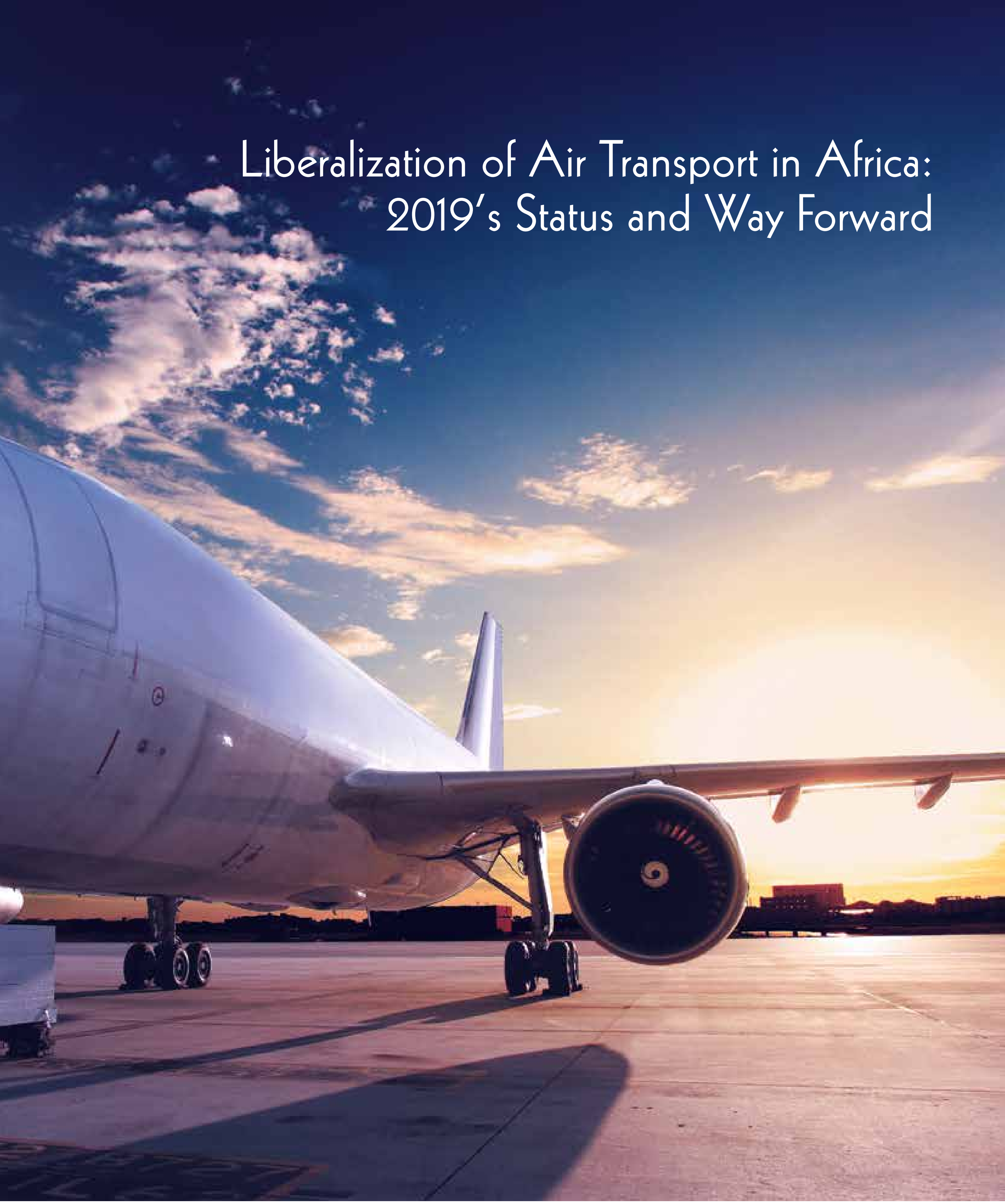
Liberalization of Air Transport in Africa: 2019's Status and Way Forward



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Acknowledgments

The African Development Bank Group (The Bank) prepared this Study as part of its Economic and Sector Work to complement its framework and guidelines document to support the aviation sector in Africa. The Bank has been playing an important role in the air transport sector in Africa by supporting and collaborating with Governments, Regional and continental Organizations, the industry and multilateral institutions to further close the financing gap for the sector.

The objectives of this study are to assess the status of air transport liberalization in Africa as an indicator of the implementation of the SAATM provisions by African States, to provide an overview of air transport connectivity in Africa (at intercontinental, continental and regional level) including the analysis of different connectivity scenarios and to give recommendations on the support actions and reforms that are required by governments, regions and private sector stakeholders to further progress in the implementation of the SAATM provisions.

The Director of Infrastructure, Cities and Urban Development of the Bank, Mr. Amadou Oumarou and the Manager of the Transport and Logistics Division, Mr. Jean Kizito Kabanguka provided the overall guidance and supervision for this endeavour. The assignment was managed by Mr. Romain Ekoto (Chief Aviation Officer) whilst the report was developed by ALG (Consultancy company).

In preparing this report, the team benefited from consultations with a wide range of stakeholders in in the Bank as well as in the industry including the African Civil Aviation Commission (AFCAC), the African Airlines Association (AFRAA), Airports Council International (ACI), the European Commission, the International Air Transport Association (IATA), the International Civil Aviation Organization (ICAO), the World Bank Group, and various Private partners. The insights and observations received from these consultations were instrumental in producing this comprehensive study and the team is grateful for the strong cooperation.

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List of abbreviations

ABJ	Abidjan Airport
ACC	Accra Airport
ADD	Addis Ababa Airport
AFCAC	African Civil Aviation Commission
ALG	Algiers Airport
ALI	Air Liberalization Index
AMU	Arab Maghreb Union
ASA	Air Services Agreements
ASEAN	Association of Southeast Asian Nations
AU	African Union
AWA	Africa World Airlines Company
BASA	Bilateral Air Service Agreements
BJL	Banjul Airport
BJM	Bujumbura Airport
BKO	Bamako Airport
CAGR	Compound annual growth rate
CAI	Cairo Airport
CASK	Cost Per Available Seat Kilometer
CEN-SAD	Community of Sahel-Saharan States
CKY	Conakry Airport
CMN	Casablanca Airport
COMESA	Common Market for Eastern and Southern Africa
COO	Cotonou Airport
CPT	Cape Town Airport
DLA	Douala Airport
DSS	Dakar Airport
DXB	Dubai Airport
EAC	East African Community
EBB	Kampala Airport
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EU	European Union
EWR	New York - Newark Airport
FNA	Freetown Airport
HRE	Harare Airport
IAD	Washingtown-Dulles Airport
IAG	International Airlines Group Company
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization

IGAD	Intergovernmental Authority on Development (Horn of Africa)
JIB	Djibouti Airport
JNB	Johannesburg Airport
JUB	Juba Airport
JV	Joint Venture
KGL	Kigali Airport
LATAM	Latin America
LBV	Libreville Airport
LCC	Low Cost Carriers
LFW	Lomé Airport
LOS	Lagos Airport
LUN	Lusaka Airport
MBA	Mombasa Airport
MERCOSUR	Mercado Común del Sur (Southern Common Market)
MGQ	Mogadishu Airport
MoI	Memorandum of Implementation
NBO	Nairobi Airport
O&D	Origin-Destination passengers
ROB	Monrovia Airport
RPKs	Revenue Passenger Kilometers
SAATM	Single African Air Transport Market
SADC	Southern African Development Community
TUN	Tunis Airport
UAE	United Arab Emirates
UNWTO	United Nations World Tourism Organization
WDH	Windhoek Airport
YD	Yamoussoukro Decision

1

Background

The African Development Bank (AfDB) considers air transportation as one of the main drivers of development of the African continent and it is determined to play a relevant role in the development of African aviation.

Hence, the AfDB has already started preparing a series of background papers in order to assess the challenges of developing the air transport sector. The first three papers correspond to the "Access to Finance in the Aviation Sector"; "Air Transport Infrastructure" and "Aviation, Safety and Regulatory Oversight" —all of which (together with the new ones to be prepared) shall be part of the bank's "Framework and Guidelines for Support to the Aviation Sector,".

Apart from the mentioned topics, the AfDB has identified market access and liberalization, taxes, fees and charges as the additional areas to be addressed.

The present report is focused on the "Market access/liberalization of air transport in Africa" and will be carried out within the context of the African Union's flagship project Single African Air Transport Market (SAATM).

The main objectives to be analysed as part of the scope of work is to:

- Provide an assessment on the status of air transport liberalization in Africa as an indicator of the implementation of the SAATM provisions by African States. The analysis will specifically focus on the development of 5th freedom rights-granting across Africa.
- Conduct a benchmarking of air transport liberalization processes in other regions worldwide.
- Provide an overview of air transport connectivity in Africa (at intercontinental, continental and regional level) including the analysis of different connectivity scenarios.
- Provide recommendations on the support actions and reforms that are required by governments, regions and private sector stakeholders to further progress in the implementation of the SAATM provisions.

2

Overview of the African air transport market

Africa's air transport market represents 2-3% of global market in terms of passengers and Revenue Passenger Kilometers (RPKs), while the continent accounts for 17% of the world's population and 7.2% of the global middle class.
Despite the efforts carried out by governments, public institutions and private companies during the last decade, scheduled air capacity in the continent has not been particularly stimulated and most of the traffic flows are concentrated in a reduced number of countries and airports. At the same time, only a limited number of African airlines have reached a critical size that allows them to compete in the internal market without compromising profitability, safety and security.

2.1 Scheduled capacity evolution

Air transport capacity in Africa has experienced significant growth during the last decade, growing from the 136.7 million scheduled seats of 2008 to the 213.6 million in 2018 at an annual growth rate (CAGR) of 4.6% (see Figure 1).

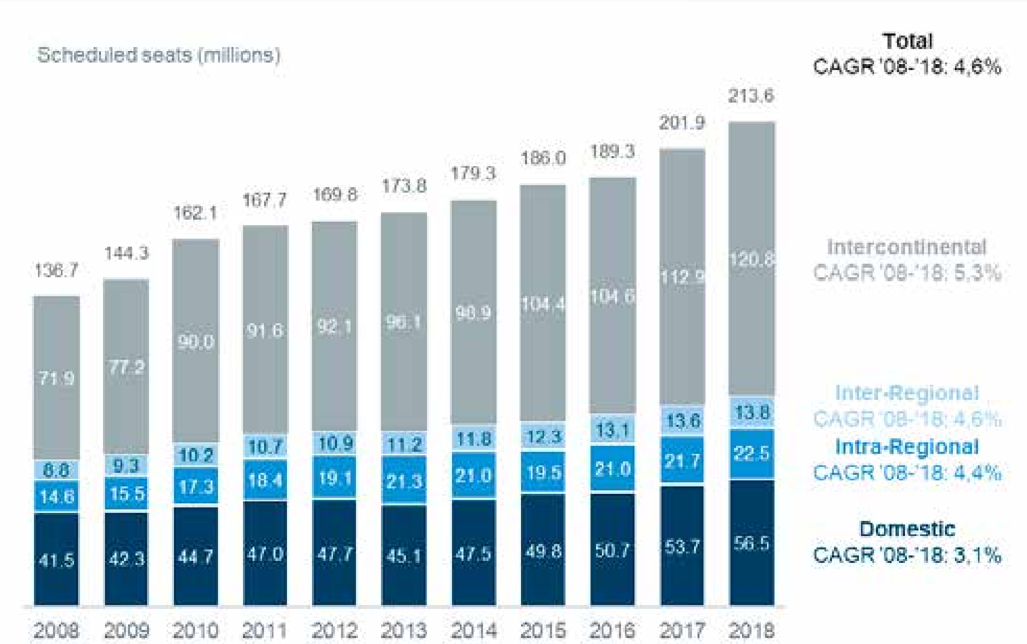


Figure 1: Evolution of scheduled capacity 2008-2018 (excluding restricted seats).
Source: OAG – Schedules Analyser

The African routes shown in the Figure 1 are split into four different types: domestic, intra-regional (connecting countries within a same African Union region), inter-regional (connecting countries belonging to two different African regions) and intercontinental.
Routes connecting African countries with other continents contributed with the biggest capacity growth share, with a 5.3% CAGR. On the other hand, domestic routes experienced the lowest growth levels (CAGR 3.1%).
It is worth noting that airlines' offering in 2010 grew by 12% year-on-year (the highest rate of the last 10 years) mainly boosted by the increase in intercontinental capacity. Tunisair, Royal Air Maroc and Ryanair were the main contributors to this increase. Also remarkable were the two last years of the same period, with a capacity increase of 13% between 2016 and 2018.
At a market level, the intercontinental segment has the biggest capacity share, with 57% of the total seats supplied, followed by the domestic market with 26%.
The low weight of the Intra- and Inter-regional markets reveals the lack of internal connectivity between the African regions and countries.

2.2 Main operating airlines

Ethiopian Airlines is the largest airline in Africa, accounting for 8.0% of the seat capacity. It is the top player in the market, despite having been the seventh in importance in seat capacity only ten years ago. In only a decade, its rising role on the continent has allowed the airline to replace South African Airways as market leader, an airline that devotes 45% of its capacity to the domestic market, the largest portion among the airlines showed in Figure 2. It is worth noting that the dominance of Ethiopian Airlines would be relatively lower if passenger figures (load factor) were compared. Its airline load factors are lower than those of its competitors at the global level (especially in the case of European competitors, with load factors more than 10 pp higher).

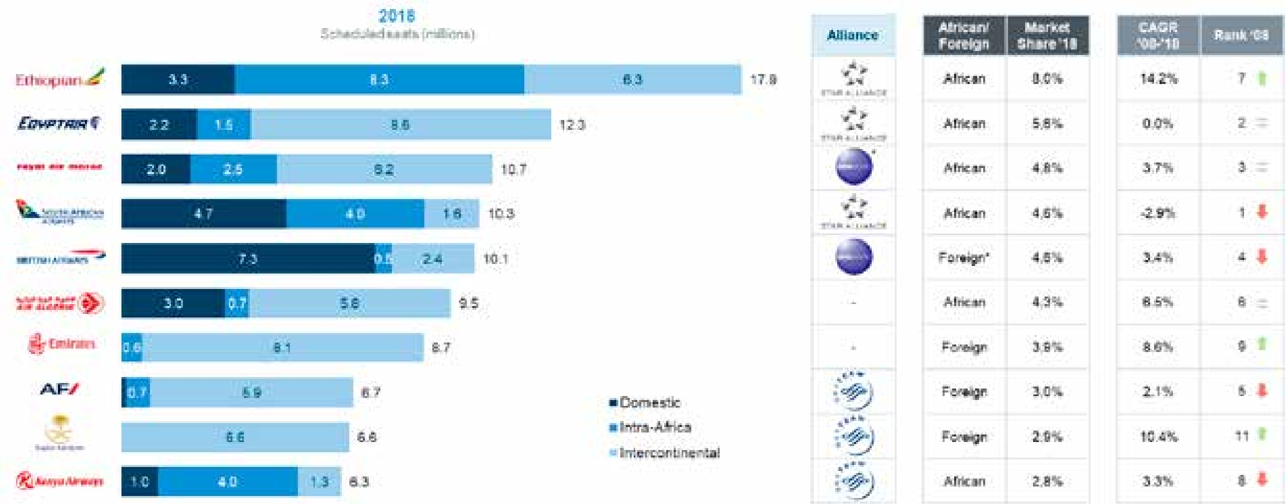


Figure 2: Top 10 airlines operating in Africa by scheduled capacity in 2018 (excluding restricted seats).
Source: OAG – Schedules Analyser
*Note: Royal Air Maroc expected to join Oneworld in 2020
*Note: British Airways' capacity includes Comair's operation, its franchise in South Africa

The top 15 African airlines providing international services within Africa constitute 81.9% of the total market, meaning that the market has become more concentrated compared with the 69.0% in 2008.
The foreign airline with the largest presence in the continent, Emirates, is found in the sixth position, followed by Air France and Saudi Arabian Airlines.
In terms of relationships with other global carriers, as of today, Royal Air Maroc is the largest airline in Africa that is not a member of an alliance, but this may change shortly because the company is expected to become the first African member of Oneworld in mid-2020.
The other African airlines in alliances are South African Airways, Egyptair and Ethiopian (Star Alliance) and Kenya Airways (Skyteam).
In the intercontinental market, Egyptair is the top performer but foreign carriers dominate this segment as they represent 62% of the scheduled capacity, with Emirates, Saudia and Air France as the leaders. In 2018, 30 African airlines operated in the intercontinental market (considering only those carriers with at least a daily flight) with Egyptair, Ethiopian, Royal Air Maroc, Air Algerie, Tunisair and Air Arabia Maroc as the top performers.

The main African carriers are shown in Figure 3:

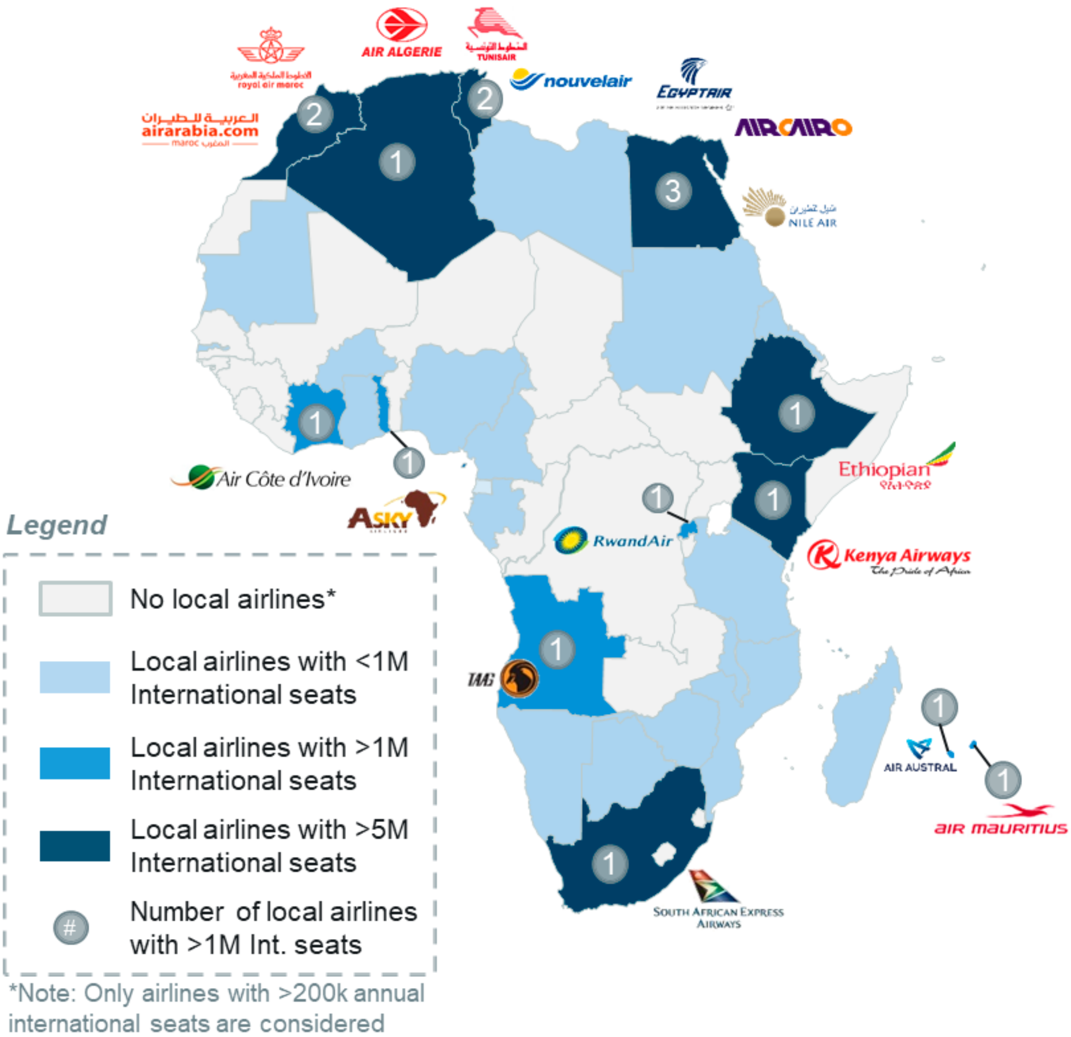


Figure 3: **Local airlines in Africa.** Source: OAG – Schedules Analyser

The current fleet carrying out commercial operations in Africa consists of approximately 1,700 aircraft and there are orders placed for an additional 258 aircraft. Ethiopian Airlines, the newly-created Green Africa Airways and Egyptair are the airlines holding the largest order books with 52, 50 and 34 aircraft, respectively (see Figure 4). The three companies together account for 55% of the total number of aircraft orders.

	Ethiopian		Egyptair		Royal Air Maroc		South African Airways		Air Algérie		Kenya Airways	
	Fleet Feb-19	On order	Fleet Feb-19	On order	Fleet Feb-19	On order	Fleet Feb-19	On order	Fleet Feb-19	On order	Fleet Feb-19	On order
Regional aircraft	19	10	-	-	4	1	-	-	18	-	13	-
A320 family	-	-	3	27	-	-	17	-	-	-	-	-
B737	24	25	29	-	38	-	6	-	32	-	12	-
A330	-	-	8	1	-	-	11	-	8	-	-	-
B767	5	-	-	-	3	-	-	-	-	-	-	-
A350	10	14	-	-	-	-	-	-	-	-	-	-
B777	19	1	8	-	-	-	-	-	-	-	-	-
B787	20	2	-	6	6	3	-	-	-	-	8	-
A340	-	-	-	-	-	-	15	-	-	-	-	-
Total fleet	97	52	48	34	51	4	49	-	58	-	33	-

Figure 4: **Fleet (current and orders) from largest African airlines.** Source: CAPA

2.3 Airports network

The network of African airports also shows an important gap between the different regions, where the busiest airports are concentrated in a limited number of countries. South Africa and Egypt alone have airports with a volume of traffic higher than 10M annual passengers. Airports with traffic volumes higher than 5M annual Pax include Algeria, Tunisia, Kenya, Nigeria, Morocco and Ethiopia, and, together with the previous countries, are the top continental performers.

Apart of the 8 aforementioned countries, only about 15 other countries have airports with an annual traffic above 1M Pax. That means that more than 30 African countries lack an airport with a volume of more than one million annual passengers —which greatly limits African air connectivity as a whole (NB: the one million passenger per annum is normally regarded as the profitability threshold for an airport).

It is also remarkable that, even when a country has an airport with a relevant passenger traffic, having secondary airports is limited to a much-reduced number of States. In most cases, the airport network of a given country consists of the international airport of the capital, and the population are in many cases far away from any airfield (especially due to poor road connections).

Finally, there are circa 15 -20 additional airports (depending on the different data sources) with an annual traffic above 500k passengers, among which the following country gateways stand out: Kigali (Rwanda); Kinshasa (DR Congo); Lomé (Togo); Cotonou (Benin); Brazzaville (Congo Republic); Ouagadougou (Burkina Faso); Libreville (Gabon) & Guinea (Conakry).


3

Liberalization Assessment

3.1 Evolution of air liberalization in Africa

Air transport connectivity in the African continent is significantly lower than in other regions, especially if we take into account the continent's size and population: Africa accounts for 17% of the world's population and 7.2% of the global middle class (Source: Oxford Economics, Airbus GMF), but only captures around 3% of the global air transport market. Some of the multiple factors that can explain this situation are the lack of market openness and the low levels of air transport liberalization, which have always been identified as one of the main barriers with the highest negative impact.

As an answer to this fact, on 17 October 1988, the Ministers in charge of Civil Aviation of 40 African states met in Yamoussoukro and agreed on a new African Air Transport Policy (the Yamoussoukro Declaration), geared towards a comprehensive reform of the air transport industry and the unification of the fragmented African air transport market.

Unfortunately, the declaration has not been enforced, although it has always been an agenda for the African Union (AU). In 2013, the liberalization of air transport, as part of the continent's socio-economic and development agenda, was included in the AU Agenda 2063 as a flagship project leading to the launch of the Single African Air Transport Market (SAATM) in 2018.

The SAATM is aimed at the effective implementation the Yamoussoukro Decision (YD), calling for:

- Full liberalization of intra-African air transport services in terms of market access;
- Free exercise of 1st, 2nd, 3rd, 4th and 5th freedom traffic rights for scheduled and freight air services by eligible airlines;
- Eligibility criteria for African carriers;
- Full liberalization of frequencies, tariffs and capacity;
- Safety and security standards for African carriers;
- Mechanisms for fair competition and dispute settlement and consumer protection.

3.1.1 Snapshot of SAATM adoption and latest developments

Since the African Union officially launched the SAATM on 28 January 2018, 33 African countries have signed the Solemn Commitment to become a member of the SAATM.

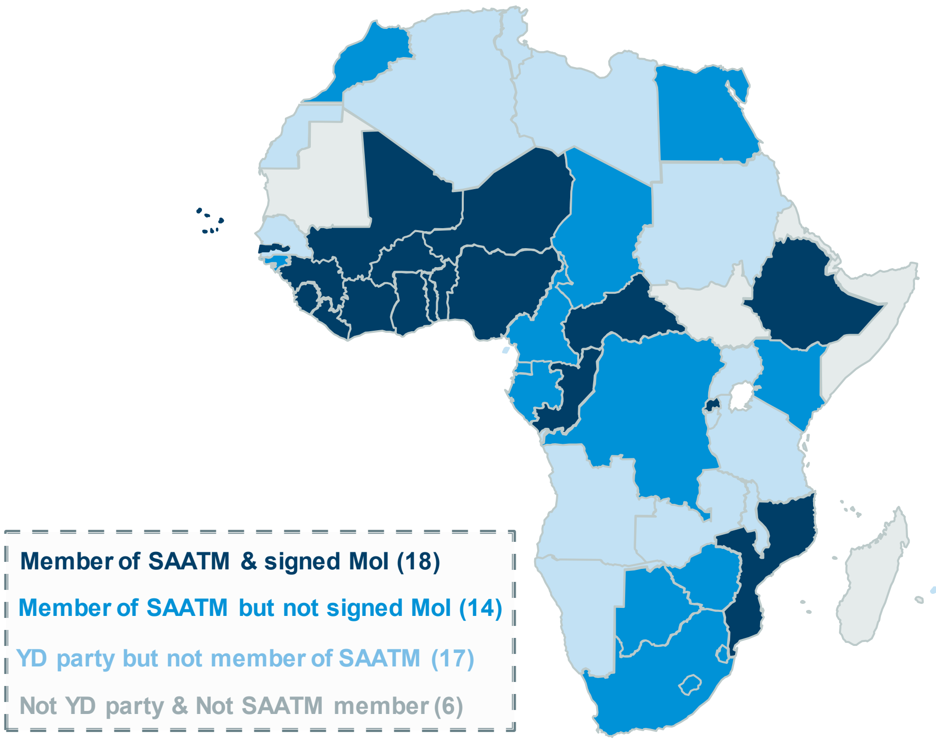


Figure 5: **Snapshot of SAATM current implementation.** Source: AFCAC (November 2019)

The African Union commission acts as the custodian of the Memorandum of Implementation (MoI), and a Ministerial Working Group composed of the Transport Ministers of the member states that have signed their commitment was set up to overview the implementation process. The African Civil Aviation Commission (AFCAC) is empowered as the Executing Agency of the SAATM and responsible for its implementation.

On May 2018, at the 4th Ministerial Working Group meeting held in Lomé, 14 countries signed the Memorandum of Implementation. Subsequently, on a meeting held in Nairobi on December 2018, 2 additional countries (Gambia and Mozambique) signed it.

Because of that process (and as can be appreciated in Figure 5), a total of 18 countries are signatories of the SAATM MoI. A further 14 countries have committed to becoming members of the SAATM, but have not yet signed the MoI.

There are 17 signatories of the YD that have not yet joined the SAATM, and there are still 6 countries that are not part of the YD nor the SAATM. The SAATM is gaining momentum, and countries are joining it regularly (the AFCAC and AFRAA are encouraging reluctant states to join). At this rate, all African countries could be committed to SAATM by 2021 (as targeted by the implementing institutions).

3.2 Traffic rights granting in Africa

Air connectivity in Africa is key to ensuring a proper development of air transport in the region, and liberalization is a catalyst for producing new routes and frequencies, shorter travel times, competition and lower fares. In this regard, YD and SAATM provisions on traffic rights include a full liberalization of 3rd, 4th and 5th freedom rights between member countries including full liberalization of capacity, frequencies and fares.

The analysis of the air transport liberalization has taken into account that the liberalization of market access enables locally based national airlines to operate air services wherever demanded in the African market. Therefore, for practical reasons, the liberalization assessment focuses on the analysis of fifth freedom rights in the different markets.

In that regard, the usage of 5th freedom rights across Africa provides an insight into the real operationalization of SAATM without the necessity of conducting in-depth analyses of Bilateral Air Service Agreements (BASAs). In fact, the characterization of the level of compliance of each country's agreements with SAATM and the level of liberalization can only be achieved after a detailed study of such agreements—and is a task beyond the scope of this report which could be undertaken by the Executing Agency of the SAATM i.e. AFCAC.

3.2.1 Role of liberalization for the African market

Urbanization and intra-Africa trade have been identified as reasons for the growth of air capacity supply between African countries, which has grown CAGR 4.5% over the last decade.

The liberalization plays a key role in this sense because it reduces and/or eliminates unnecessary restrictions, allowing more players in the industry with free access to markets.

a) Intra-Africa market liberalization snapshot

Figure 6 below shows the evolution of the scheduled capacity among the African countries, categorized between unrestricted vs. restricted capacity (restricted capacity corresponds to flight segments operated with traffic rights restrictions, i.e. that seats cannot be commercialized by the airlines; Entebbe-Kigali being the route with the highest amount of restricted capacity). The figure proposed does not include domestic flights.

	CAGR '08-'13	CAGR '13-'18	CAGR '08-'18
Unrestricted	6,8%	2,2%	4,5%
Restricted	3,7%	-0,5%	1,6%
Total	**6,5%**	**2%**	**4,2%**

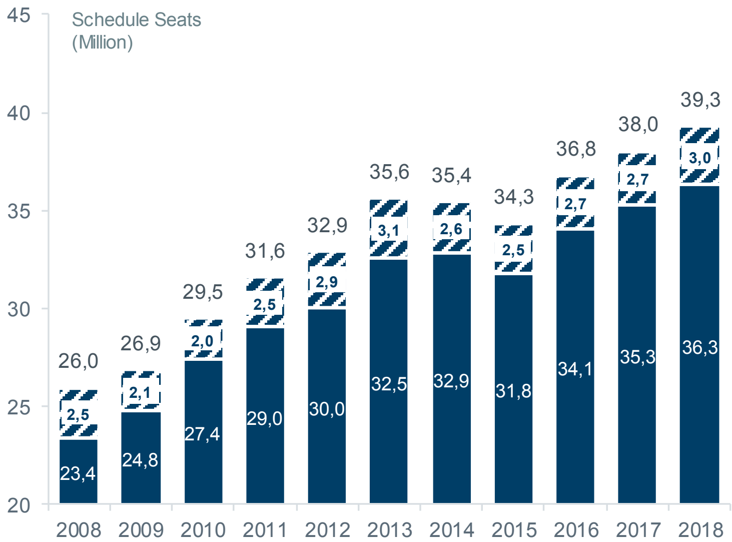


Figure 6: Evolution of the intra-Africa scheduled capacity. Source: OAG – Schedules Analyser

The overall evolution of the African market throughout the decade has increased smoothly, with a higher growth rate in the first half of the decade (CAGR of 6.5% during 2008-2013) and a more prudent growth in the last three years after the stagnation of 2013-2014 and the negative growth of 2015.

Focusing on the restricted routes, these routes have always been present over the last decade, recording a slight reduction in the last five years (CAGR of -0.5% 2013-2018).

The presence of restricted routes is directly linked to the air freedom restrictions still in force in several of the Bilateral Agreements.

Currently, it is appreciated that 50% of the restricted capacity supply is concentrated in six segments, with all these restrictions being applied to non-African airlines. The top two restricted segments in terms of capacity supply are shown below in Figure 7:

Restricted segment	Operating Airlines	Flight Routing
Entebbe - Kigali	Turkish Airlines	Istanbul - Entebbe - Kigali - Istabul
	Qatar	Doha - Entebbe - Kigali - Doha
	Brussels Airlines	Brussels - Entebbe - Kigali - Brussels
	KLM	Amsterdam - Entebbe - Kigali - Amsterdam
Abidjan - Bamako	Air France	Paris - Bamako - Abjdian
	Corsair	Orly - Bamako -Abjdian - Orly

Figure 7: Top two restricted segments in terms of capacity supply in 2018.
Source: OAG – Schedules Analyser

The restricted segments shown above these lines are part of the 3M scheduled seats without traffic rights granted in 2018 and which are displayed in Figure 8. Such figure splits the evolution of the intra-Africa capacity depending on the air freedom rights needed to supply such seats:

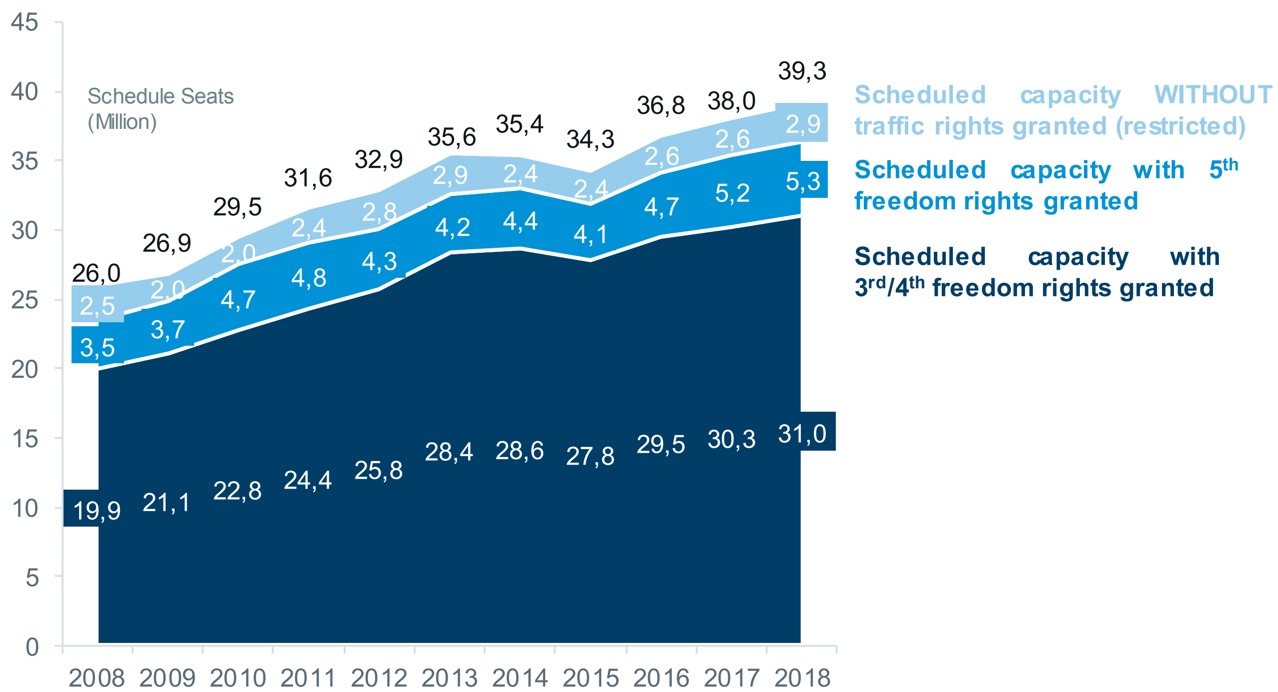


Figure 8: Intra-Africa scheduled capacity evolution by air freedom rights. Source: OAG – Schedules Analyser

- Of the 39.3M direct intra-Africa seats scheduled in 2018, about 31M were supplied using third/fourth freedom rights, meaning that the country of departure/origin was the home country of the operating airline.
- 5.3M of the scheduled seats were supplied using fifth freedoms rights (in flights for which such freedom was granted), meaning the airlines were able to commercialize tickets to fly in all the segments.
- The remaining scheduled seats were supplied by airlines that needed fifth freedom rights to operate on these specific routes but those rights were not granted. Thus, airlines were not able to commercialize flight tickets to fly on those specific segments.

Ultimately, it can be appreciated that most of the intra-Africa scheduled capacity, 79%, is supplied by using third/ fourth freedom traffic rights.

The high number of flights with stopovers is typical of certain regions such as ECOWAS—where the scheduled capacity with fifth freedom rights granted represents around 44% of the total intra-ECOWAS scheduled capacity—but does not gain that relevance in the overall intra-Africa capacity. The scheduled capacity with fifth freedom rights accounts for about 13% of the total intra-Africa capacity.

b) Intercontinental market liberalization snapshot

The intercontinental market is key to the opening of Africa to wealthier regions around the world, allowing intercontinental tourists and visitors to reach the continent easily.

In order to develop intercontinental businesses and to attract multinational companies, it is very important to offer proper connection to the countries of origin of such companies.

The increase and consolidation of the tourism industry itself is directly linked to air transport. That is why having a developed intercontinental network should drive the arrivals of intercontinental tourists to Africa.

Figure 9 shows the evolution of the Intercontinental scheduled capacity with the split of unrestricted vs. restricted capacity (restricted capacity are the flight segments operated with traffic right restrictions that cannot be commercialized by airlines, which are negligible in the intercontinental market).

Figure 9: Intercontinental scheduled capacity evolution
Source: OAG – Schedules Analyser

The overall evolution of the Intercontinental market throughout the decade is slightly higher than the intra-Africa market (CAGR 5.3% for the Intercontinental unrestricted market vs. CAGR 4.5% in the case of African market).
The Intercontinental market has not been affected by the low recession in 2015, but has passed through two periods of stagnation in 2011-2012 and 2015-2016. The highest growth rate was registered in 2009-2010, led by the increase in seat supply reported by Royal Air Maroc (27%).
In the same year, Ryanair almost doubled the capacity supply to the African continent (95%), taking advantage of the EU-Morocco Open Skies agreement recently signed.
If compared to the intra-Africa market, it is highly remarkable that the intercontinental market capacity has a volume that is more than 3 times bigger than the African market. This fact is actually a dysfunction of the market, because neighbour regions normally represent higher volumes of traffic while capacity to further countries is normally more limited. Some other regions show a similar trend (particularly those with low disposable income and large diaspora, i.e. Commonwealth of Independent States (CIS) countries).
Finally, it has also to be pointed out that the share of restricted flights caused by the lack of air traffic rights is negligible in the Intercontinental market, as there is no economic sense in operating flight in this market without the ability to commercialize the capacity supplied.

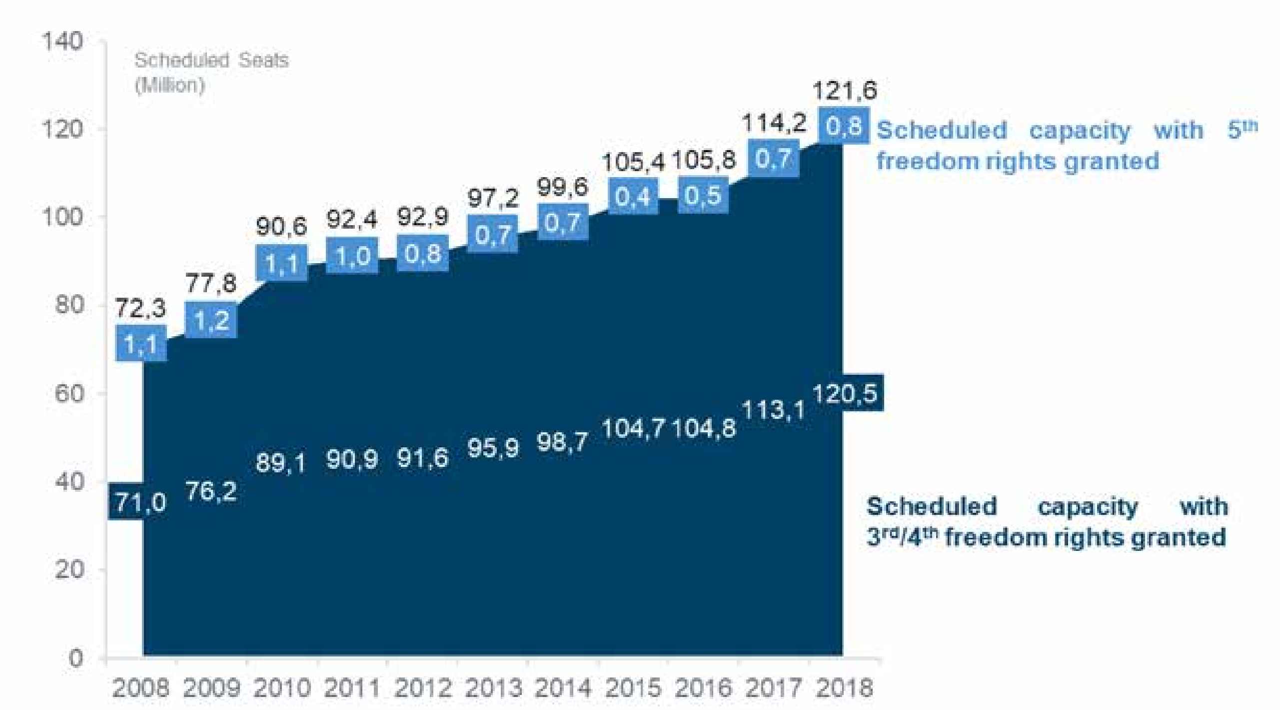


Figure 11: **Evolution of the scheduled capacity in the intercontinental market by air traffic rights.**
Source: OAG – Schedules Analyser

Figure 11 shows that most of the scheduled capacity in the intercontinental market is supplied by using third or fourth air freedom rights.
With respect to the intercontinental air traffic rights, there is no need to agree on the granting of fifth freedom rights. What's important is to have bilateral agreements with the relevant countries granting the access to foreign companies. The feasibility of the different routes will be mainly driven by passenger demand and route economics.

3.2.2 Evolution of fifth freedom routes

While the significance of fifth freedom traffic rights is diminishing in mature markets, the fifth freedom route model became a keystone of the development of services by consolidated African airlines and the cornerstone strategy of some newcomers.

a) Intra-Africa market evolution of fifth freedom

The evolution of the routes operated with fifth freedom is shown in Figure 12. The snapshot taken at different years during the last decade allows appreciation of how the operation with fifth freedom rights is characteristic of Sub-Saharan Africa.

Figure 12: **Evolution of fifth freedom routes operated over the last decade (2008-2018).**
Source: OAG – Schedules Analyser

In 2008, fifth freedom routes concentrated almost entirely in the West and Central Africa region and then they gradually extended and consolidated towards the South and East region.

Although the number of routes operated with fifth freedom increased over the last decade (21% increase of routes operated with fifth freedom from 2008 to 2018), the preeminent role of the ECOWAS region in terms of number of routes operated with fifth freedom was maintained.

Fifth freedom rights granted to airlines as part of the ECOWAS Treaty (a multilateral agreement signed by the member states that made up the Economic Community of West African States in 1975 in Nigeria), helps in justifying the historically higher concentration of triangular and multi-stop flights operated in Western Africa compared to the rest of flights operated in the continent.

This treaty (signed before YD and SAATM) encourages co-operation in flight scheduling, leasing of aircraft and granting the use of fifth freedom rights to airlines of the region. Moreover, it promotes the development of regional air transportation services and endeavour to bring about the merger of national airlines in order to promote their efficiency and profitability.

In 2018, 59 Intra-African routes and 4 Intercontinental routes were operated by using fifth freedom rights (including routes with more than 2 weekly frequencies).

	Central	East	North	South	West
Central	8	2	-	1	7
East	2	5	-	-	-
North	-	-	-	-	-
South	1	-	-	9	-
West	7	-	-	-	27
Total	**18**	**7**	**-**	**10**	**34**

Figure 13: **Region-pairs served by fifth freedom routes (routes between different regions are counted twice).** Source: OAG – Schedules Analyser

As displayed in Figure 13, the Intra-Western market concentrated most of the routes (27), followed by the intra-South (9), the intra-Central (8) and the West-Central (7) markets.

The table shows the regions served under fifth freedom and also highlights another interesting trend: that the majority of routes operated under 5th freedom cover intra-regional segments.

Regional routes with 5th freedom boost airlines growth fit well into the business model of small national airlines, allowing them to offer services in routes that would otherwise not be profitable (given their small domestic markets, unable to support only OD services). Rwandair or ASKY are examples of regional airlines making a wide use of fifth freedom rights along their networks. The Togolese carrier, with a fleet of nine aircraft, achieved the highest connectivity within the ECOWAS region relying on the widely use of fifth freedom rights. Meanwhile, carriers like Air Cote d'Ivoire and Air Senegal can also rely partially on their home markets.

The freedoms needed to supply capacity have been here analysed at a regional level, the results are shown in Figure 14:

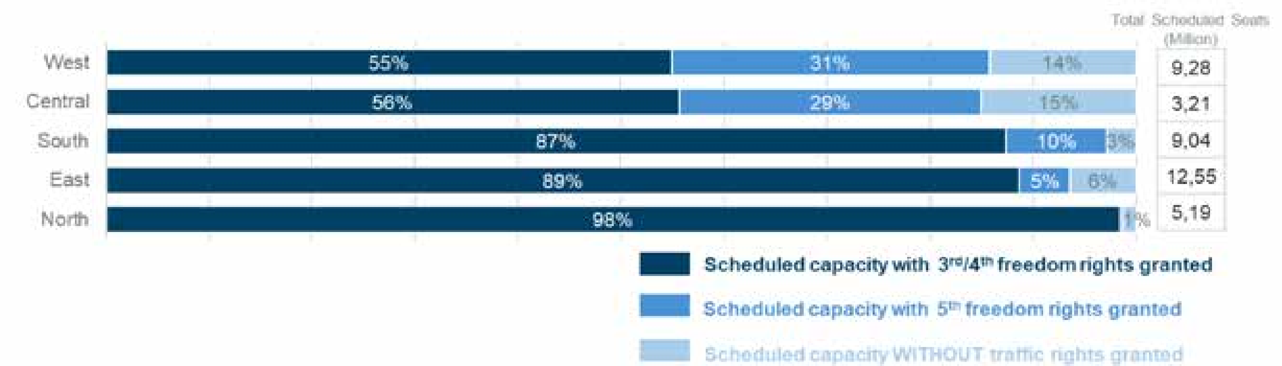


Figure 14: **Scheduled capacity by type of freedom needed in 2018.** Source: OAG – Schedules Analyser

Despite regional market size disparities, trend similarities can be outlined from the analysis of the results:

- Almost one third of the capacity supply in West Africa and Central Africa is under fifth freedom rights.
- In the case of Central Africa, this is mainly due to the lack of national carriers and to the low volume of traffic. At present, the capacity supply provided by the Central region is the smallest among the African region and the main airlines offering fifth freedom flights in the region are ASKY, Ethiopian and Rwandair (carriers that are not based in the region).

- The case of West Africa is different. As mentioned above, the ECOWAS Treaty, together with the affirmation of some local carriers' strategy (ASKY hub and spoke operation) justify the percentage of fifth freedom routes. 18 out of the 19 routes that are currently operated by ASKY are multi-stop and request fifth freedom. Another historical route operated with fifth freedom rights is the Abidjan-Accra route operated by Emirates before the beginning of Air Cote d´Ivoire operation.
- North Africa, South Africa and East Africa regions, due to the existence of consolidated local airlines and the presence of the main African hubs, show a completely different trend characterized by more than 80% of capacity supply offered using third/fourth freedom rights.

The analysis of the North Africa market composition reveals that the capacity supplied with fifth freedom traffic rights granted is almost negligible.

In the South and East region, the percentage of flights offered using fifth freedom ranges from 5%-10% of the total capacity. Most of these routes were launched recently, mainly thanks to a more liberal approach promoted by the countries of this region together with the consolidation of Rwandair, Kenya Airways and Ethiopian Airlines.

Case Study: Rwandair widens the network in South Africa thanks to fifth freedom rights (New Kigali-Harare-Cape Town flights)

Rwandair starts a direct route from Harare to Cape Town

- In December 2017 Rwandair published that the Aviation Authorities of Zimbawe and South Africa granted fifth freedom rights to the airline to fly between Harare and South Africa.
- In March 2018 Rwandair started operating the direct flight HRE-CPT, the capacity supply offered in 2018 was 17,9 K seats.
- The direct flight CPT-HRE allows to achieve a travel time reduction of about 2 hours and 20 minutes.

The segment HRE-CPT is an example of a route recently started and exploited using fifth freedom. Until March 2018 a direct route connecting HRE-CPT did not exist and the passengers had to connect in Johannesburg or Windhoek. Thanks to fifth freedom rights, RwandAir became the first airline to fly direct from Harare to Cape Town in South Africa with four weekly flights. In fact RwandAir has been granted recently fifth freedom rights for flights between Harare and South Africa by the aviation authorities in Zimbabwe, giving the airline a boost for future route developments. South Africa's civil aviation authorities, which have in the past been notoriously slow granting foreign airlines fifth freedom rights, as approved on their part.

b) Intercontinental market evolution of fifth freedom

Fifth freedom traffic rights are not widely used for the Intercontinental routes. As previously mentioned, for the intercontinental market, it is important to have bilateral agreements with the relevant countries and grant the access to foreign companies rather than granting fifth freedom rights.

Therefore, flights with stopover requiring fifth freedom air traffic rights are exceptional. In 2018, fifth freedom intercontinental flights were mainly concentrated in the following five routes (see Figure 15):

5th freedom segment	Operating Airlines	International Flight Routing
ABJ-EWR	Ethiopian	Addis-Abidjan-New York
LFW-EWR		Addis-Lomé-New York
DSS-IAD	South African Airways	Johannesbourg-Dakar-Washington
ACC-IAD		Johannesbourg-Accra-Washington
MBA-DXB	RwandAir	Kigali-Mombasa-Dubai

Figure 15: **Fifth freedom intercontinental routes in 2018.** Source: OAG – Schedules Analyser

Among the Intercontinental fifth freedom routes, it is worth highlighting the ADD-LFW/ABJ-EWR and JNB-DSS/ACC-IAD, connecting the ECOWAS region with North America.

Finally, in December 2018, Ethiopian launched a new route to North America, ADD-LFW-LAX, with the Lomé - Los Angeles segment operated under fifth freedom.

3.2.3 Impact of liberalization on routes and competition

An important indicator to be analysed in order to measure the level of development of air transport in a region is the evolution of the number of routes operated and the level of competition in these routes.

Figure 16 below shows the evolution of the number of intra-Africa routes, classified according to the number of airlines competing in each route.

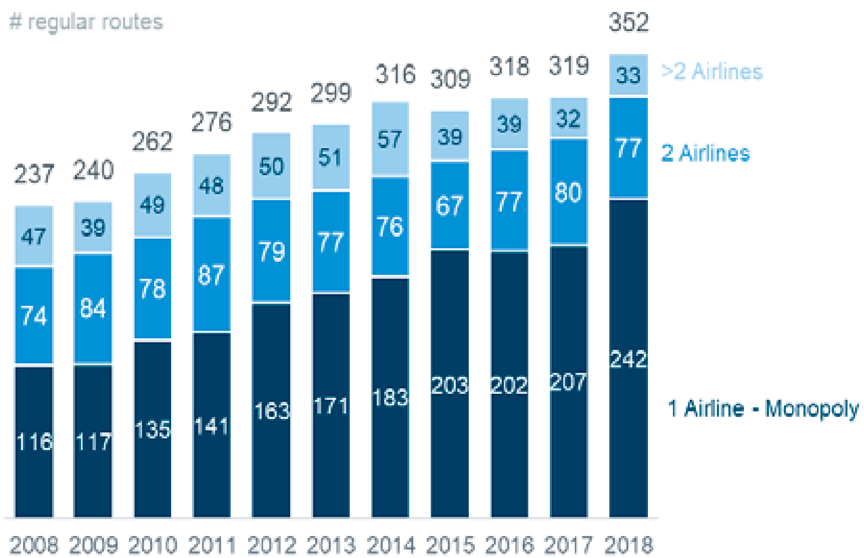


Figure 16: **Evolution of intra-Africa routes by number of competitors.** Source: OAG – Schedules Analyser

In 2018, around 69% of the routes were operated under monopolies, and less than 10% of the routes had three or more airlines competing. The number of routes under monopolies increased over the last decades (8%) and, since 2015, represents more than 60% of the intra-Africa routes.

The level of competition is even lower when the flights operated by using fifth freedom rights are not taken into consideration (see Figure 17). In 2018, the number of routes operated by more than two airlines accounted for less than 3% of the total number of routes operated under third/fourth freedom.

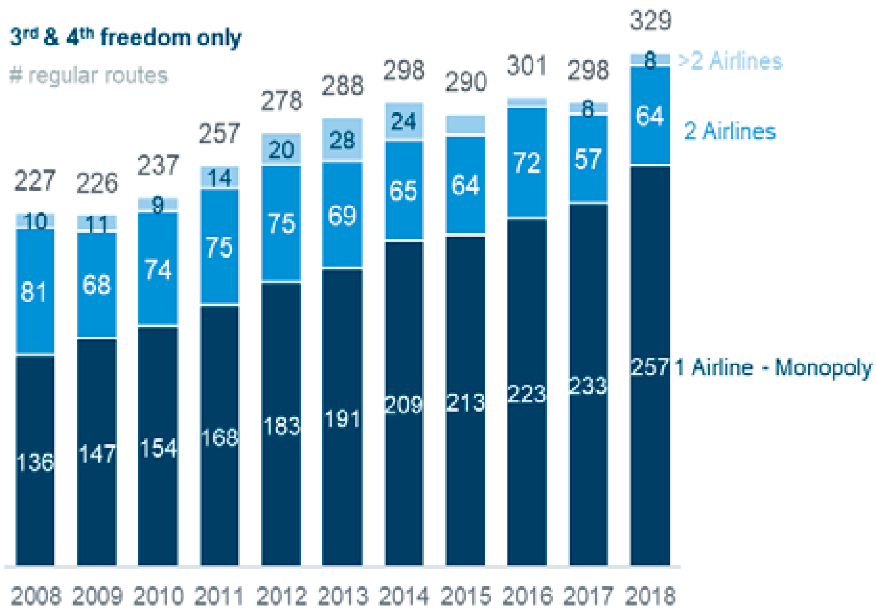


Figure 17: **Evolution of intra-Africa routes by number of competitors.** Source: OAG – Schedules Analyser

The decreasing level of competition over the last decade can be attributed to several factors including the financial instability, which mainly affected the smallest African carriers, can partially justify the reduction of competition.

As a matter of fact, in the ECOWAS region the level of competition was higher in the 2008-2011 period due to the coexistence of Air Mali, Air Nigeria and Senegal Airlines with other smaller local carriers. After the collapse of such airlines, the competition was reduced drastically.

At the same time, the big players of the African Market consolidated their position over the last decade, thus increasing their network and opening new routes often operated with the totality of market share.

In the last decade, Ethiopian Airlines significantly increased the number of routes operated with monopoly (i.e. with no competitor), from 18 routes in 2008 to 43 routes in 2018. Other carriers operating an increasing number of routes under monopoly are Royal Air Maroc, Kenya Airways and South African Airways, which in average doubled the number of routes operated under monopoly between 2008 and 2018.

Focusing on the level competition on fifth freedom routes, Figure 18 lists the top fifteen routes in terms of capacity supply. The table proposed below shows what carriers are currently exploiting each route, differentiating between the airlines operating under fifth freedom and the airlines operating with third/fourth freedom.

Figure 18: Top fifteen intra-Africa fifth freedom routes and competition. Source: OAG – Schedules Analyser

At a first sight, it can be seen that fifth freedom stimulates the competition, avoiding in many cases the monopoly in a route (i.e. ABJ-ACC, BKO-DSS, CKY-DSS, BJM-KGL, ACC-FNA, ABJ-CKY).

Fifth freedom routes also allow operating segments that would otherwise not be served, such as COO-LBV, FNA-ROB, EBB-JUB, JIB-MGQ.

The analysis of the global impact of the opening to 5th freedom operations has revealed that:

- Fifth freedom rights grant multi-stop flights profitability by adding the flows of passengers that are not embarking or disembarking in the airline home base.
- Services conducted on a fifth freedom basis can be used to stimulate the market, which could ultimately lead to the introduction of air services on a third/fourth freedom basis.
- Fifth freedom rights are very important for airlines to serve countries with low population/propensity to fly: it allows the operation of routes that are not yet served by any airline, creating new routes and allowing the passengers to fly directly between those airports without the inconveniences of taking connecting flights.
- As an example, the route Conakry-Bamako, is operated six times weekly by ASKY as part of the Lomé-Conakry-Bamako flight, allowing passengers to travel directly between both cities in just 1h 30min. thanks to the fifth freedom rights granted to the airline. The alternatives to fly this route imply taking connecting flights via Casablanca, meaning journeys of over 20 hours and return ticket prices in excess of USD 1,200 (twice the price of the direct flight with ASKY).
- In routes that already exist, fifth freedom increases the number of frequencies operated, giving travellers more possibilities to choose the day and time more convenient to fly.
- The increase in competition and the consequent reduction of airfares benefit travellers and stimulate demand.

3.2.4 Airlines granted with fifth freedom

In order to understand the operation based on fifth freedom rights and its impact on the market, it is interesting to analyse which airlines adopt this model.
Figure 19 below shows the evolution of scheduled seats in the intra-Africa market, categorised by the home region of the airlines supplying such capacity and the capacity that is restricted (not possible to be commercialized by airlines) due to air freedom rights are neglected.

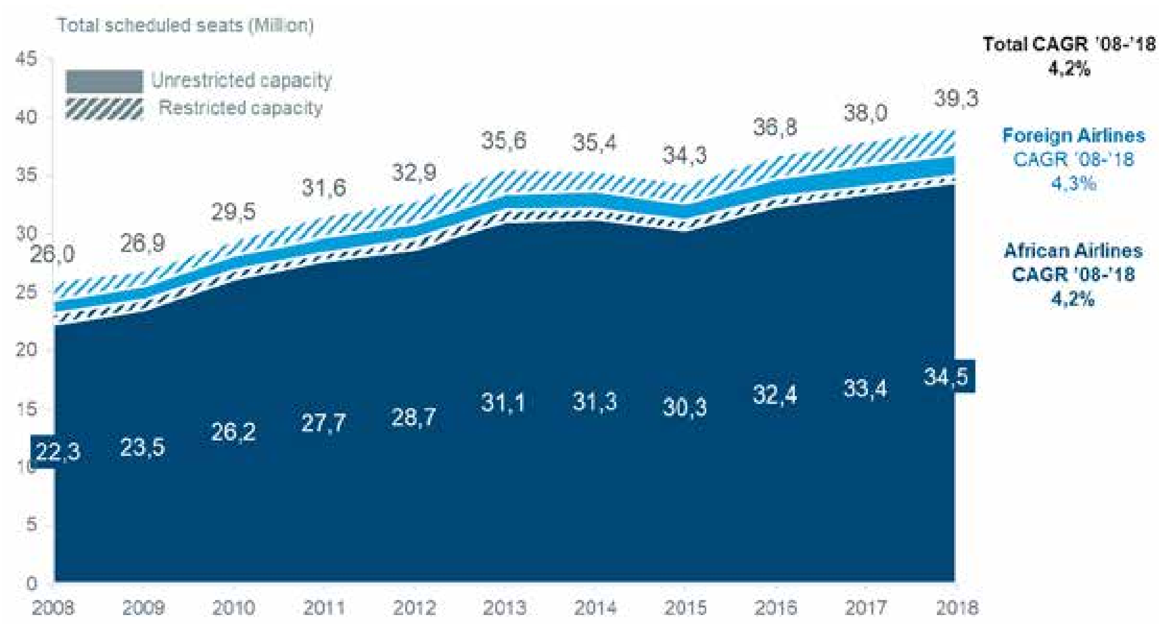


Figure 19: **Evolution of intra-Africa capacity supply by airline origin.** Source: OAG – Schedules Analyser

It is remarkable that the African market is largely served by African airlines and their portion of restricted flights is very reduced. It currently represents only 2% of the total capacity supplied by African airlines (striped dark blue area). This is aligned with the YD decision and with the objectives pursued by the SAATM project.
If the growth in scheduled capacity for both African and foreign airlines is almost comparable (CAGR 4.3% African airlines vs. CAGR 4.2% intercontinental), it is not negligible that 59% of the capacity provided by intercontinental airlines is without traffic rights granted (striped light blue area).
The reason of the restriction is that normally African carriers already operate the segments and so the African countries tend to protect the national airlines from intercontinental carrier competition.
This is for example the case of the segment EBB-KGL; this route prohibits KLM, Qatar, Brussels Airlines and Turkish Airlines but it is operated by the local airline Rwandair using 3rd and 4th freedom rights.
Obviously, the fact that the route is operated under monopoly can produce a detrimental effect on the price of the ticket.
Figure 20 illustrates the market share by the main airlines in 2018 in terms of scheduled capacity with fifth freedom rights (only the unrestricted scheduled capacity is taken into consideration).

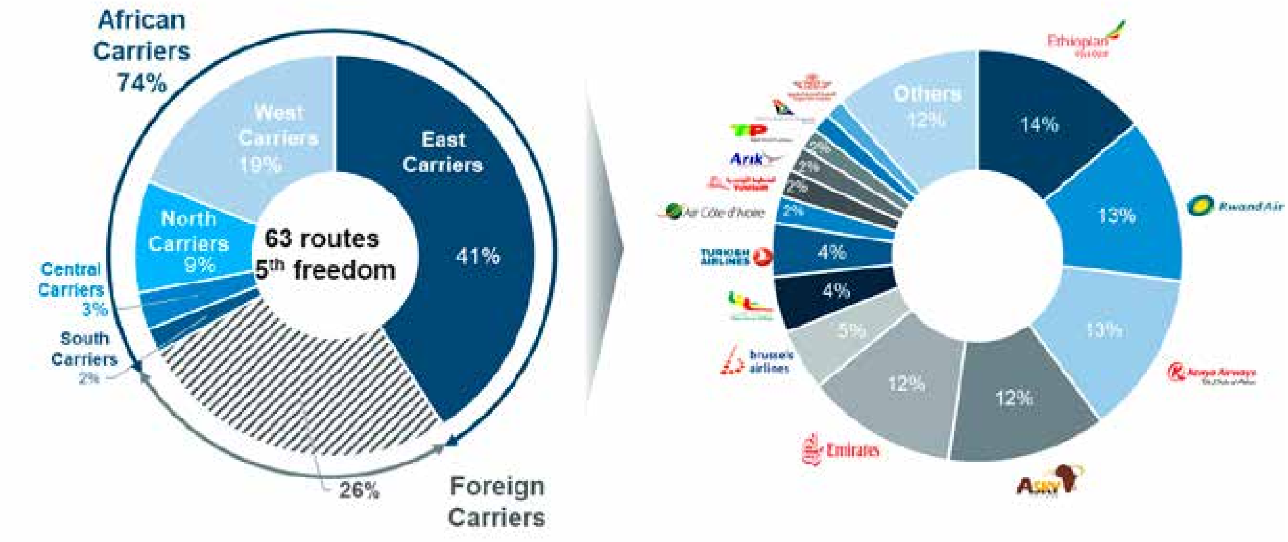


Figure 20: **Fifth freedom intra-Africa capacity supply by airline origin.** Source: OAG – Schedules Analyser

As it is shown in the chart, the main airlines operating fifth freedom routes in the intra-Africa market are Ethiopian, Rwandair and Kenya airways, which represent almost the total capacity supply offered with fifth freedom rights by the East Africa carriers (41% of the total market).

While for Ethiopian and Kenya airlines the capacity supplied with fifth freedom rights represents less than 20% over the total capacity supplied in 2018 (9% for Ethiopian and 17% for Kenya airways), for Rwandair the percentage of seats with fifth freedom is significantly higher (approx. 37%).

This percentage is even higher in the case of ASKY, the first West Africa carrier to appear in the market share of intra-Africa seats supplied with fifth freedom: 52% of seats supply provided by ASKY in 2018 are in routes operated with fifth freedom.

In fact, since the ASKY operation started in 2012, the airline clearly showed a strategy based on a hub and spoke operation concentrated in a single wave per day at Lomé and multi-stops flights operated with fifth freedom rights needed.

Rwandair and ASKY are examples of carriers with a small fleet based in countries with negligible domestic traffic. It clearly appears that the use of fifth freedom is key to their development.

Among the foreign carriers, only Emirates and Brussels airlines have relevant presence, which represent 5% and 12% respectively of the scheduled capacity.

Moreover, the capacity supply offered by Emirates is concentrated in three routes: ABJ-ACC, HRE-LUN, CKY-DSS, the segment ABJ-ACC is considered an «exception» of route operated by a non-African airline using fifth freedom rights within the ECOWAS region. These rights were given to Emirates because at the time that the airline started operating the segment, there was no African carrier exploiting the route.

The rest of the market is very fragmented, a total of 15 airlines have to be added in order to reach the remaining 31% of the market share.

3.3 The application of open skies: Air Liberalization benchmarking

A benchmarking of liberalization processes held globally is presented here with the objective of extracting the most relevant lessons learnt from each case as well as to show the impacts that such initiatives have had in other regions.

The proposed case studies are the liberalization of the EU with its Single Aviation Market, the Morocco-EU Open Skies agreement, the ASEAN Single Aviation Market (SAM) and the Fortaleza Agreement in the MERCOSUR region.

3.3.1 Liberalization agreements: Implementation process

a) EU Single Aviation Market

The EU community gradually liberalized the air transport market through a process that lasted more than ten years and brought to the implementation of three legislative packages as proposed in Figure 21:

Figure 21: EU Single Aviation Market timeline. Source: European Commission

Prior to the progressive implementation of the three liberalization packages, in 1983 the EU had approved directive 83/416/CEE, opening access to the sub-regional market (flights between secondary airports and operated by small aircraft).
Subsequently, the EU institutions approved a series of regulations that were progressively revoked by new sets of regulations that expanded the scope of the liberalization process. More than 10 different regulations or directives were approved during the whole process covering the fields of competition, capacity limitations, fare setting and the issuance of operator certificates to European carriers.
The full implementation of the third package created the favourable regulatory conditions for the rise of flag carriers operating hub-and-spoke networks focused on their national airports. In fact, the third package granted unlimited 3rd, 4th, 5th, 6th and 7th freedom rights and, from 1997, also 8th and 9th (cabotage) freedoms.
This alleviation of commercial restrictions also gave the chance to new carriers to break the monopoly of the flag carriers and low-cost carriers started to take off. The low-cost carriers started to gain market share quickly at of the end of the 1990s as they took advantage of the opportunity to establish an ever-increasing number of crew and aircraft bases all over Europe, whereas the flag carriers remained designated to their national home.
Air liberalization has been key for the development of Low Cost Carriers (LCCs)s in the EU as their business model is essentially different from that of the full-service network carriers. Sufficient route density is not created through complex hub-and-spoke operations (meaning they use 3rd and 4th freedom rights) but by serving an extended catchment area by establishing different bases around the continent (so using also 7th and 9th freedom rights).

b) Morocco-EU Open Skies agreement

The Morocco-EU Open Skies agreement was signed in 2006, allowing unrestricted 3rd and 4th freedom rights between the EU (considered as a unique single market) and Morocco. As outlined in the agreement, EU and Moroccan carriers are allowed to operate any number or routes without any price or capacity restrictions.
The differentiating restrictions that still exist involve the cabin crew requirements, the access to European airports slots and the airport charging systems to European and Moroccan carriers.
Although Royal Air Maroc still dominates the EU-Morocco market, the Open Skies agreement considerably tightened competition: 13 European carriers, including low-cost airlines Ryanair and EasyJet, have currently daily

services to the Moroccan market. The agreement also triggered the establishment in 2009 of the low-cost airline Air Arabia in Morocco, which is mainly focused in the Morocco-EU market. In fact, in 2018, Low Cost Carriers supplied more than 50% of the capacity scheduled in the EU-Morocco market.

c) Association of Southeast Asian Nations (ASEAN) Single Aviation Market

ASEAN Single Aviation Market is geared towards the development of a unified and single aviation market among ASEAN members in Southeast Asia.
In the first phase (2009), restrictions on 3rd and 4th freedoms of the air between capitals of member states were removed and by 2010, this liberalization was extended to secondary cities.
In a second phase (2011), the full liberalization of 5th freedom traffic rights between all capital cities took effect. The plan was for all ASEAN carriers to enjoy unlimited 3rd, 4th and 5th freedom operations within the region. However, three ASEAN members (Philippines, Indonesia and Laos) were reluctant to ratify the full agreement.
At present, Indonesia remains opposed to opening up its secondary cities, and the Philippines has excluded Manila from the agreement, while Laos has yet to free up Luang Prabang and the national capital Vientiane.

d) Fortaleza Agreement (MERCOSUR)

The sub-regional Air Services Agreement (commonly known as Fortaleza Agreement) aims to enable new sub-regional regular air services in routes different from those effectively operated under Bilateral Agreements, with the objective of promoting and developing new market-pairs.
Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay are founding parties to this agreement. In 2000, Peru also joined MERCOSUR and the agreement is open for accession by other states of South America.

3.3.2 Liberalization agreements: Scope and market openness level

Every multilateral liberalization agreement reaches a different level of market openness, depending on the willingness of its signatories to go further on the liberalizations process. Figure 22 compares the most relevant market access elements that characterize the multilateral agreements:

	Designation	Capacity	Tariff	Freedoms of the air	Ownership	Implementation approach
EU Single Aviation Market	Multiple designation	Free determination	Free pricing	Full cabotage	Community of interests	Phased
Morocco-EU Open Skies	Multiple designation	Free determination	Free pricing	3rd and 4th freedom rights	Substantial ownership and effective control for Moroccan Airlines / community of interest extended to European Economic Area States	One-shot
Fortaleza Agreement (MERCOSUR)	Multiple designation	Predetermination	Economy of origin	3rd and 4th freedom rights	Not specified	One-shot
ASEAN Single Aviation Market	Multiple designation	Free determination	Free determination	Unlimited 3rd, 4th, and 5th freedom rights (restricted 5th freedom rights applied)	Ownership majority through ASEAN investor, may be split across countries	Phased
Yamoussoukro Decision	Multiple designation	Free determination	Free pricing	3rd, 4th and 5th freedom rights	Community of interest	One-shot

Figure 22: **Market access features of the plurilateral ASAs.** Source: Multilateral Agreements

The information contained in Figure 22 allows determining a synthetic measure of the openness of a given multilateral agreement. This measure was developed by the World Trade Organization and is called ALI (Air Liberalization Index). It has been constructed by attributing weights to the different variants of the key market access features of the agreements (e.g. granting of freedoms of the air, capacity restrictions, etc.). It is worth mentioning that the ALI measure the theoretical liberalization level of a given agreement but does not measure its actual implementation.
The value of the ALI ranges between zero, for very restrictive ASAs, and fifty, for very open ones. Figure 23 shows the ALI calculated for the multilateral ASAs, analysed together with the ALI for the Yamoussoukro Decision / SAATM.
Among the multilateral agreements taken into consideration, the EU Single Aviation Market leads the ranking with an ALI of 43, followed by YD/SAATM (34), EU-Morocco (26), ASEAN SAM (30) and Fortaleza Agreement (21).

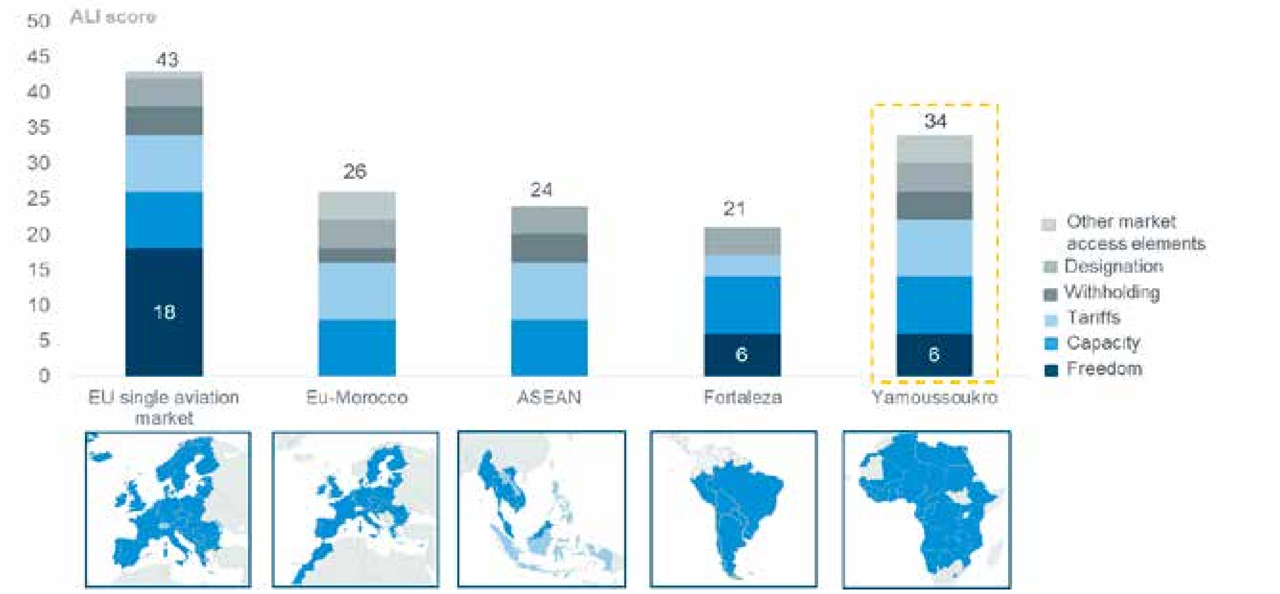


Figure 23: **ALI composition of the multilateral ASAs.** Source: Multilateral Agreements, WTO

The following aspects can be highlighted from the analysis of Figure 23:

- While 5th freedom traffic rights are granted in all multilateral agreements—with the exception the EU-Morocco agreement—only the EU Single Aviation Market agreement removes all the restrictions on domestic and international routes rights, thus obtaining an ALI significantly above the average. This is the key element of the European liberalization process, which—together with no restrictions in the number of designated airlines, capacity and frequencies—lays the foundations for the free market competition.
- All the multilateral agreements analysed contain a multi-designation clause for airlines, thus encouraging the presence of several players in the market. The restrictions, where applied, concern the withholding and ownership clauses. Actually, the withholding condition within the same agreement can differ from one country to the other, as is the case of the EU-Morocco agreement.
- In many cases, a more restrictive withholding condition is explained by the presence of national airlines majority government owned.
- The dominant clause in all multilateral ASAs is the determination of free pricing and capacity (apart from Fortaleza Agreement). Under this method, rates are not subject to approval by any party, and the designated companies are free to decide the frequencies and capacity without regulatory intervention. Some agreements

may allow parties to require tariff notification, but only for information purposes and without penalizing a fair competition.

- The «other market access elements» refers to cooperative arrangements, if any, and the obligation to share statistics. The cooperative arrangements feature is contained in the Yamoussoukro Decision and in the EU-Morocco agreement, while the exchange of statistics is mentioned in the European Union agreement.

To sum up, regardless of the differences in market size, the multilateral agreements (apart from Fortaleza) appear to be quite homogeneous and highly liberal, especially when compared to bilateral agreements.
It is also remarkable the YD/SAATM positioning in the ranking of the ALI as it results to be the second most liberal among the agreements analysed. It differs from European liberalization agreement only in the air freedoms granting (YD/SAATM grants up to 5th freedom while EU Single Aviation Market includes full cabotage, meaning it grants complete access to the nine freedoms of the air).

3.3.3 Liberalization agreements: Status, impacts and benefits

Because of its implementation, each liberalization process produced measurable impacts and benefits in the respective market. Different studies that measured the benefits to the liberalization agreements are summarized below:

- The European Single Aviation Market approach (1970 – late 90s') was gradual in its establishment, allowing the different countries time to put in place mechanisms that ensure the members to attain benefit from the agreement:
  - The generation of an incremental 44M passengers was recorded, with an increase in post-liberalization years of about 33% as contrasted with pre-liberalization growth of about 4%-6% per year.
  - The creation of 1.4M full-time jobs resulted from the liberalization and the European GDP grew by USD 85 billion.
- Once the Morocco-EU Open Skies (2006) agreement was signed, traffic increased significantly:
  - Between 2005 and 2009, traffic grew by 18% per year generating in 2009 around €1,000 M worth of impact on Moroccan GDP and promoting the creation of 24,000 direct, indirect and induced jobs.
  - In terms of fare reduction, the impact estimated brought an annual decrease in fare of 7%.

The liberalisation of the air transport industry has also had a great impact on income from tourism. The World Travel and Tourism Council reports that foreign visitor arrivals increased at a steady pace since 2006, with an expected growth of 6% per annum until 2020.

- Even if the liberalization has not reached the same extent as embraced in other global regions (as for example intra-European Union) the ASEAN Single Aviation Market (2009-2011) has brought several benefits:
  - The growth in origin-destination (OD) passengers increased by 116% between 2005 and 2012 and the total annual scheduled capacity CAGR growth increased from 8% to 13% after the ASEAN signature.
  - Low cost carriers led much of that growth: between 2009 and 2012 full service carriers grew by 6.1% annually while ASEAN's low-cost carriers grew about 3.5 time faster (21.8%) annually on average. Their market share grew 40% in main city-pairs markets and 55% in secondary markets.
- If compared to other agreements, the impact of Fortaleza (MERCOSUR) Agreement (1996) has been more discreet. This is because the decisions are not supranational, therefore creating an impasse between liberal position (like Chile) and the conservator one (like Brazil). Brazil has not defined a clear policy on the subject whereas Chile with its well-defined regulatory framework has chosen the Open Skies policy.

Actually, Chile has pursued an Open Skies policy towards aviation since the late 1970s and its benefits are directly reflected in national economy. According to a study published by IATA, future liberalization achievements could mean an increase of 1.2M international passengers, a reduction of about 18% of the average fare, the creation of 35,200 new jobs and a USD 727M increase in the national GDP.

While it is clear that air transportation increases as economies grow, the results above also recognize that air liberalization is an important facilitator for air traffic and general economic growth.

The cases proposed confirm that the traffic growth subsequent to the liberalization of air services agreements between countries is an undeniable result. The typical average growth goes between 13% and 33% (i.e. significantly greater than in the years before the liberalization). Indeed, in a number of situations, the growth developed at rates exceeding 50%.

Furthermore, this data clearly proves that liberalization, besides spurring economic development and employment of the aviation section, also facilitates the arrival of larger numbers of tourists to a region or country and facilitates growth and productivity in the general economy. Ultimately, air transportation contributes significantly to rising GDP.

In all these case studies, the Open Skies agreements produce positive impacts on the countries that sign these agreements and are a good background to boosting SAATM implementation in Africa.

4

Connectivity Assessment

4.1 Intra-Africa connectivity

4.1.1 Domestic connectivity

Domestic connectivity is the market segment less affected by the multilateral liberalization agreements, as it is only impacted by the granting of 8th and 9th freedom rights. The level of domestic services is mainly impacted by factors that are specific to each country such as size, distribution of the population, presence of secondary/regional airports or the availability of local airlines than can serve domestic routes.

As seen in Figure 24, South Africa is by far the largest domestic market in Africa, distantly followed by Nigeria, with only a third of the capacity. The leadership of South Africa is also apparent when analysing routes and airlines: eight out of the top 10 domestic routes are in South Africa; and the three top airlines operating in domestic markets, South African Airways, Mango and Comair are all based in South Africa.

Both Kenya and Tanzania, in third and fourth position respectively, have important tourist attractions in the Rift Valley, which drive domestic operations. The rest of the top domestic markets is completed by large countries with relevant airlines that connect the main cities within the country.

Rank	Country	Scheduled Seats (MSeats; 2018)
1	South Africa	21,1
2	Nigeria	7,0
3	Kenya	4,9
4	Tanzania	3,6
5	Algeria	3,3
6	Ethiopia	2,9
7	Egypt	2,9
8	Morocco	2,2
9	Angola	1,2
10	Sudan	1,0
	Others	9,3
	Total	**59,2**

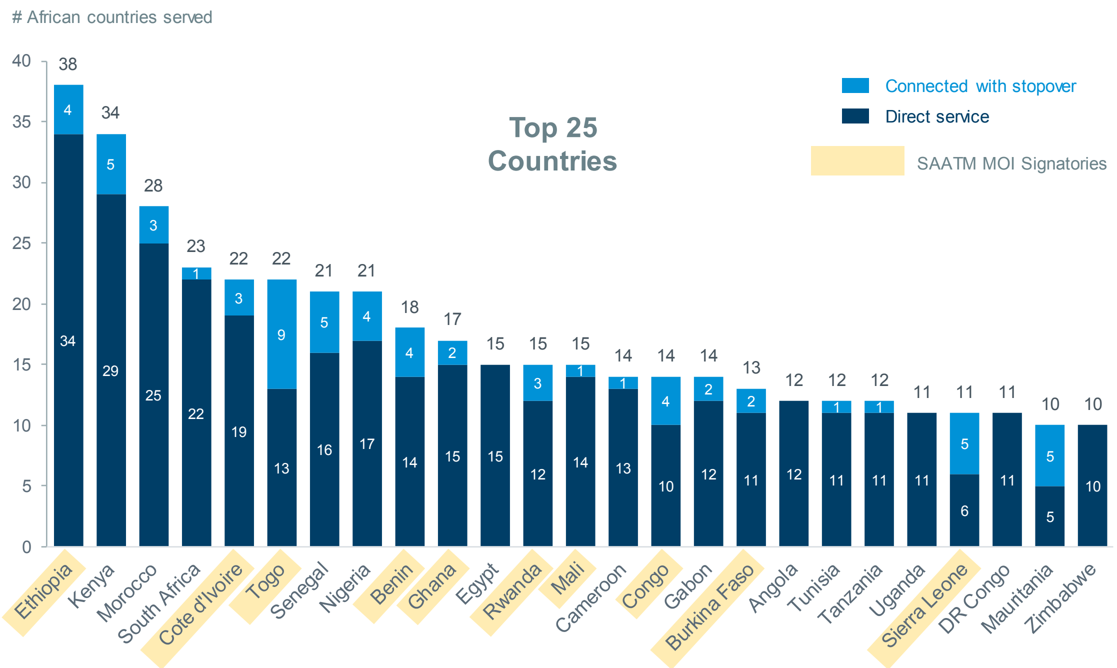
Figure 24: **Top 10 domestic markets in Africa.** Source: OAG – Schedules Analyser

4.1.2 International connectivity

As defined by the ICAO, connectivity is the ability of a network to move passengers, cargo and mail involving the minimum transit points, which makes the trip as short as possible with optimal user satisfaction at the lowest price possible.

Intra-African connectivity is of the utmost importance as it enables citizens to connect with neighbour countries, which tend to be the ones with the strongest social and economic links. Especially when travel distances are long and road/rail infrastructures are not well developed, having a great access to air connectivity is essential for diverse areas of the economy and the society (i.e. establishment of successful multinational businesses, development of local tourism flows, allow citizens to visit friends and relatives)

The number of African countries served both by direct services and with stopovers from every country in the continent can be seen as a proxy to measure intra-African connectivity. The 25 best-connected African countries are shown in Figure 25.



Countries ranked outside Top-25	# African countries served					
	5 to 10	Zambia Niger Equatorial Guinea	Guinea Sudan Algeria	Chad Namibia Liberia	Malawi Gambia Mozambique	South Sudan Central African Rep Madagascar
	5 or less	Libya Mauritius Eritrea	Seychelles Comoros Guinea-Bissau	Burundi Somalia Djibouti	Sao Tome & Pri. Cape Verde Botswana	Lesotho Swaziland

Figure 25: Countries by Intra-African connectivity. Source: OAG – Schedules Analyser

Countries with the highest number of country-pairs served are the ones with a local airline among the market leaders in the Intra-Africa segment. Figure 26 below highlights Ethiopian Airlines, Kenya Airways, South African Airways and Royal Air Maroc as the top performers in the continental market. Not surprisingly, their home countries (Ethiopia, Kenya, South Africa and Morocco) rank as the four most connected.

Togo is positioned as the leader in terms of the number of connections through stopovers. This is due to the strategy of ASKY, the local airline, which has developed a network focused on multi-stop routings across the Western Africa region rather than direct connections. Côte d'Ivoire, with the same number of total connections as Togo, is much stronger in direct connections. Again, the strategy of the local airline—Air Côte d'Ivoire in this case—is the reason behind the connectivity profile of the country.

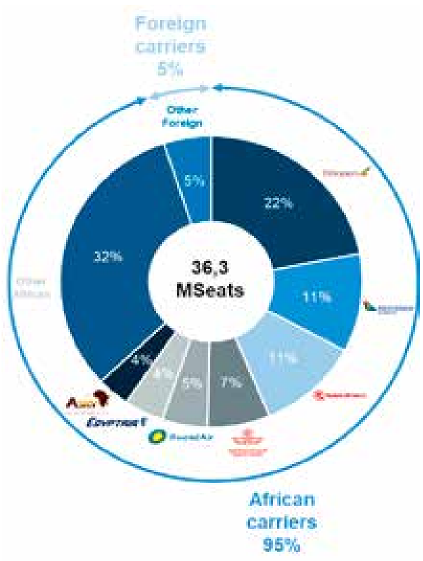


Figure 26: **Intra-Africa market share by airline (excluding domestic).** Source: OAG – Schedules Analyser

Intra-African Original-Destination (OD) traffic flows are shown in Figure 27 below, classified according to the passengers' origin and their final destination region. In 2017, around 15 million passengers travelled internationally between African countries, with 9,5MPax travelling inside each of the 5 regions and 5,8MPax travelling between two different regions.

OD Flows '000 Pax

Origin	Final Destination: Central	East	North	South	West	Total
Central	406	174	87	162	430	1.261
East	166	2.316	338	761	218	3.801
North	94	329	2.102	61	383	2.970
South	159	774	64	2.828	272	4.098
West	411	234	365	265	1.837	3.114
Total	1.238	3.829	2.956	4.079	3.142	**15.246**

Note: Domestic traffic not included

Total Intra-Regional: 9,5 MPax

Total Inter-Regional: 5,8 MPax

Figure 27: **Intra-Africa OD traffic flows by region of origin/destination ('000 Pax; 2017)**
Source: OAG – Traffic Analyser

Relevant differences are derived from the analysis of the intra-African flows. In the intra-regional markets, the position of the Central region highlights negatively, as only circa 400k passengers travelled between countries of this area in 2017. The level of connectivity of this region with the rest of Africa is also very low, being only moderately relevant to its connectivity to the Western region.

Differences can also be observed in the Figure 28 below, which shows the OD flows between airports according to their volume of passengers. High-density pairs are the ones with more than 200,000 annual pax (equivalent to the connectivity provided by 2 daily frequencies on narrow body aircraft). Mid-density pairs concentrate flows with 60k to 100k annual pax (equivalent to 1 daily freq. on regional aircraft or 4 weekly freqs with narrow body). Finally, low-density pairs represent flows of 10k to 30k annual passengers (equivalent to only 2 or 3 weekly freqs. on regional aircraft).

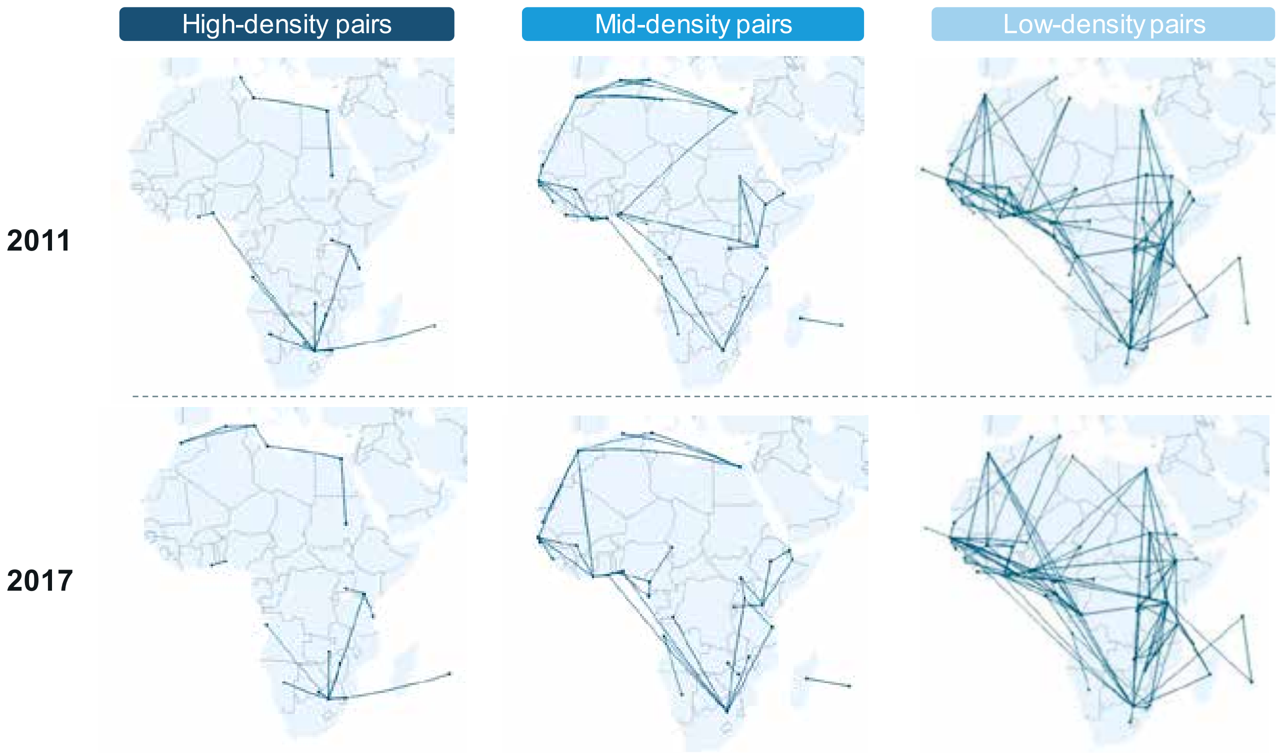


Figure 28: Evolution of high, mid and low-density OD market pairs; 2017 vs. 2011. Source: OAG – Traffic Analyser

In any case, it has to be stressed that the values for the other regions, as well as the overall traffic across the continent are very low when compared to other continents. As an example, the intra-Western Europe market accounted in 2017 for 370M Pax, intra-Latin America for 25 MPax and intra-South East Asia for 45 MPax.

Direct vs. Connecting traffic flows

Another important characteristic of air connectivity is the ability that passengers have to travel directly to their final destination or if they need to perform intermediate connections. Performing intermediate connections is very usual when travelling to long-haul destinations—as direct services would not make economic sense due to the low levels of direct demand. However, for shorter travel distances, connecting flights are not a desirable solution given that it adds extra flight time and waiting times at the connecting airport (if connectivity to the main local hubs is not well developed trip times can be dramatically increased due to very inefficient routings or very long waiting times).

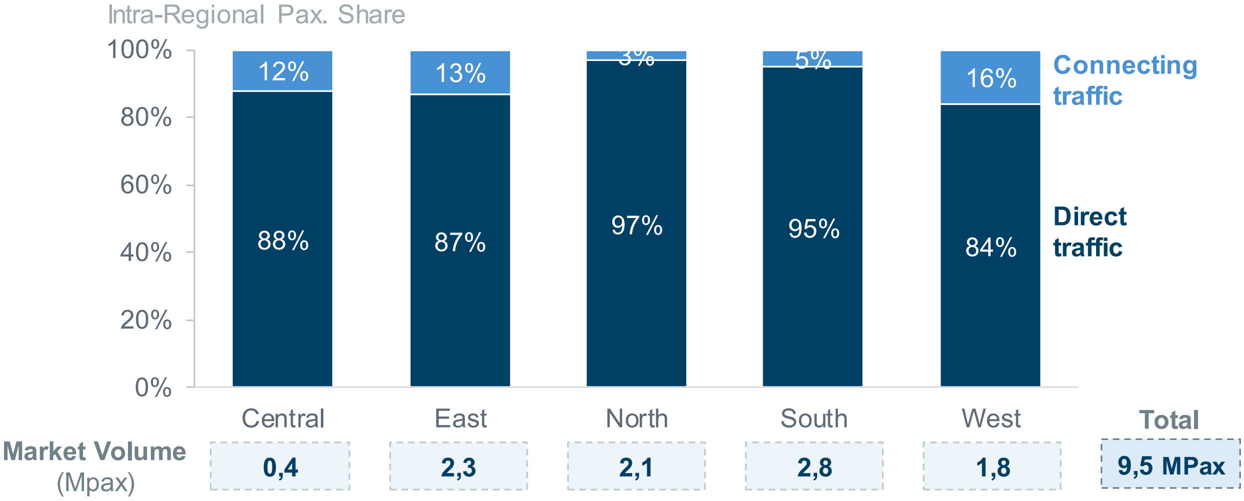


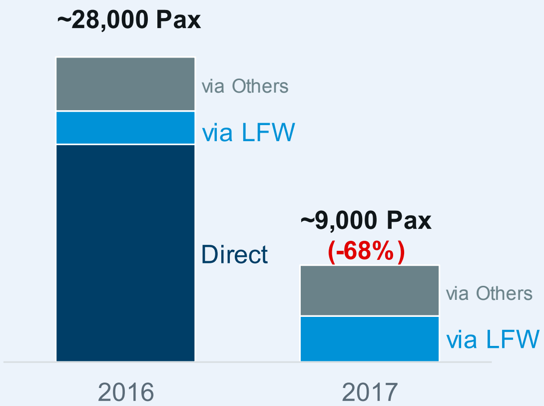
Figure 29: **Intra-regional traffic composition: direct vs connecting.** Source: OAG – Traffic Analyser

Figure 29 shows the share of passengers travelling directly or connecting in each of the African regions (for international flights between countries within each region). Generally, the share of connecting passengers is low in all the regions and especially in the Northern and Southern ones where it represents very marginal values below 5%.

The Western region shows the highest share (16%), triggered by the strategies of Air Cote d'Ivoire and ASKY with their regional hubs in Abidjan and Lomé, which capture 58% and 18% of the connecting passengers respectively. The case of the Central region is a particularly remarkable case, as it does not have a clear regional hub acting as a regional connector. In fact, one third of the passengers connecting within the Central region make their connections in Lomé, meaning they need to deviate largely from their direct route due to an absence of better options.

Case Study: Cameroon to DR Congo connection

Passengers travelling between Cameroon and the DR Congo



- **Camair Co route from Douala to Kinshasa was canceled in 2016 (3/4 weekly)**
- **Douala-Kinshasa route length is 1.125 Km. while route via Lomé adds extra 1.800 Km.**
- **The trip with connections takes more than 8 hours and costs over 1.000 USD**

A relevant example of the importance of having direct links in the short-haul market (or at least having good connecting options) is the Douala to Kinshasa market. A dramatic reduction of passenger travelling between those cities was experienced in 2017, when Camair Co cancelled its direct route. Once the direct route was cancelled, the only indirect option with some relevant presence was the one offered by ASKY via its hub in Lomé but even in this case the trip time and the high cost did not allow the airline to capture an important part of the unserved demand. The absence of any other competitive alternatives offering intermediate connections implied that almost 70% of the traffic between these two countries disappeared.

The analysis of the flows of passengers with connecting flights takes even more important in the inter-regions market, where the share of connecting traffic reaches one third (32%) of the total market (see Figure 30).

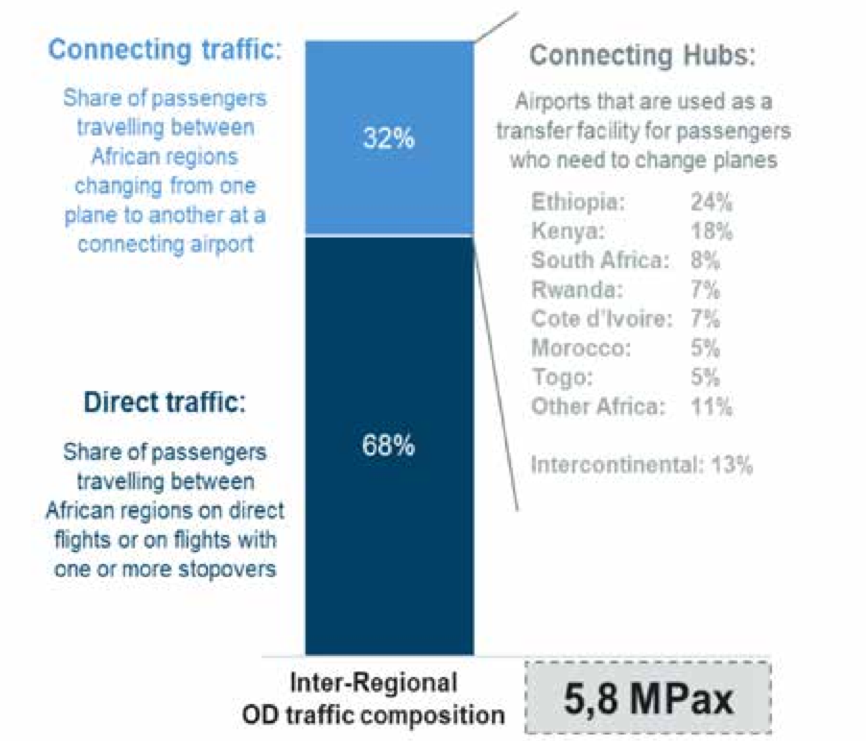


Figure 30: **Inter-regional OD traffic composition: direct vs connecting.** Source: OAG – Traffic Analyser

It makes logic sense for the inter-regional market to show a higher share of connecting passengers than the ones for passengers travelling inside each of the regions, as levels of demand tend to be lower and routes are longer—so they might need to be operated with wide bodies.

Regarding the main countries used as intermediate connecting points, Ethiopia and Kenya stand out as the two main gateways, capturing 24% and 18% of the market respectively. Their geographical position—along with the wide networks to the rest of Africa of Ethiopian Airlines and Kenya Airways (see Figure 31)—place those countries good alternatives to offer connectivity between many African countries.

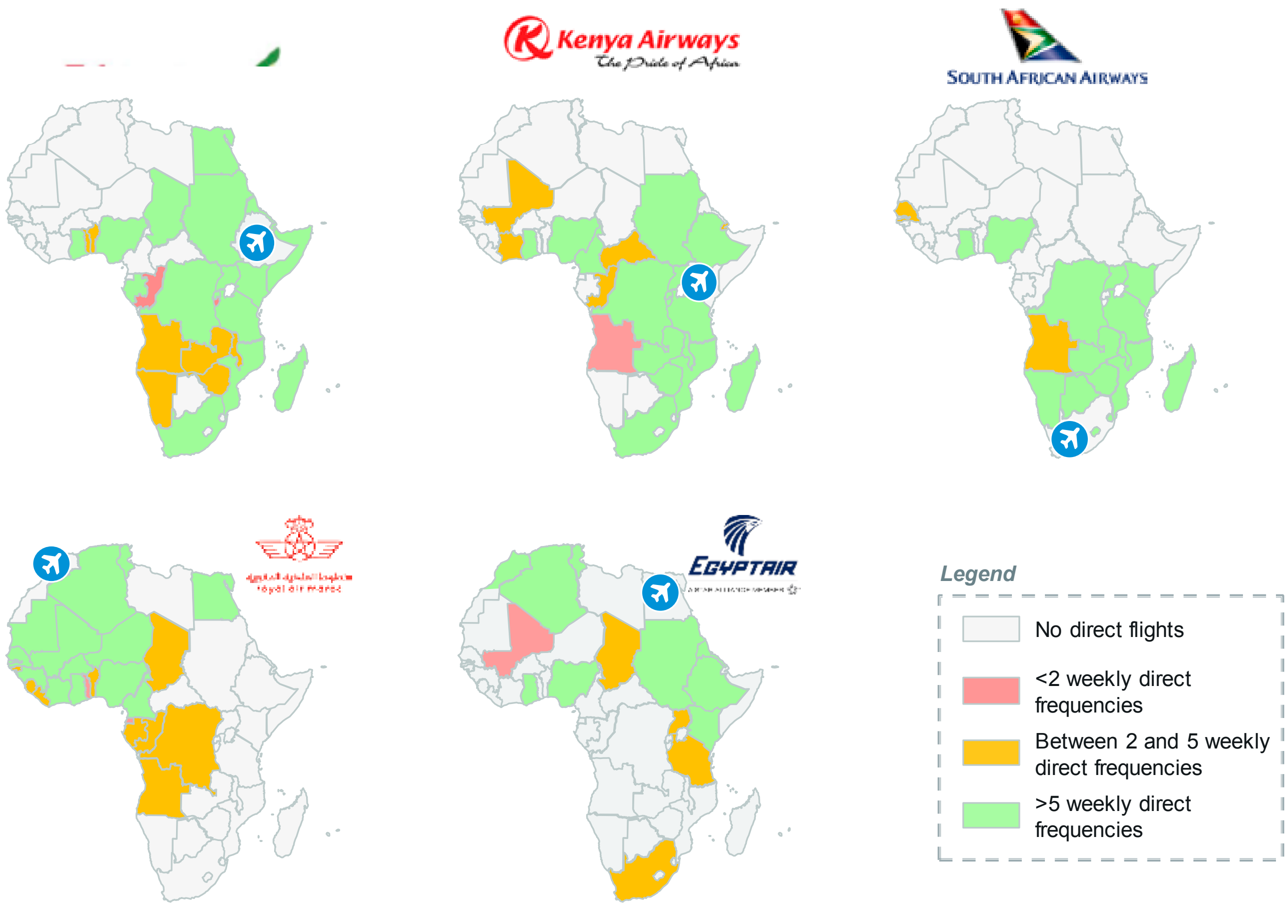


Figure 31: **Main intra-Africa connecting airlines and countries.** Source: OAG – Schedules Analyser

On the other hand, South Africa (10%), Morocco (5%) and Egypt (2%) present much lower market shares as the geographical positions of these 3 countries strongly hinders their ability to be a competitive intra-African connecting point. Moreover, the networks of African routes offered by their home carriers are much more limited and they just concentrate on offering connectivity to theirs closest neighbouring countries.

Other African countries with relevant market share are Rwanda, Cote d'Ivoire and Togo, which, despite limited having local air markets, are well positioned as regional hubs. The strategies of their local airlines, Rwandair, Air Cote d'Ivoire and ASKY, are focused on becoming regional connectors, either by using their home bases as a hub or by offering multi-stop routes.

4.2 Intercontinental connectivity

As pointed out when analysing the capacity scheduled from/to Africa, the intercontinental segment accounts for most of the African market. Figure 32 presents the intercontinental OD traffic flows between the African regions and the rest of the world.

Several conclusions can be drawn from the analysis of the different traffic flows:

- The Northern region constiututes most of the intercontinental traffic, accounting for almost 60% of the total passengers. The connectivity to Europe (mainly routes from Morocco and Algeria with France as their main destination) and to the Middle East are of special relevance (with the traffic between Egypt and Saudi Arabia representing almost half of the North-Middle East market)

- On the other hand, the traffic from/to the Central regions is very low and mostly concentrated in Europe (mostly traffic flows between Cameroon, Congo, Gabon and France)

OD Flows – Both ways (Mpax)	Europe	Middle East	Asia-Pacific	Americas	**Total**
Central	1,5	0,3	0,4	0,2	**2,3**
East	5,9	5,3	2,5	1,1	**14,7**
North	28,8	17,8	1,8	1,5	**49,8**
South	5,2	1,0	2,3	1,3	**9,8**
West	5,7	1,2	1,0	1,4	**9,3**
Total	**47,0**	**25,5**	**8,0**	**5,5**	**86,0**

Figure 32: **Intercontinental OD traffic flows by African regions.** Source: OAG – Traffic Analyser

In the case of the intercontinental market, it is also worth analysing how the demand is served.Figure 33 shows that 30% of the intercontinental passengers had to perform one or more stops, taking different flights before reaching their final destination.

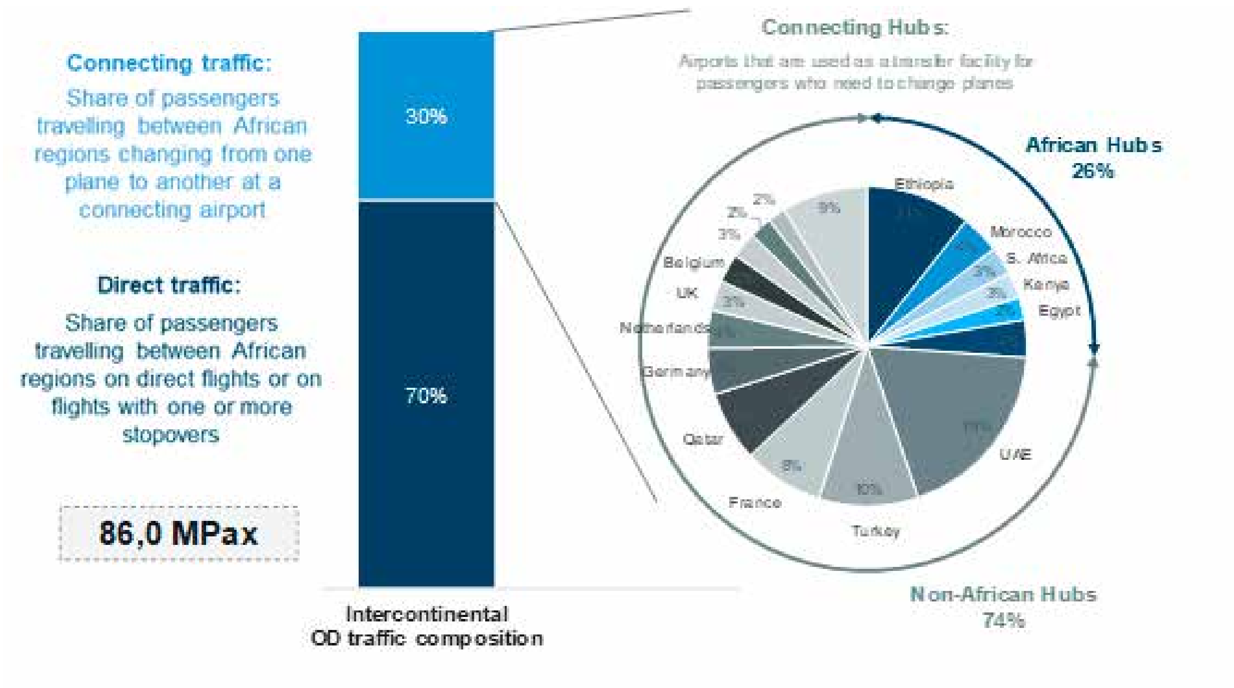


Figure 33: **Intercontinental - Africa OD traffic composition: direct vs connecting.**
Source: OAG – Traffic Analyser

Concerning the main Hubs used as connecting points, African Hubs only captured 26% of the connections, meaning that most of the connecting traffic had to connect at airports out of Africa (and most probably using non-African airlines).

In particular, Middle East hubs (UAE, Turkey and Qatar) captured a very relevant share of the connections, and Ethiopia was the only African country capturing a relevant share of passengers.
The main countries of origin/destination of the intercontinental flows are presented in Figure 34, including a split between passengers travelling directly and those who had to connect (the share of connecting passengers in every country is also shown with the yellow line).
France and Saudi Arabia stand out as the two main markets, mainly due to their great connectivity with Northern Africa. The UAE and other European countries complete the top markets, together with the USA and China.

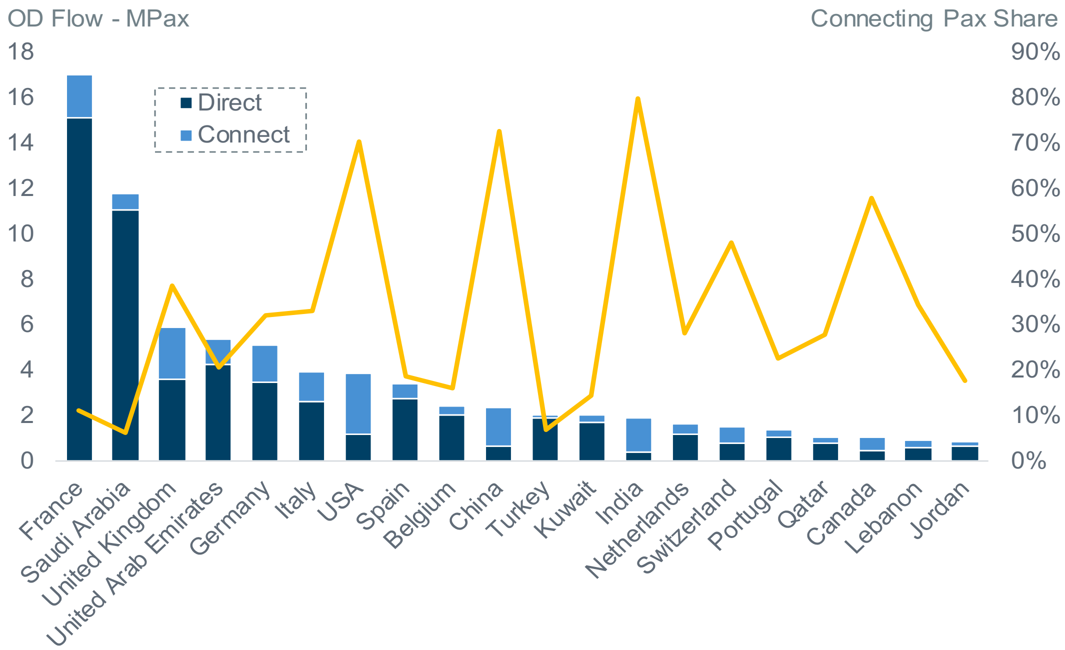


Figure 34: Intercontinental - Africa OD traffic composition: direct vs connecting.
Source: OAG – Traffic Analyser

Finally, the USA, China, India and Canada are the countries with the highest connecting share (above 60%), given the lack of direct flights between Africa and such countries. It is expected that the most remote countries are the ones that have the highest levels of non-direct traffic.
Figure 35 shows the main Hubs used as connecting points by passengers travelling from/to Africa in the intercontinental market. It is worth noting the high growth of Middle Eastern Hubs (UAE, Turkey, Qatar), with Ethiopia being the only African country with a relevant share and growth.

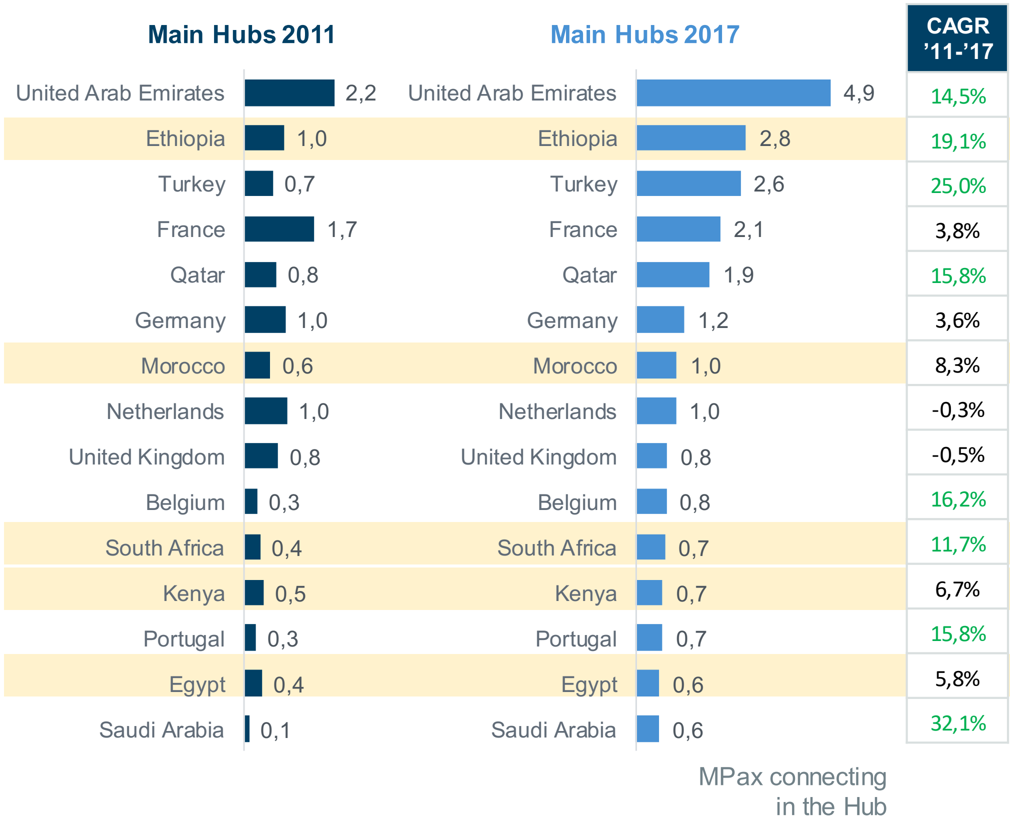


Figure 35: Main intercontinental connecting Hubs; 2017 vs. 2011. Source: OAG – Traffic Analyser

Sub-Saharan Region

As explained previously, more than half of the intercontinental traffic flows have their origin or destination in Northern Africa, leaving the Sub Saharan intercontinental market with 36.2 M Passengers in 2017.

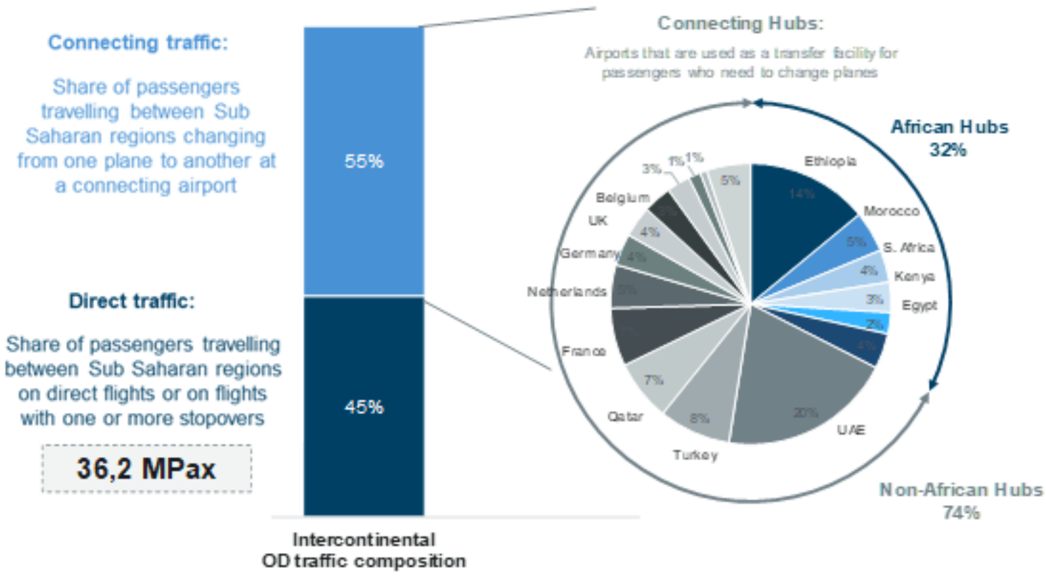


Figure 36: Intercontinental Africa OD traffic composition: direct vs connecting (Sub-Saharan Africa only)
Source: OAG – Traffic Analyser

As shown in the Figure 36, the non-direct market (passengers having to connect before reaching their final destination) is much more relevant in Sub-Saharan Africa, reaching a 55% share. With respect to the main hubs used as connecting point, the distribution is fairly similar with African Hubs, accounting for 32% of the share (vs. 26% for the overall Africa).

In terms of the main intercontinental markets for Sub-Saharan Africa, (see Figure 37 below) the main difference compared with the overall continent is the position of France and Saudi Arabia (both countries are by far the top 2 performers in the continent, with a much minor relevance in the Sub-Saharan Africa).

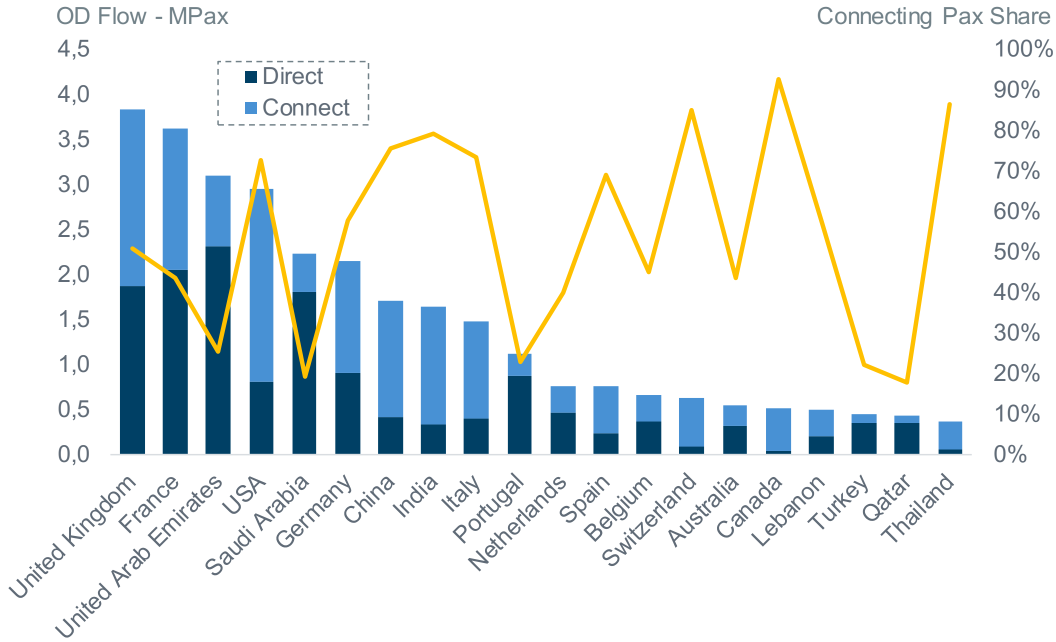


Figure 37: Main countries of OD of the intercontinental flows (Sub-Saharan region only)
Source: OAG – Traffic Analyser

4.2.1 Airlines in the Intercontinental market

Figure 38 illustrates the market share of the main airlines operating intercontinental flights in 2018. In the intra-African segment, local airlines monopolize the market with 89% of the capacity, but in the case of intercontinental routes, African carriers serve only 39% of the seats.

The five main African intercontinental carriers (Egyptair, Royal Air Maroc, Ethiopian, Air Algerie and Tunisair) account for 66% of the total capacity provided by African airlines. In the case of foreign carriers, shares are less concentrated because the five main carriers (Emirates, Saudia, Air France, Turkish Airlines and Ryanair, the only low cost carrier on the list) account for only 38% of the total capacity provided by foreign carriers. Consequently, the biggest share is held by a large number of foreign airlines.

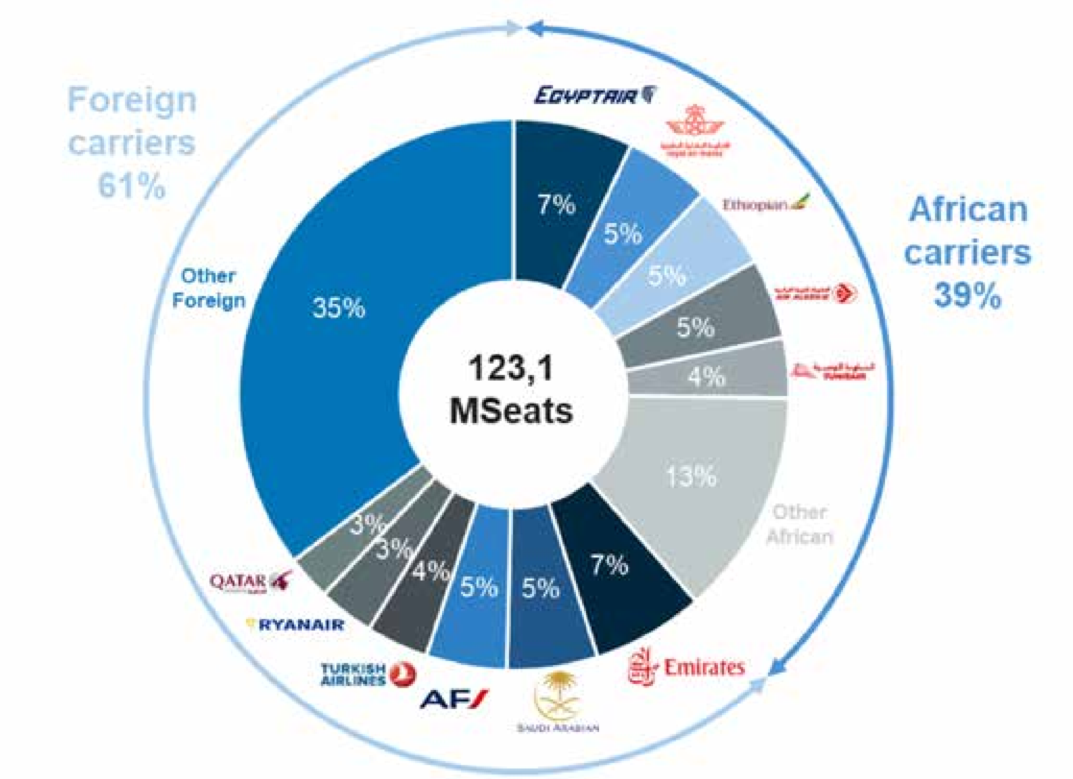


Figure 38: **Intercontinental market share by airline.** Source: OAG – Schedules Analyser

In order to identify which are the key African intercontinental airlines, more parameters in addition to market shares need to be analysed. The following figure shows worldwide route networks and African presence for Ethiopian, Egyptair, Royal Air Maroc, South African Airways and Kenya Airways from their hubs in Addis Ababa, Cairo, Casablanca, Johannesburg and Nairobi, respectively.

Despite their market shares, Air Algerie and Tunisair are not taken into consideration as intercontinental carriers as their presence is in a single market, Europe, accounts for around 80% of their international capacity deployment. Royal Air Maroc shows a similar trend as 74% of its intercontinental capacity is allocated to routes to/from Europe (see Figure 39). However, its presence in America makes it reasonable to consider the airline as a relevant intercontinental carrier.

On the other hand, South African Airways and Kenya Airways, which are not in the top 5 by market share, can be seen as intercontinental airlines given their relevant presence in markets other than Europe.

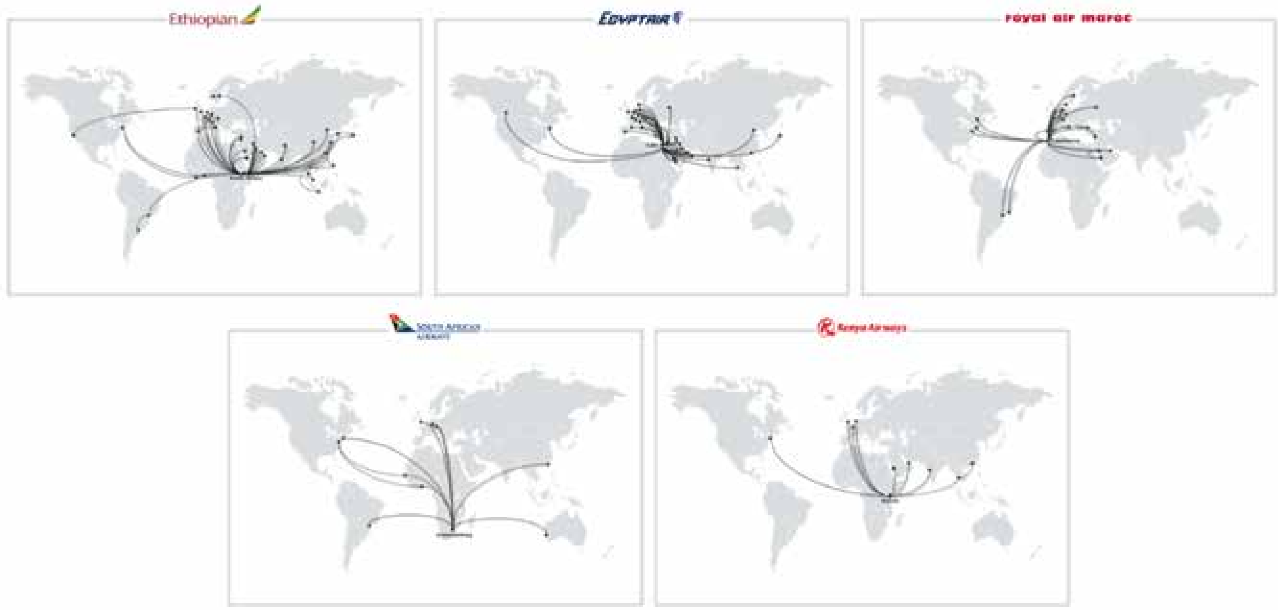


Figure 39: **Route network from key hubs.** Source: OAG – Schedules Analyser

The analysis of capacity volumes allocation shown in Figure 40 highlights that:

- Europe and Middle East are the two biggest markets served from African hubs
- Ethiopian is the most well balanced route network, with similar capacity deployed to Asia-Pacific, Europe and Middle East, and less focus on Americas
- All airlines analysed, except for Royal Air Maroc, have expanded their networks to the Asia-Pacific region.

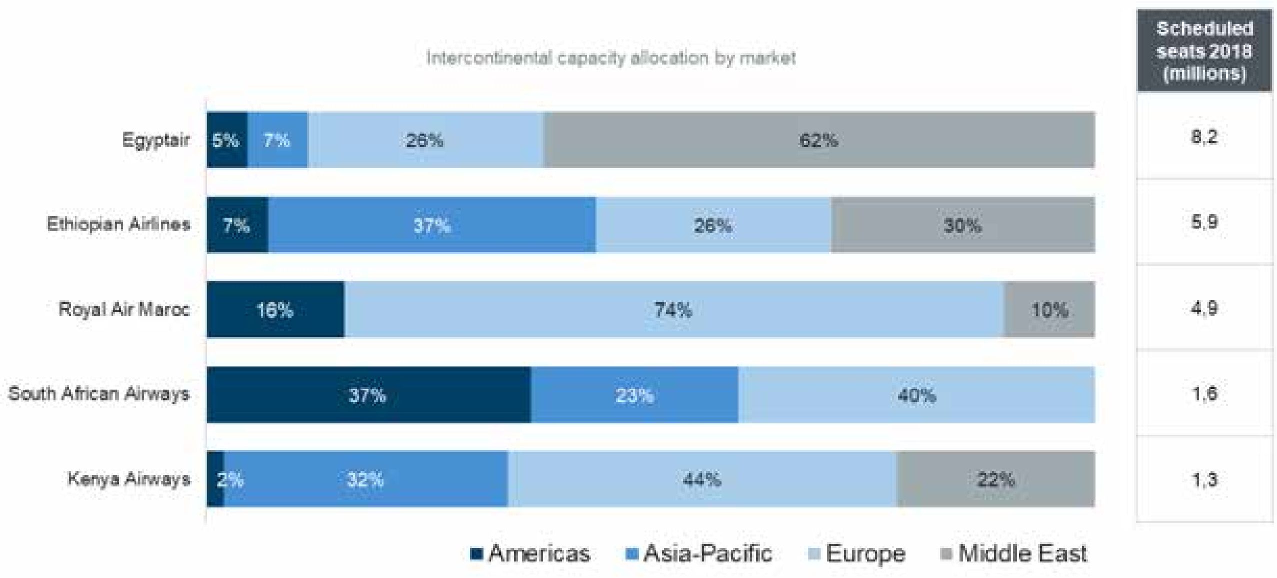


Figure 40: **Airlines' intercontinental capacity allocation by market.** Source: OAG – Schedules Analyser

5

Cost of Air Transport

In general, countries with large populations and economies or small but rapidly growing populations and economies, represent an opportunity for the development of strong domestic and international networks. At the same time, the reduction in the cost of travelling has proved to be one of the main drivers that triggered the constant growth of global air transport throughout the last decades.

Nevertheless, the evolution of ticket prices has shown different trends among the different continents and regions. This, together with the economic inequality between countries stands, as one of the main factors to explain the differences on air transport development around the globe.

The African region clearly shows a partial misalignment between size of population, economy and air traffic growth. The continent presents a set of challenges that are unique to its environment and principally include high costs, poor aircraft utilization and sparse demand.

5.1 African market performance

The benchmark proposed in Figure 41 compares intra-Africa typical yield with other world regions typical yield:

Typical Yield			
Route	Intra-Europe	Intra-LATAM	Intra-Africa
Av. Yield (USD/km)	0.02 - 0.08	0.06 - 0.11	0.08 - 0.17

Figure 41: International benchmark of typical yield (750 to 2000 km; economy cabin).
Source: OAG – Traffic Analyser

The differences between airfares in Africa and the rest of the analysed markets are very relevant, especially when compared to the intra-European market:

- The intra-Europe average yield level is the lowest among the analysed regions; the European market has strongly decreased its yield levels during the last years thanks to the competition between the main European LCCs (Ryanair, Easyjet, Wizz Air, Vueling, Norwegian…) and currently airfares for 1,000 Km flights are below USD 100.
- The yield levels of the intra-Latin America market have also decreased, especially in its main markets where the LCCs have a big penetration rate (Brazil and Mexico mainly).
- The yield levels of Africa are the definitely above the average shown in the other analysed regions. At present, airlines' high operational costs combined with low passenger load factors (caused by low air transport demand and fleet limitations) require that the end

user pay high air fares as an attempt to reach positive airline profitability levels, which is still yet to be achieved overall.

The air transport sector in Africa still needs to develop sustainable growth, not only in its internal market (intra-Africa), but also in the intercontinental market. Travelling to Africa from a different region means paying high fares, but also high yields for the operating airlines.

This is evident in Figure 42, which compares the yield curves depicted by foreign airlines flying a distance to Africa and those flying the same distance to another destination outside Africa.

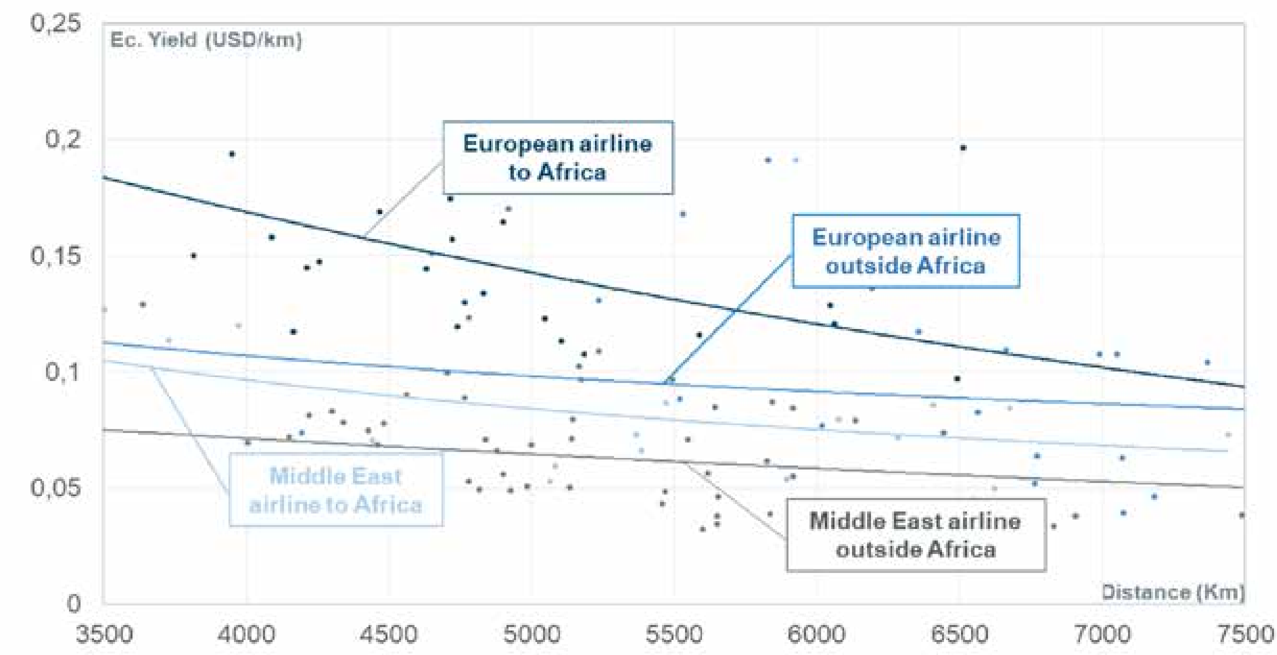


Figure 42: **Yield curve for a foreign airline flying to Africa and flying outside Africa (economy cabin).**
Source: OAG – Traffic Analyser

The analysis has been performed from two different markets (for a European airline and the for a Middle Eastern airline) and the resulting curves show similar trends: for each of the selected foreign airlines, it is more expensive to fly to Africa than to a destination of the same distance outside Africa.

NB: it is worth stressing that the figures shown in this section of the study refer only to the airline base fare, not including any kind of passenger charges, fees or taxes levied by other parties.

5.1.1 Intra-Africa market yield by region

The internal inequality is another of the challenges that characterizes the African market. Figure 43 shows the yield curve for the direct routes from/to the different African regions.

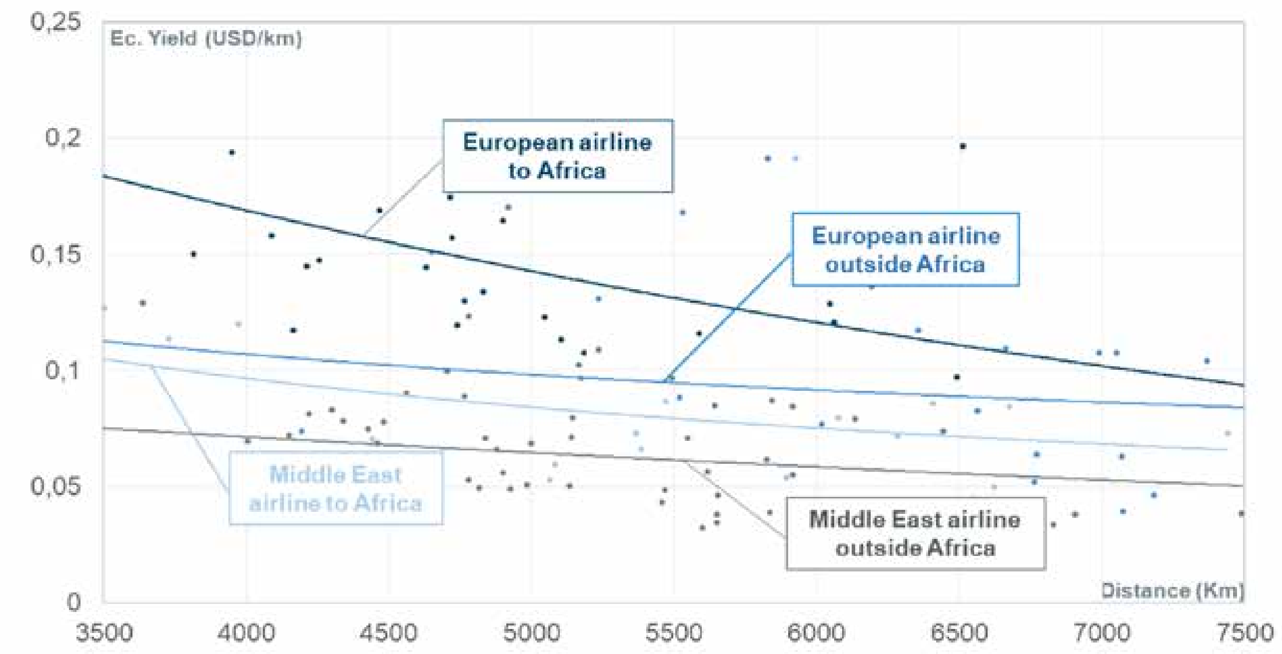


Figure 43: **Yield curve by African regions (economy cabin).** Source: OAG – Traffic Analyser

The trend obtained is typical of this kind of analysis:

- Very high values for short sectors due to the higher weight of the fixed costs (handling, take-off fuel consumption, maintenance costs linked to the number of take-offs/landings, part of the staff costs…) and the lower hourly utilization of the fleet in this kind of flights.
- As route distances increase, the ticket price per km also decreases due to the dilution of fixed costs, but such trend stabilizes when the distance values are above certain level.

With respect to the yield level, a significant difference is observed between the different regions. North Africa presents a yield curve comparable with the one showed by other foreign regions. This is mainly due to the presence of the most consolidated African airlines and the European LCC penetration favoured by the EU-Morocco Open Skies.

On the contrary, the Central region (the region that presents the lowest levels of internal connectivity) reports a yield curve clearly above the African average.

5.1.2 African Airport fees, taxes and charges

The high value of the airport taxes, fees and charges is one of the main barriers to the development of the traffic in the African countries. Figure 44 provides the comparison of the charges in a turnaround for different markets and regions:

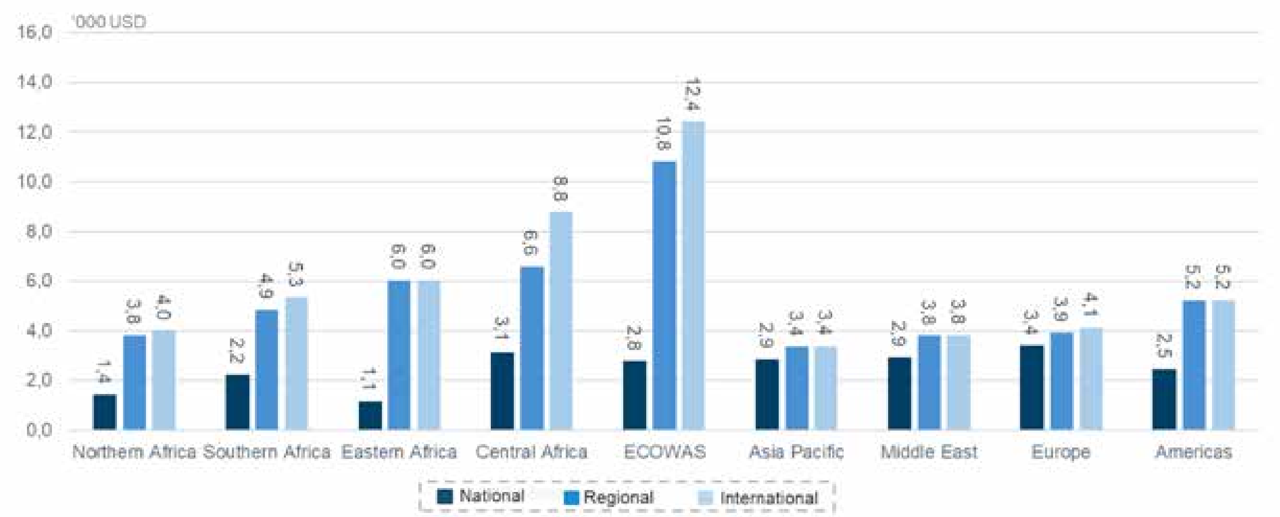


Figure 44: **Charges by turnaround for different markets and regions.** Source: IATA

The African regions, excluding the North Africa region that have values comparable to other world regions, report values clearly above the average calculated for Asia, Europe and Middle East in each of the compared regional and international markets.

Detailed analyses can be carried out by country and market but, generally, a decrease on the charges and taxes imposed (mainly those from the local governments and not related to the air transport) has a positive impact on the cost of air transport, with the consequent stimulation of demand.

With the adequate policies carried out, the growth of African air traffic flows could compensate for the decrease of unitary charges and taxes, making the total incomes received by all the stakeholders increase and have a positive impact on the local government and institutions, and on the regional air transport industry.

5.2 African airlines' performance

Foreign competitors around the globe leave behind African airlines when it comes to having a strong balance sheet. According to the IATA Industry Economic Performance 2018 report, Africa is the weakest region despite shrinking losses over the past four years losses, amid higher commodity prices and improved load factors . Breakeven load factors are relatively low, as yields are a little higher than average and costs are lower. Few airlines in the region are able to achieve adequate load factors, which average the lowest globally.

The strongest financial performance is being delivered by airlines in North America and the breakeven load factors are highest in Europe, caused by low yields due to the competitive open aviation area, high regulatory costs and massive presence of low cost airlines.

5.2.1 Airlines´ CASK

In order to properly assess the airline cost-efficiency for each of the cost elements, an analysis on the cost per offered seat and kilometre (CASK) has been developed for a sample of airlines, Figure 45. Twenty-three (23) airlines have been selected for the described analysis: four (4) African airlines and three (3) airlines for each of the other regions, together with four (4) low cost carriers from different regions:

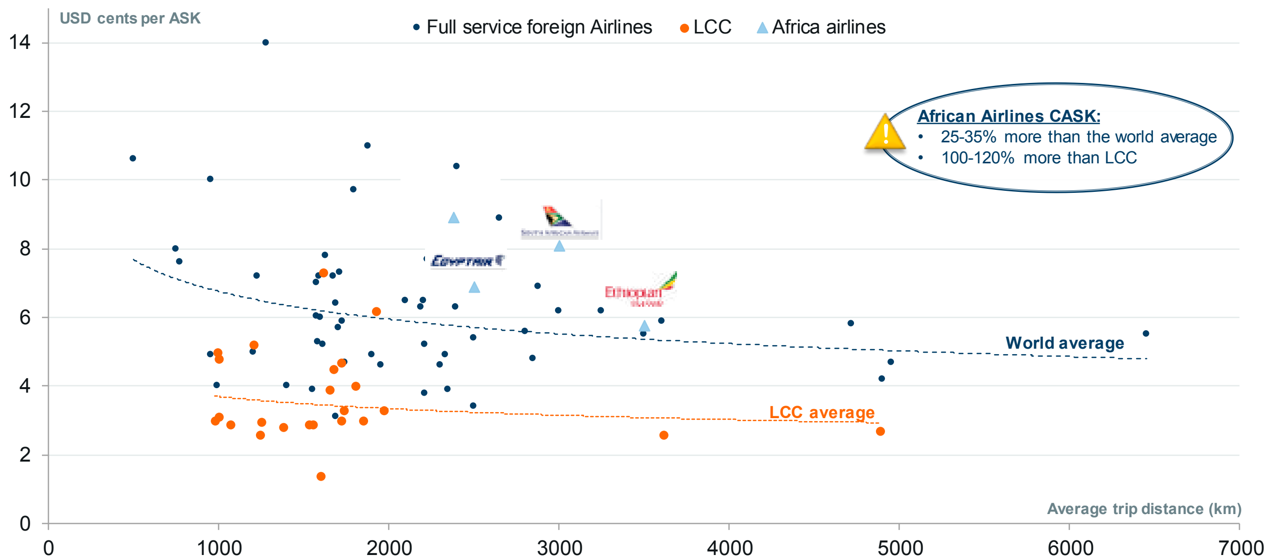


Figure 45: **African and foreign airlines CASK benchmarking.** Source: CAPA, Airlines' annual reports

In general terms, the results show that African airlines' CASK is 100-120% higher than those of low cost carriers and CASK is 25-35% higher than the world average.

The low cost carriers have much lower cost per CASK than full service carriers and their presence is no longer exclusive to regions with mature markets, such as Europe and North America.

In fact, in Asia the LCCs, that grew rapidly over the last years, currently account for almost 26% of all seats in the region (ASEAN Single Aviation Market is playing a positive role in the development of LCCs in South-East Asia).

In the last five years, the LCCs started very slowly to penetrate the Africa's regional international market. However, (despite Fastjet, Mango, Fly 540 and Kulula operation) LCCs remain drastically under-represented in Africa, making the African market one of the last frontiers for the global LCC sector.

It adds that the impact of high commodity prices and the high presence of stated-owned airlines are other factors hindering the LCC growth and contributing to airlines in Africa making losses while breakeven load factors are relatively low as yields are a little higher than average and costs are lower.

6

Qualitative assessment on SAATM impact

6.1 SAATM impact on air connectivity

Air connectivity is a measure of economic potential and opportunity. The better connected a country is by air, the greater is its ability to unlock the economic and social benefits that air transport can provide.
The SAATM impact on air connectivity revolves around the proliferation of new routes, the development of secondary gateway, the airlines' cooperation & consolidation and the potentiation of main/regional Hubs.
The analysis of each development below allows extrapolation of its evolution key features and gives the rational, together with previous studies published on this subject, to perform a high-level qualitative forecast of future air connectivity scenarios.

6.1.1 Proliferation of new routes and additional frequencies

The lack of direct routes in the intra-African market strongly limits the connectivity between the different countries within the continent.
Africa's low level of connectivity becomes even more evident if compared with other regions all around the world. Figure 46 shows the maximum number of country-pairs with direct service and the current number of country-pairs with direct service for each of the listed regions (the maximum country-pairs are calculated based on the total number of countries in each region and the maximum country-pairs that can be served - i.e. for Africa 54x53/2):

	Maximum Country-Pairs	Country-Pairs with direct service	
Africa	1.431	233	16%
Europe	946	616	65%
Latin America	171	85	50%

Figure 46: **Direct connectivity between country-pairs - Benchmark.**
Source: OAG – Schedules Analyser

While Latin America and Europe exploited direct service for at least half of their potential direct routes between country-pairs, the African region only serves direct service for 16% of its maximum number of country pairs.
The low level of direct services between African countries creates a big barrier for passengers to travel within the continent. This is the case of the Douala-Kinshasa route operated by Camair, which was cancelled in 2016. The lack of direct services led to a reduction of almost 20,000 Pax and forces the passenger to travel via Lomé adding an extra 1,800 Km to a route of 1,125 Km. The trip with connections takes more than 8 hours and costs in excess of USD 1,000. Congo Airways recently re-launched the route.
The SAATM implementation—eliminating the countries´ restriction—is expected to boost the launch of new direct services that would stimulate the demand thanks to a reduction of trip duration and airfares. An example of this is the direct service between N'Djamena and Dakar that would reduce the trip time to less than 5 hours and could be offered from circa USD 800/roundtrip, based on the region typical yields (-35%/-50% reduction with respect to current fares).
In addition, the granting of 5th freedom rights promoted by SAATM allows smaller markets to be directly served (or at least with a stopover), thus creating new routes and additional frequencies and allowing the passengers to fly directly between those airports without the inconveniences of connecting flights. As an example, the Conakry-Bamako is operated six times weekly by ASKY as part of the flight Lomé-Conakry-Bamako, allowing passengers to travel directly between both cities in just 1h 30min. (thanks to the 5th freedom rights granted to the airline). The alternatives to fly this route imply a connecting flight via Casablanca, leading to journeys of over 20 hours and return ticket prices over USD 1,200 (twice the price of the direct flight with ASKY).
Beyond promoting new routes, the fifth freedom also assures the operation of the small markets that would otherwise not exist due to the low demand. In fact, as can be appreciated in Figure 47, the levels of demand on the LFW-BKO or LFW-CKY markets wouldn't justify offering direct services without the granting of 5th freedom rights.

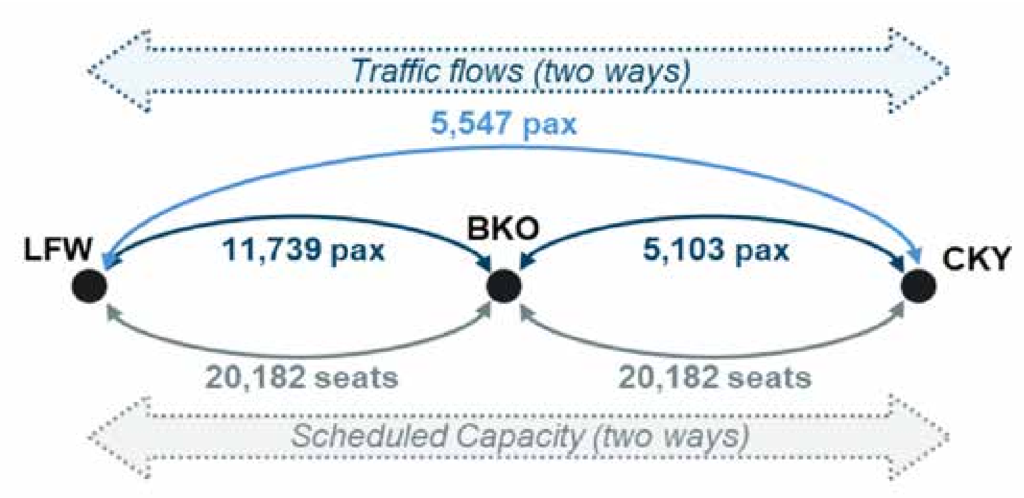


Figure 47: **Fifth freedom route Lomé-Bamako-Conakry; Annual figures.** Source: OAG

6.1.2 Development of secondary gateways

Most African countries only have one airport with significant traffic volumes . In many cases, even the main gateway of the country does not reach a passenger volume above 500k. Only 10 African airports report traffic above 5Mpax.
In addition, most countries concentrate almost the totality of the international traffic in the country's main gateway

(~86%, see Figure 48), thus stressing the existence of poor or even absent domestic markets and making the development of local and regional airlines more difficult.

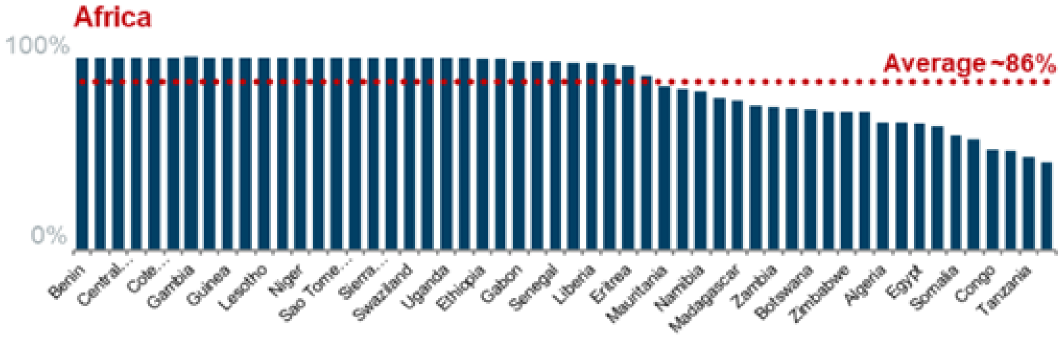


Figure 48: Concentration of international traffic in African countries main gateway.
Source: OAG – Schedules Analyser

The trend is quite different in more mature markets (see Figure 49): Europe and Latin America have consolidated domestic markets within their countries, and report a concentration of international traffic in theirs main gateway which does not exceed ~47% in Europe and 75% in Latin America.

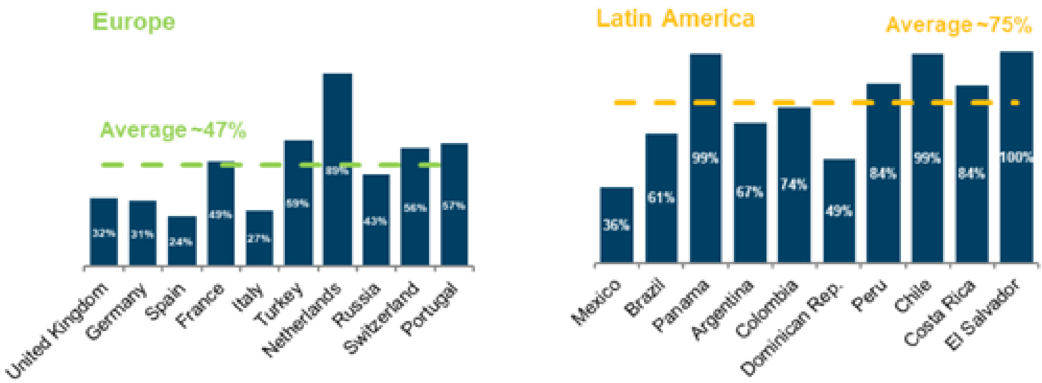


Figure 49: Concentration of international traffic in Europe and Latin America countries main gateway.
Source: OAG – Schedules Analyser

Given the success of dispersing the international traffic between the main and secondary gates in other world regions, it is expected that the proliferation of secondary gateways within the African countries should boost the domestic markets and create new demand segments. That implies better access to air transport by larger parts of the population and improves the operation of the regional airlines.

6.2 Airlines performance

6.2.1 Airlines cooperation & consolidation

African airlines struggle to offer competitive airfares and stimulate demand, and few are profitable . The results showed in the previous chapter indicate that the African airlines´ CASK is much higher than the LCCs and full service carriers' world average.

In other regions of the world, airlines cooperation and consolidation has proved to be the best mechanism to ensure the greatest levels of service and lowest fares while ensuring the airlines success.
In Europe, for example, several cases prove the success of airlines that are member to global alliances: Airfrance and KLM (Skyteam), British Airways and Iberia (Oneworld), Lufthansa and Brussels Airlines (Star Alliance).
Additionally, as seen in the analysis of the EU single market process, the EU market is characterized by the presence of low-cost carriers that started to gain market share quickly at of the end of the 1990. Some successful examples are Ryanair, Easyjet and Wizz.
On the other side, independent airlines that are not reaching a critical size have disappeared or are being sold as they struggle to survive (airberlin, Spanair, Alitalia, etc.).
Latin America's matrix of airlines and partnerships has also changed drastically during the last decade, driven by the mergers of Avianca and TACA (Avianca) and LAN and TAM (Latam). Only 38% of Latin America's seats are deployed by unaligned airlines, and one of the largest airlines operating outside an alliance is Gol. Latin America's first LCC represented 31% of Brazil's system wide seats and 36% of the country's domestic seats as of late Jul-2017. In order to survive, Latin America's airlines are racing to forge JVs with their respective airline partners.
With respect to the African market, the removal of restrictions on African carriers as promoted SAATM would improve airline performance through cooperation and potential airline integration
Some potential airlines cooperation could indicate the way forward. Royal Air Maroc recently applied to membership of IAG and is preparing to become the first African member of Oneworld, which is planned to occur in mid-2020. The other African airlines that are members of alliances are South African Airways, Egyptair and Ethiopian (Star Alliance) and Kenya Airways (Skyteam).
Ethiopian has a strategic partnership with ASKY, and plans to launch four African start-up airlines by the end of 2019 and participates in the management of other African airlines.
Several code share agreements are also currently operating, as the case of Africa World Airlines (AWA) and South Africa or Air Mauritius and Kenya Airways that expanded their cooperation.
The liberalization of Africa's air transport market is crucial for boosting the cooperation and consolidation of African airlines, as it enables the possibility to follow multi-national strategies both in terms of capacity supply and in terms of foreign investment. The freedom to offer code-sharing flights or invest in foreign airlines should be part of multilateral agreements and should be presented as an opportunity for airlines to gain profitability and ensure their success.

6.2.2 Potentiation of Main & Regional Hubs

Direct routes to the main African hubs should allow smaller countries to be connected to the intercontinental markets.
The development of regional hubs can be boosted by the cooperation of local airlines with the main African carriers: the African hubs carriers may gain access to small markets that would not justify a direct route and the local carriers act as regional connectors, obtaining additional flows of passengers and improving their load factor.
ASKY´s strategic partnership with Ethiopian is a good example. As seen in Figure 50, the Togolese airline's current strategy—with a hub and spoke operation concentrated in a single wave per day—grants the connection to the highest number of capital of the region and feeds Ethiopian Airline long-haul flights.

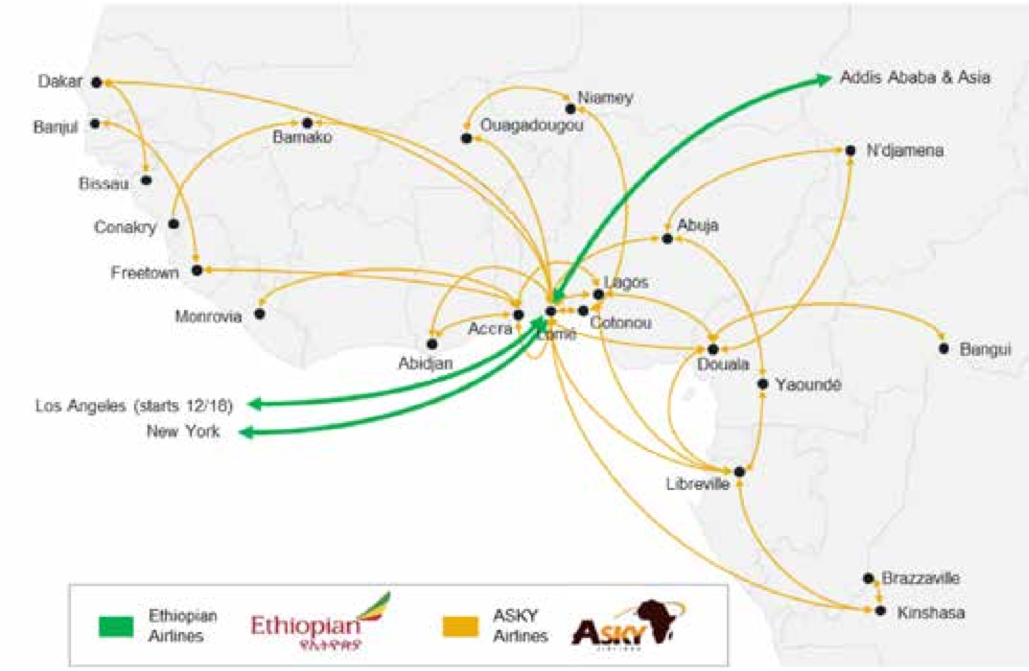


Figure 50: ASKY and ASKY-Ethiopian partnership network. Source: OAG – Schedules Analyser, Airlines' website

At present, 50% of Ethiopian Airline's traffic in Lomé is fed by ASKY. The role of ASKY is pivotal for Ethiopian Airline's Pan African expansion and new long-haul routes from Lomé are planned.
Finally, the partnership allows ASKY to have access to financing its fleet and places the airline as a top player within the ECOWAS region for greater connectivity to America and Asia.
The potential for of regional Hubs to cooperate with the main African carriers is an opportunity for smaller carriers to develop their local networks (additional sources of traffic).

6.3 High-level qualitative forecast scenario

6.3.1 Connectivity improvement

As already pointed out, several studies outline how the Open Skies agreements produce positive impacts on the countries that sign these agreements, stressing the relevance of air transport for a country's economy and the resulting impact on job creation.
Figure 51 compares the OD flows between intra-Africa airports in 2018 with a forecast for 2037.

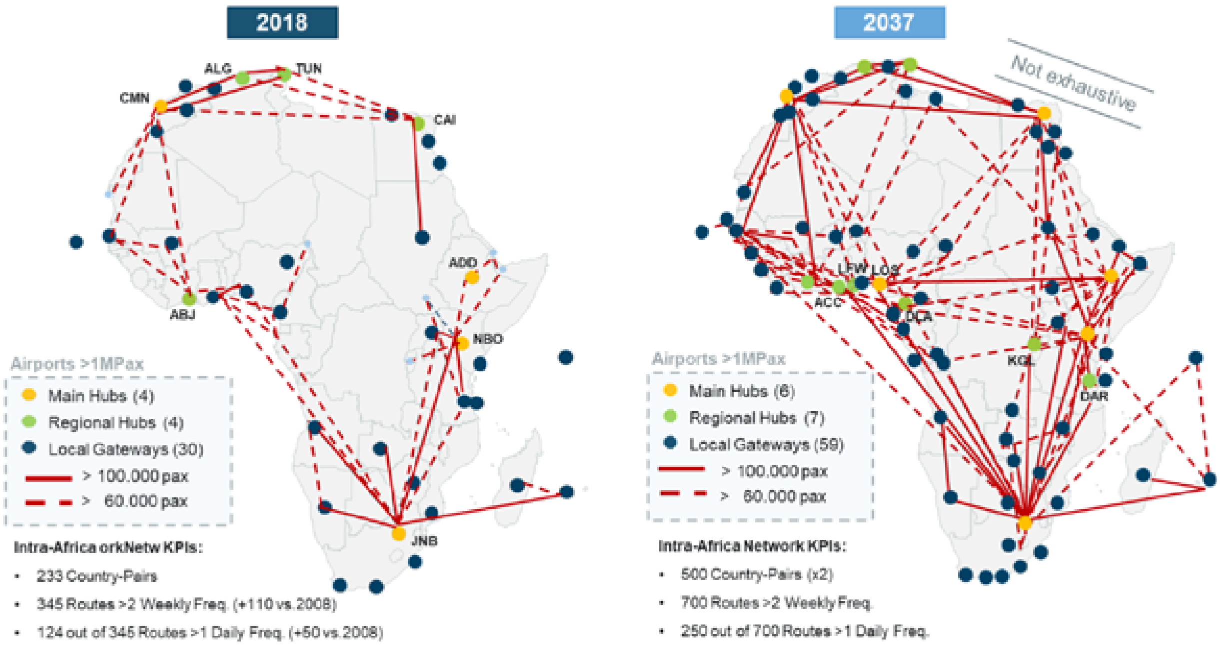


Figure 51: OD flows between African airports according to their volume of passengers; 2018 vs 2037.
Source: OAG – Traffic Analyser, ALG Analysis

Looking to the current status (2018), it is noted that there are few options to travel between different African regions with more than one frequency per day (route with more than 60,000 pax). For instance, there are no daily options to/from North-Eastern, North-Central/Western-Eastern, West/Central-Eastern and Central-Eastern air travels.
The current Intra-Africa market includes 233 country-pairs served, 345 routes with a frequency of 2 weekly and 124 operated daily. There are 4 main Hubs, none of them in the West and Central region and the 4 regional Hubs are concentrated in the North region (with the exception of Abidjan).
Assuming that SAATM acts as catalyst for the effective removal of intra-Africa market barriers, it is estimated that the developments analyzed in the previous chapter will give rise to:

- The creation of new routes connecting the African regions (especially transversal routes West-East Africa, West-North Africa) and the increasing of fifth freedom routes. This means 500 country-pairs served, 700 routes with two weekly frequencies, and 250 of operated daily. By 2037, this large increase in daily served routes will connect most of Africa.
- The development of secondary airports in Africa, enabling a greater portion of the population to access air transportation and boosting domestic markets. A wider network of airports will also boost the creation of new demand segments. The local gateways will almost double (from 30 to 59), two additional main Hubss will be added (Lagos and Cairo) and few regional Hubs will consolidate in the West/Central and East region.

6.3.2 Traffic growth

The estimation of routes evolution has a direct impact on the 2037 traffic projection, which is shown in Figure 52:

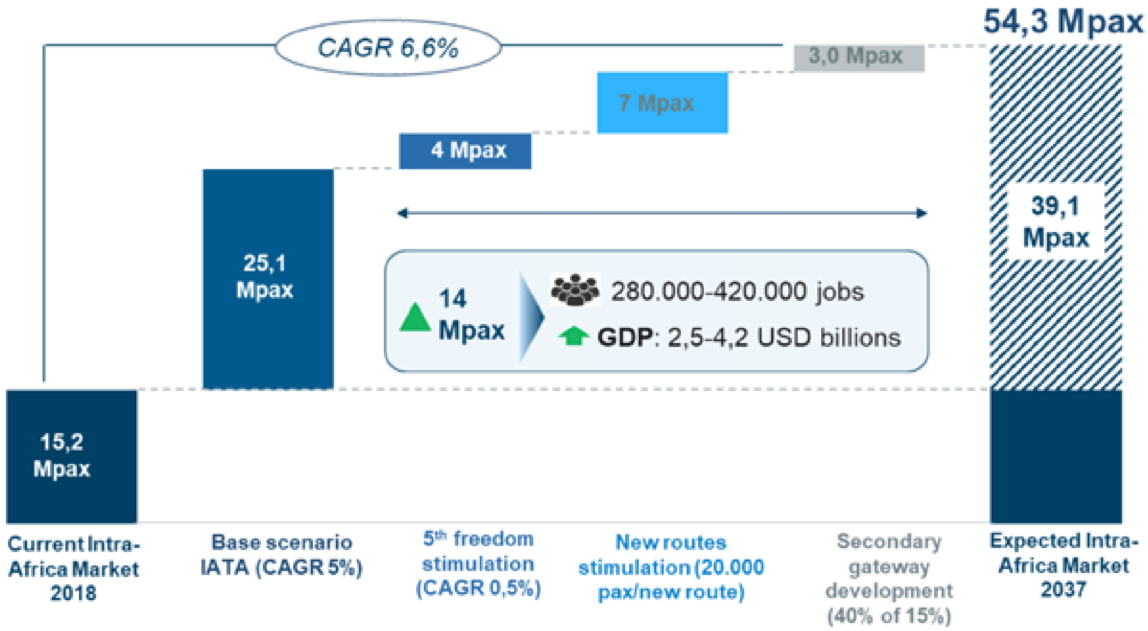


Figure 52: **Intra-Africa air connectivity forecast horizon 2037.** Source: ALG Analysis

The high-qualitative estimation of Intra-Africa traffic is based on the following rationale:
According to a base scenario contained in the study published by IATA/Oxford economics, the demand for air travel in Africa is expected to grow at a CAGR of 5% during the next 20 years if no policy changes are implemented. That will boost the current Intra-Africa market, which currently counts 15.2 Mpax (2018), to +25,1Mpax in 2037. By applying a direct extrapolation from the results of the previous studies and assessing the impact of SAATM and air liberalization, it can be estimated that SAATM could mean 14M additional passengers in 2037 for the whole intra-African market—including 5th freedom passengers´ stimulation, new routes traffic generation and secondary gateway development:

- The 5th freedom stimulation is estimated to provide an additional 4Mpax (CAGR 0.5%);
- The new routes stimulation should contribute with 20,000 pax/route which results in 7MPax; and
- The secondary gateway development adds the remaining 3Mpax. According to the regional benchmarking (page 43), and assuming that the airports gateway demand will be maintained, a 15% additional traffic is in secondary airports (40% of which would come from the Intra-Africa market, which correspond to 3Mpax).

To conclude, and based on the previous considerations, an incremental volume of 14MPax respect to the base scenario can be stimulated thanks to the air transport liberalization. This means an estimation of 54.3 Mpax for the intra-Africa market by 2037 (CAGR 6.6%).

6.3.3 Economic benefits

Indeed, the liberalization produces several additional effects at different levels. According to several industry sources and the above-mentioned studies, every additional 1M passengers travelling by air in Africa would support the creation of around 20,000-30,000 jobs. Thus, the additional traffic stimulated by SAATM could suppose the creation of up to 280,000 - 420,000 jobs across Africa.
Given the estimations that every job supported by aviation is contributing USD 9,000-10,000 to the African GDP, the total impact of SAATM would add USD 2.5-4.2 billion to the continent's economy.

7

Main conclusions and recommendations

7.1 Market liberalization benefits and risks

The development of air transport is strictly linked to the capacity of airlines to offer their services without any restrictions: with the freedom to set the adequate frequencies and fares on those markets where they consider an unattended demand. In this regard, the market openness in the air market is key to allowing national and foreign airlines to offer their services with the minimum limitations.
The introduction of new routes and frequencies, providing passengers with greater levels of connectivity, shorter travel times (and eventually lower fares) is one of the main drivers of air traffic growth. Particularly, air liberalization has proven to be one of the main triggers to the development of Low-Cost Carriers, given the necessity for these airlines to follow flexible multinational network strategies.
The example analysed for an African airline shows that the routes with stop-over and under 5th freedom rights have a higher load factor (+20 pp) than those without 5th freedom rights (see Figure 53)

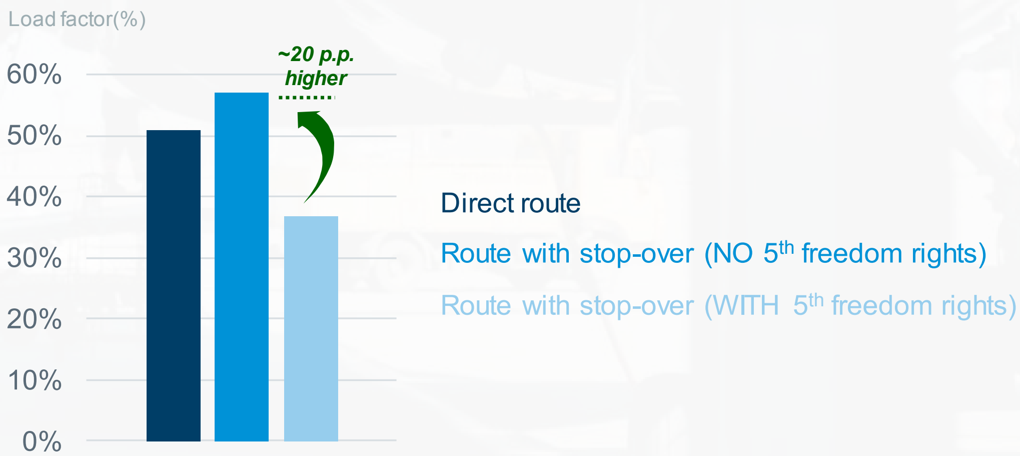


Figure 53: Load factor – African airline. Source: OAG – Traffic Analyser

The air traffic growth has direct and indirect positive effects on employment, trade, travel and tourism leading to the growth of the overall economy.
Nevertheless, air liberalization can be perceived by protectionist states as a threat to their national industry, which makes it necessary to highlight the benefits and propose mitigation measures to address their concerns. Some of the main challenges to be addressed when opening air transport market are that:

- Governments are usually afraid of the negative impact that the opening of their airspace to foreign competition could have on their national airlines. This is particularly relevant when governments are directly involved in the management of airlines. In this regard, a progressive outsourcing of airline operations has proved to be successful in other liberalization processes.
- Airlines need to adapt their strategies and look for the opportunities that market openness can bring them to develop their network in other countries. Following cooperative strategies and even mergers with other carriers also allow airlines to ensure financial sustainability. The participation of private equity and opening of the airlines to international funding should also alleviate their financial challenges, thus contributing to their success.
- One of the risks of air liberalization is the abuse of dominant positions or the extension of unfair competition practices. In order to reassure countries and airlines to opening their markets, it is important to have adequate antitrust regulations in place and create the institutions to ensure the settlement of disputes.
- Air liberalization benefits might not be fully achieved if additional measures are not implemented to ensure the free movement of people and goods. In this regard, measures such as the African passport and the continental free trade area should contribute to the success of the SAATM, and vice-versa.

7.2 African liberalization process and current challenges

The African aviation liberalization process started with the Yamoussoukro Declaration of 1988 (which was adopted by 44 African states in 1999 with the Yamoussoukro Decision). After a transitional period of 2 years, the regulation entered into force in August 2002. However, the liberalization process has not followed a homogenous implementation across the continent and has not yielded the expected results.

Consequently, the African Union decided to launch the Single African Air Transport Market (SAATM) in 2015 and included it as a flagship project of its Agenda 2063. As part of the SAATM, the African Union issued the commitment to the immediate implementation of the provisions contained in the Yamoussoukro Decision. The launch of the SAATM pursues the development of intra-African air connectivity, providing airlines with a regulatory framework that allows them to offer international services without restrictions as regards capacity and the setting of airfares (other than fair competition provisions).

As far as African institutions are concerned, the development of air transport in Africa is not comparable to the evolution followed in regions where liberalization processes have been implemented. However, it cannot be directly concluded that the lack of results is only due to the unsuccessful deployment of liberalization measures: the African aviation sector also faces many other issues that have detrimental effects on development. In fact, some countries with the most open approach to air liberalisation have not yet experienced major improvements on air connectivity. Several factors can be cited as the main barriers to preventing a successful development of air connectivity in the African continent:

- Limited infrastructure development, especially of secondary gateways that complement the country's main airport in the capital. The underdevelopment of regional connectivity in Africa (which is characterised by having very few secondary gateways with the capacity to operate commercial flights) does not allow using this segment as the initial stage of the liberalization process. Most African countries concentrate all their international traffic (or at least a very relevant share) in their capital, and Governments are reluctant to opening their main airports to foreign airlines without restrictions, thus preventing direct competition with their national carrier in their hubs.
- Moreover, the lack of secondary airports in most countries prevents the development of the domestic market, which is almost non-existent in many cases.
- The airport charges and government taxes on aviation in Africa are above worldwide average levels, accounting

for a great portion of fare prices and making air travelling even more unaffordable to most of the continent's population.

- Airline operating costs are also very high, mainly due to their high exogenous costs (fuel cost, ground services, aircraft financing, etc.). Limited access to financing is another of the main barriers for African airline development. Airlines normally depend on public financing (especially detrimental is the lack of financing for the purchase or lease of aircraft).
- The lack of free people movement in many countries with restrictive visa policies is also an important barrier to air connectivity development, making it very complicated for most African population to travel to neighbour countries. According to the latest UNWTO Visa Openness Report, 75% of African population need a visa to travel, of which more than 40% require a traditional visa (no eVisa or visa on arrival available).
- Unequal pace in the implementation of liberalization measures, even between the countries that have committed to SAATM and signed the Memorandum of Implementation. The protectionist attitude of governments, who are reluctant to open their internal markets to foreign airlines or investors, is to protect local entities. This issue is stressed in countries where governments are directly involved in the development of airlines and want to protect their flag carrier.
- Poor aviation safety, caused by inadequate oversight mechanism and regulations

7.3 Recent evolution of air connectivity in Africa

Despite challenges in the evolution of air transport in Africa, the aviation sector across the continent has followed a positive trend during the last decade, accounting for a 4.6% CAGR during the 2008-2018 period, and with growth accelerated in the last 2 years.

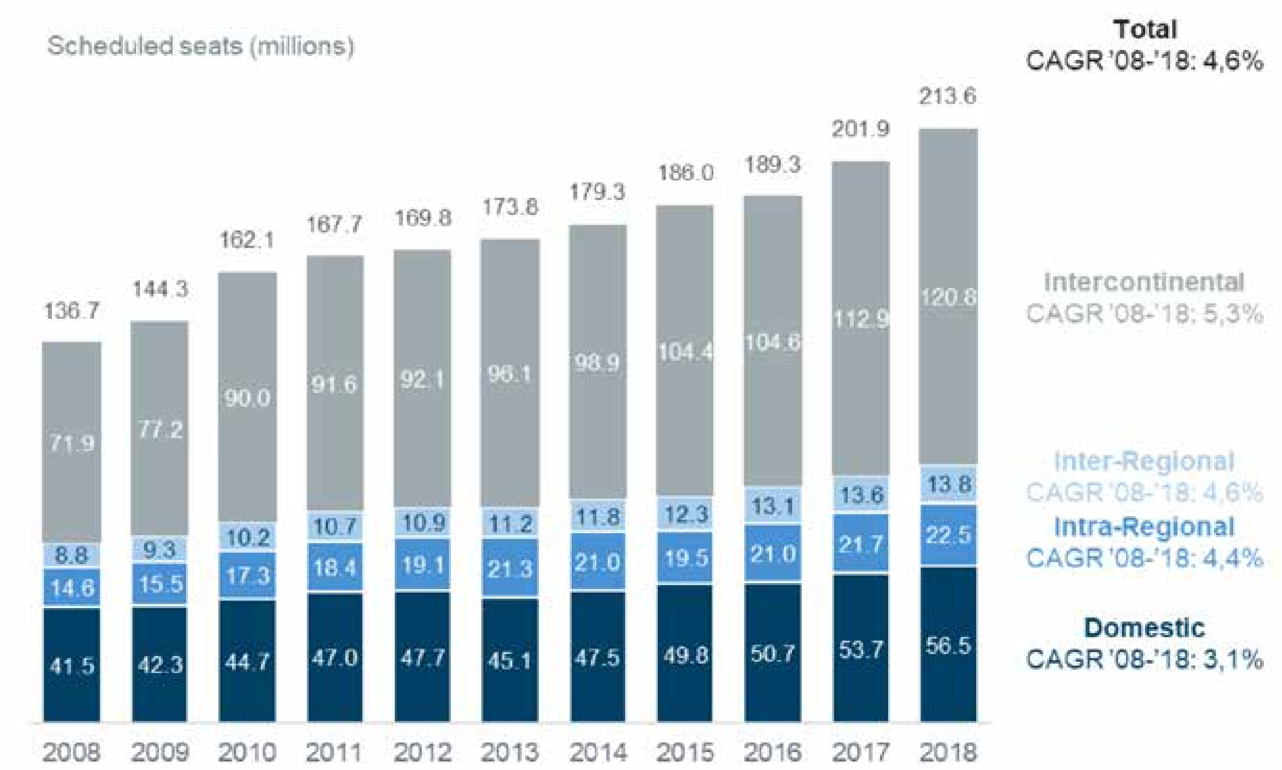


Figure 54: **Evolution of scheduled capacity in Africa 2008-2018 (excluding restricted seats).**
Source: OAG – Schedules Analyser

This positive evolution is also reflected on the growth of direct intra-African routes (routes connecting directly to airports within the continent), that have grown from 237 in 2008 to more than 350 in 2018 (with a high increase from the 319 routes operated in 2017).

In terms of airline development, Africa has now a few airlines that have reached a size that places them in a good position for profitability and success. Furthermore, some of these airlines are now part of the worldwide airlines alliances (South African Airways, Ethiopian Airlines and Egyptair in Star Alliance; Kenya Airways in SkyTeam and Royal Air Maroc in Oneworld) which proves their maturity and commitment to complying with international norms and best practices.

The analysis of the evolution of liberalization, and particularly of the use of fifth freedom rights, reveals a positive trend in capacity augmentation and in the proliferation of routes. The capacity operated thanks to fifth freedom rights represented in 2018 circa 15% of the total intra-African international capacity. All this capacity has allowed the introduction of new routes that would otherwise not have been offered by any airline and has increased competition in other previously-served segments.

Fifth freedom traffic rights were used to operate in 59 city-pairs, most of them in the Western and Central Africa, contributing positively to the connectivity in less developed regions. The concentration of most of the capacity deployed under fifth freedom rights is also related to the greater market openness in those regions, particularly in the countries part of the ECOWAS.

Despite the positive trend of the last decade, the development of air connectivity in Africa has been very heterogeneous with a few countries concentrating the major airlines and the busiest airports. The intra-African market is still particularly under developed. It accounted for only about 15M passengers in 2018, a very low volume of traffic judging by the continent's size and population. The development of the intra-African market should be approached from a local and a continental perspective:

- On a sub-regional level, it is important to concentrate the efforts in developing the secondary gateways in most of the countries (which are inexistent or have very poor infrastructures).
- On a regional level, direct links between neighbour countries should grow, ultimately removing the necessity to make long and expensive trips via connections at other airports.
- Finally, at continental and intercontinental levels, connectivity should be directed to the main African hubs (Addis Ababa, Johannesburg, Casablanca, Cairo and Nairobi) which constitute the gateways from Africa to the rest of the world.

7.4 YD and SAATM limitations

The launch of the SAATM, together with the Continental free trade area and the African passport MoveAfrica projects (along with branding African tourism) constitute good initiatives to tackle some of the issues and barriers mentioned above. However, some of the approaches of the SAATM can present limitations, particularly when compared to other liberalization processes successfully deployed in the past:

7.4.1 Regulatory scheme

As shown in the benchmarking analysis, all previous liberalization processes took very long to be fully implemented and were structured into different stages. Markets were gradually opened in terms of air freedoms, capacity limitations and fares setting.

- The deployment of EU and ASEAN Single Aviation Markets took a very long timeline and in both cases were opened very gradually. In the case of the ASEAN the process is still on-going and is expected to take years before its completion.

- Air freedoms were granted progressively, starting from just 3rd/4th freedom granting in regional airports to the full market liberalization.
- Capacity limitations were not removed at once and flexibility to the fares setting mechanisms was progressively introduced.

- Some of the motivations that can be argued to justify a step-by-step implementation starting by the sub-regional market from secondary airports are:
  - Stimulation of traffic at secondary gateways, as they are closer to a big portion of the population that nowadays have to travel long distances by road to reach the main airports
  - Provision of enough time so that national airlines can adapt to the new regulation before they are ready to open market access at their main hub

SAATM's spirit of implementing all the liberalization measures all at once (based on the YD regulatory text) might be regarded as ambitious by the most protectionist countries —and can in turn make them reluctant to joining. The complete removal of capacity limitations and the full liberalization of fares setting is also worrying for some carriers, especially if we consider the important involvement of African governments in their national carriers.

In this regard, it is important to keep on showing the benefits that air liberalization can bring in the mid-term. It is particularly important to stress the necessity to open the internal markets to competition and to private equity, gradually reducing the involvement of public institutions into the management of national airlines.

The liberalization of internal markets was one of the triggers that enabled the introduction of liberalization measures in other regions, which eventually contributed to the emergence of LCCs (and the consequent democratization of air transport thanks to the reduction on airfares).

7.4.2 Enhancement and financing of the SAATM institutions

One of the main reasons for the failure of the YD was the lack of a body with the power to enforce the regulations approved. It is important to highlight that once the YD entered into force, its provisions were binding for all the signatories and superseded any Bilateral Agreements in place between them. However, it has been clearly proven that the YD principles have not been implemented and that no political body or court of justice has been allowed to enforce them.

The proper regulatory and institutional framework is needed in order to empower the newly-created bodies including the Executing Agency so they can enforce the texts approved. And accordingly, it has to be made clear to Countries that non-compliant provisions in their BASAs will not be applicable. Ultimately, BASAs may not be needed anymore, as multilateral agreements would cover all the regulatory needs (e.g. EU Single Aviation Market model). It is also essential to establish the financing of the SAATM institutions in order to allocate the resources required during the implementation process and during the later stages—and especially for the fully dedicated teams needed and for the external advice when required.

- In this regard, the African institutions and governments should ensure the proper financing of the SAATM institutions, and they could study and evaluate the possibility of establishing a tax on air transport with the specific purpose of funding the SAATM institutions. This way, the regular functioning of the SAATM would be independent from governments, banks or other institutions and would ensure an ongoing funding (not dependent on political decisions or the financial health of its members).

  As has been pointed out, aviation costs in Africa are already high and the introduction of new taxes should be addressed carefully. In this regard, the possibility of introducing a tax to inter-continental flights might be analyzed, given that this market is less price-sensitive and that a low tax would have a very minor impact on ticket prices. The high volume of traffic in this market would allow raising enough money by just introducing a very low tax per flight (i.e. with ca. 86 MPax in the intercontinental market, a tax of less than 10 cents per passenger would be enough to raise up to USD 5 M. The impact of such a low tax on an intercontinental ticket price would be minor). In any case, the addition of taxes to domestic or intra African flights should not be contemplated.

- With such resources, the AFCAC, as Executing Agency of the SAATM could finance and increase the personnel and resources fully dedicated to the SAATM, in order to continually analyze, launch and re-evaluate the initiatives defined in the SAATM implementation roadmap. Examples of its concrete tasks could be:
    - Fix a clear timeline with future milestones and evaluate its actual implementation
    - Provide technical assistance to governments and civil aviation authorities with respect to the re-negotiation of BASAs and the transfer of the approved regulations into national legislation
    - Participate in the dissemination of the advancement in the implementation

7.4.3 Geographical scope

It is also worth highlighting that the other liberalization processes analyzed involved a significantly reduced number of countries:

- Only 10 states (with the later adhesion of Portugal and Spain in 1986) composed the European Union at the time of EU Single Aviation Market definition. All the other countries joining the EU after 1993 had to automatically adopt the Single Aviation Market. Moreover, by that time, the EU already had a long history of cooperation and had strong institutions in place.
- The ASEAN only has 10 member states, which have also been cooperating for many years. Moreover, in its first stages of implementation, countries were divided into sub-regions of just a few countries and liberalization at a regional level was introduced in later phases.

In both cases, all the countries of the organizations were part of the discussions and the decisions they took were binding for all the members (with some minor exceptions they could introduce in the regulations).

In the African case, it is also remarkable that, as previously cited, there are important differences on the level of maturity of aviation markets in the different countries and regions. In this regard, some countries could still not be ready for a full implementation of the SAATM at the same pace than those other countries with more developed economies and aviation industries. The main differences between countries are:

- Inexistent or under-developed secondary airports network at many countries
- Unequal development of national airlines
- Countries with very low demand levels, mainly triggered by underdeveloped economies
- Political instability

It would be far from realistic to expect important results from the implementation of the SAATM in countries where airports are not ready, without any relevant airlines or with very low levels of demand. In fact, in some of those markets the involvement of public institutions and governments in the development of air transport and airlines might still be necessary.

7.5 Should the SAATM redefine its implementation strategy?

Bearing in mind the aforementioned differences between African countries and regions —and the difficulties this fact presents for a smooth and homogeneous implementation of the SAATM— a hybrid implementation strategy should be evaluated to accommodate the different pace that every country or region can follow. The proposed strategy would change the vision that of “Champion countries” to a “Champion Region”.

An approach based on the gradual implementation of liberalization initiatives from a sub-regional to a continental level could complement the deployment of the SAATM and would probably yield results earlier. The selection of a region with a good level of integration, adequate infrastructures and airlines would also set an example to other regions by showing the benefits obtained as a result of its implementation.

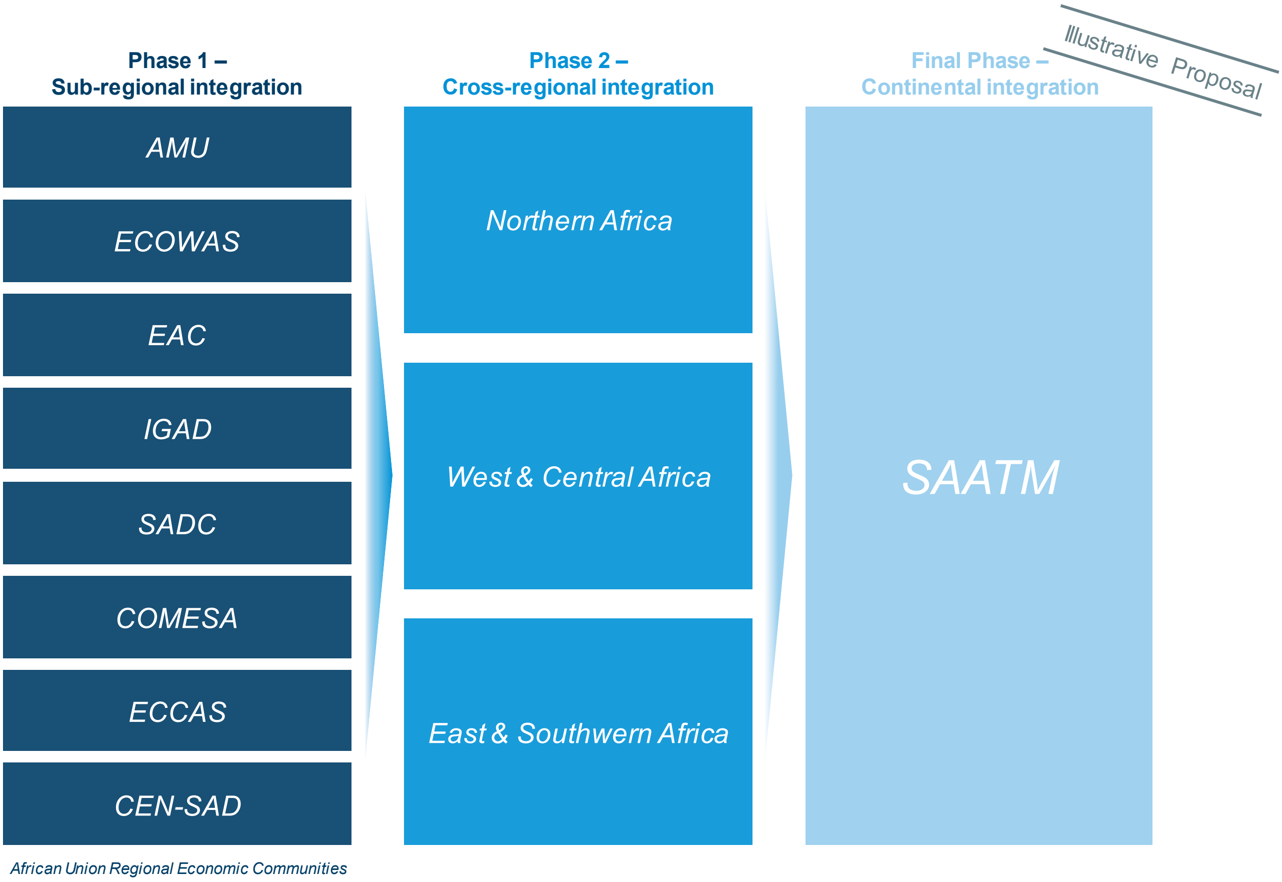


Figure 55: SAATM geographical implementation. Source: ALG Analysis

- In this regard, a region like Southern and Eastern Africa could set an example to other regions as it fulfills most of the requirements needed to succeed in the implementation of the liberalization measures:
  - A well-integrated region with mature institutions in place (COMESA) and with previous experience in the development of regional projects
  - Several countries committed to the SAATM
  - Considerable levels of demand, especially in some of its countries
  - Adequate infrastructures in most countries, including secondary gateways
  - Airlines with relevant volumes of traffic and multinational strategies
  - Easier movement of people and goods
- The SAATM roadmap, implementation timeline and current objectives on a continental level should be maintained and complemented by the specific measures to be developed in the selected “Champion region”. Some of the measures to be deployed in the selected region could include the extension of liberalization measures to the 7th freedom of the air and the opening of internal markets to private equity and international investors (as well as to reinforce the role of the AFCAC to oversee the proper implementation of the SAATM initiatives). It is important to note that the liberalization of the international air transport market in many parts of

the world came about as a natural consequence of deregulated domestic airline markets.

- Once the implementation at this region has reached a certain maturity, the results and lessons learnt will be used to continue with the process in other countries, in turn making for an easier implementation.

Based on the abovementioned reassessment of the geographical scope and the implementation phases of the SAATM, the appropriateness of the Yamoussoukro Decision text could be reconsidered in the future. As an example, the EU Single Aviation Market consisted of several decisions and regulations that revoked the previous texts. In the case of ASEAN, two different Multilateral Agreements and a total of 10 Protocols have already been signed. At the same time, it is also important to keep working towards developing the additional regulations, particularly those concerned with the settlement of disputes.

7.6 African Development Bank contribution

One of the main barriers faced by SAATM and other liberalization processes is the resistance to change by those countries that are concerned about opening their aviation market to foreign competitors. In this regard, it is necessary to keep advocating for the benefits of air liberalization.

However, it is also important to avoid creating false expectations when the implemented measures will show their effects: as shown in the benchmarked analysis, the implementation of all liberalization agreements required long timelines. Following those examples, the SAATM Executing Agency should focus more closely on the robustness of the proposed measures and on their effective implementation rather than on the number of countries committed or the immediacy of results.

Regarding the benefits that liberalization could bring, it is also necessary to highlight that it will not bring any benefits by itself if additional measures are not taken to face other issues of the African aviation sector: high cost of air transport, lack of competition in ground services, infrastructure constraints, and a lack of airline financing.

The promotion of market access and liberalization constitutes a critical step in facilitating the successful implementation of other initiatives (i.e. provide suitable operating conditions for LCCs and facilitate their expansion) and not as an end in itself. Some of the actions to be carried out in order to raise the States' awareness about the benefits of air transport sector and its liberalization include:

- The selection of the region with the highest willingness and potential for full implementation of the SAATM measures and conducting of an in-depth analysis of its aviation sector and regulations. In particular, an analysis of the status of national regulations and the advancements to be done at local level to harmonize the national law with the multilateral agreements.
- Finance the regional institutions needed to implement the agreed liberalization measures in the selected region and disseminate the results obtained in the rest of the continent. As the process progresses, study the potential regions where liberalization measures could be applied in later stages.
- Keep analyzing all the other necessary measures to develop the aviation sector in Africa and stress how they are impacted and triggered by the market liberalization (i.e. the success of LCCs worldwide is always related to their ability to follow multinational strategies, boosted by the free access to foreign markets). Measures regarding the reduction of operating costs in the sector are especially important as they would allow a wider access of population to air transport services.
- In those regions with a weaker air transport ecosystems, the Bank could support the construction and improvement of regional airports within the adequate institutional framework (e.g.: an independent airport corporation) as a first step towards the effective liberalization of the market. Moreover, having a relevant network of regional airports constitutes a critical step towards the development of domestic traffic, which plays a key role in the launch of new national airlines.

- Study potential contributions of the air transport sector to the overall economy from a holistic point of view, focusing not only on the technical and economic analysis of the sector itself, but also to other air transport dependent sectors such as tourism, trade, investment etc. The measures taken to improve air connectivity in Africa will not succeed if they are not followed by initiatives to support all the related sectors and the overall economy.

Annex I

Freedoms of the air

The freedoms of the air are a set of commercial aviation rights granting a country's airlines the privilege to enter, land or others geographic specifications in another country's airspace. There are nine freedoms of the air defined from less to more rights:

1. **First Freedom of the Air -** the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to fly across its territory without landing.
2. **Second Freedom of the Air -** the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to land in its territory for non-traffic purposes.
3. **Third Freedom of The Air -** the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down, in the territory of the first State, traffic coming from the home State of the carrier.
4. **Fourth Freedom of The Air -** the right or privilege, in respect of scheduled international air services, granted by one State to another State to take on, in the territory of the first State, traffic destined for the home State of the carrier.
5. **Fifth Freedom of The Air -** the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down and to take on, in the territory of the first State, traffic coming from or destined to a third State.
6. **Sixth Freedom of The Air -** the right or privilege, in respect of scheduled international air services, of transporting, via the home State of the carrier, traffic moving between two other States. ICAO characterizes all «freedoms» beyond the Fifth as «so-called» because only the first five «freedoms» have been officially recognized as such by international treaty.
7. **Seventh Freedom of The Air -** the right or privilege, in respect of scheduled international air services, granted by one State to another State, of transporting traffic between the territory of the granting State and any third State with no requirement to include on such operation any point in the territory of the recipient State, i.e the service need not connect to or be an extension of any service to/from the home State of the carrier.
8. **Eighth Freedom of The Air -** the right or privilege, in respect of scheduled international air services, of transporting cabotage traffic between two points in the territory of the granting State on a service which originates or terminates in the home country of the foreign carrier or (in connection with the so-called Seventh Freedom of the Air) outside the territory of the granting State (also known as «consecutive cabotage»).
9. **Ninth Freedom of The Air -** the right or privilege of transporting cabotage traffic of the granting State on a service performed entirely within the territory of the granting State (also known as «stand alone» cabotage).

The following figure illustrates the nine freedoms of the air of the home state with respect to a state A (being B a different state to home state and state A):

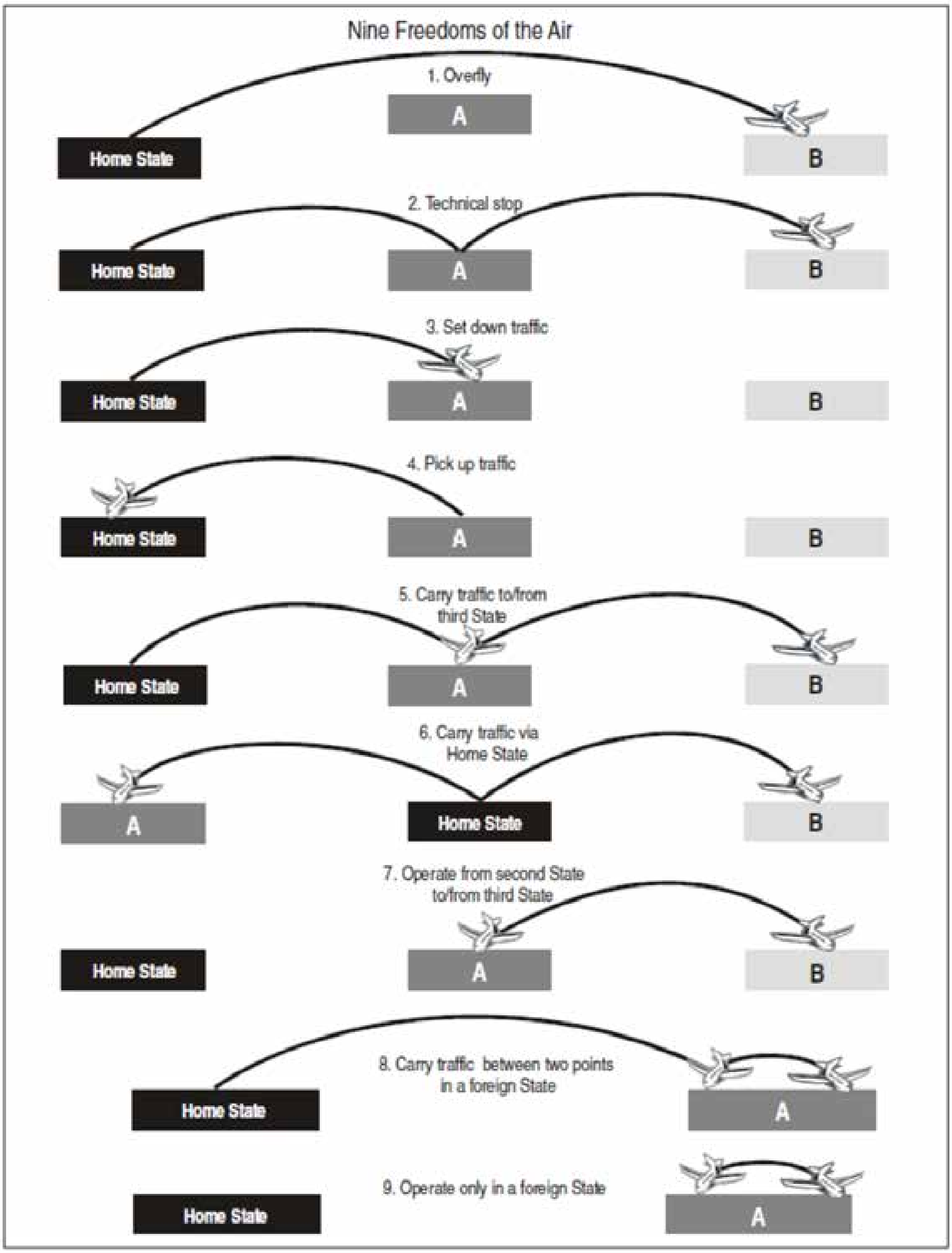


Figure 56: The Nine Freedoms of the Air. Source: Manual on the Regulation of International Air Transport (Doc 9626, Part 4)

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