

# Strategies for the Airline Industry on the African Continent

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## Abstract

African Aviation continues to fall short of serving the demands of the fast-growing African population. For major air transport in and out of the African continent, African travellers rely mainly on non-African Airlines. There is, however, one successful airline on the continent at the writing of this paper: Ethiopian Airlines and the Ethiopian Aviation Group. Why are no further successful airlines possible on a continent of 1.4 billion people (25% of the world's population) and only a 2%-share of global air transport? At the introduction of SAATM, which is anticipated as the start of the domestic African aviation boom, most African countries seem unprepared to build a success story like Ethiopia. Transportation infrastructure in sub-Saharan Africa does not start with roads and rail but with runways and airlines. This research investigates the basic requirements needed to equip Africa with a competitive aviation industry that would contribute some 5% to the continent's GDP and create hundreds of thousands of workplaces. Interviews with African SAATM leaders signal a slowdown in the effort to succeed. The research is also concerned about the lack of inclusion in the implementation of a NetZero CO<sub>2</sub> emission scheme in Africa.

## Keywords

African Aviation, SAATM, African Air Transport Industry, African Airlines, NetZero

## 1. Introduction

Contrary to the promise of the International Civil Aviation Organisation (ICAO) "No country left behind", which originally meant that all United Nations (UN) members are held to the same rules and regulations of air transport, Africa is falling behind. The goal was for air transport to become a major infrastructure

component of every state in order to grow the gross domestic product (GDP) and the jobs created by air transport. Africa has 1.4 billion people today, about 20% of the global population, but barely achieves 2% of the world air transport market. When looking at the airborne global flights on 1 October 2024 (Figure 1 [1]), the “hole” in aviation over Africa is obvious, as detailed in Figure 2 [1].



Figure 1. Global aviation traffic (1-10-24).



Figure 2. African aviation traffic (1-10-24).

The main air traffic in West Africa connects a few major cities along the Atlantic coast. Nigerian aviation (at 230 million Nigerians in 2023) contributed according to Oxford Economics in 2023 \$2.5 billion to Nigeria’s GDP, a bare 0.7%, employing 217,000 people in aviation [2]. In the US, with 330 million people, aviation drives 4.7% of the US GDP—the equivalent of \$1.3 trillion in 2023. Every day, US airlines operate more than 25,000 flights carrying 2.5 million passengers to/from 80 countries and more than 59,000 tons of cargo to/from more than 220 countries,

with 7.6 million people working in the US aviation industry [3]. One example of success in African aviation is Ethiopian Airlines (ET). This national airline, together with the Ethiopian aviation industry driven by ET, and 100% owned by the Ethiopian government, contributed \$4.15 billion to the Ethiopian GDP in 2019. This was 5.7% of the national GDP, employing 1.1 million people. After ET used COVID-19 to ignite its cargo business significantly, the GDP contribution rose to over \$6 billion, more than 8% of the nation's GDP. With 128 million people and a nominal GDP of \$156 billion, Ethiopia has the lowest per capita income (\$1,473) amongst Nigeria (\$1,755), Kenya (\$2,187) and South Africa (\$6,426), and yet has only functioning, profitable and government-owned aviation corporation (airline, airport, MRO, training college, cargo, catering, duty-free) in Africa.

How can this be? Ethiopia grew from one of the poorest, draught-stricken countries to a blossoming state, driven by the national carrier ET as the key developer of industry, tourism, and cargo delivery. Addis Ababa has become the major hub in East Africa, even with the disadvantage of 2300m altitude and the respective lower aircraft performance, especially for long-haul flights. In a regression analysis, Nigerian researchers Anfofum, Zakaree, and Iluno demonstrated a positive correlation between the GDP contribution of the aviation industry and the growth factor of the country's GDP [4].

This research paper looks at the state of the African aviation industry at the dawn of the implementation of the Single African Air Transport Market (SAATM). 37 of 54 African states have meanwhile signed the SAATM contract. Together with the visa-free travel under the AU Agenda 2063, the African Continental Free Trade Area (AfCFTA), SAATM shall lead to a boost in inner African air transport, driven by those airlines which may agree on the following determinants when building a successful and profitable airline operation:

- 1) independence from governmental directions
- 2) a modern fleet suitable for the market
- 3) rigorous, reliable and on-time performance
- 4) a passenger-focused service with online booking flexibility
- 5) a team of well-educated professionals
- 6) a sustainable aviation concept of NetZero CO<sub>2</sub> emissions and Sustainable Aviation Fuel (SAF), the key to ICAOs global commitment to reach NetZero CO<sub>2</sub> emissions by 2050.

### **The State of Aviation in Africa**

Africa seems on the move. Journalists write about the African spirit and the opportunities of a continent struggling with high poverty, lack of education, environmental disasters, and generally high corruption. Suddenly, Africa moves into the spotlight, as its current 1.4 billion people, soon to be doubled, provide plenty of qualified workforce while the so-called developed countries contend with declining populations, not only the qualified professions but also the workforce needed to grow their GDP.

**Table 1.** Global population development (in millions).

Region	2022	2030	2050
World	7,942	8,512	9,687
Sub-Saharan Africa	1,152	1,401	2,094
Northern Africa and Western Asia	549	617	771
Central and Southern Asia	2,075	2,248	2,575
Eastern and South-Eastern Asia	2,342	2,372	2,317
Latin America and the Caribbean	658	695	749
Australia/New Zealand	31	34	38
Oceania	14	15	20
Europe and Northern America	1,120	1,129	1,125
Least developed countries	1,112	1,328	1,914
Landlocked developing countries	557	664	947
Small island developing countries	74	79	87

The population estimates of the United Nations in **Table 1** [5] above signify a decline of the Chinese population until 2050, a stagnant or moderate climb in most regions, but significant growth in sub-Saharan Africa and Central and Southern Asia. Nigeria will grow from 230 million people to over 500 million in the coming 35 years, which would make it No. 3 in the world behind India and China.

Sub-Saharan Africa is forecasted to grow to over 2 billion people by 2050, then making up 20% of the world's population. This includes several landlocked and least developed countries, which tend to grow faster in population due to socio-economic effects (religion, generation caretaking, lack of birth control). The main concern is the already high poverty rate (Nigeria > 40%) and the high youth unemployment (Nigeria > 50%). On the one hand, there are young people without proper education, on the other hand, undergraduate alumni without job opportunities.

The African Union, in its Agenda 2063, aims to unite Africa as one economic power, "an integrated, prosperous, and peaceful Africa, driven by its citizens, representing a dynamic force in the international arena" [6]. One of the flagship projects of the AU is SAATM, promoting intra-regional connectivity between the capital cities of Africa by creating a single unified air transport market in Africa, as an impetus to the continent's economic integration and growth agenda [6]. The other flagship project tightly connected to the success of SAATM is the African Continental Free Trade Agreement (AfCFTA), which removes restrictions on Africans' ability to travel, work and live within their continent. It transforms restrictive laws and promotes visa-free travel to allow the movement of all African citizens in all African countries. AfCFTA will be the world's largest free trade area, bringing together the 54 countries of the African Union (AU), to create a single continental market for a population of about 1.3 billion people and with a combined GDP of approximately US\$3.4 trillion [6]. This looks like the European Union and the European Open Skies, together with the Schengen Agreement of inner-European free movement. But would this be possible in Africa, by 2063?

So far, only 37 of the 54 African countries have signed the SAATM agreement, as shown in **Figure 3** [7]. Touristic hotspots, like the Seychelles or Mauritius, may not see the benefits, and other nations are politically not ready to join the single African air transport market. However, not all European countries are part of the EU or Schengen either. Moreover, it is one thing to sign the SAATM agreement, and another to accept what comes with it, namely open skies between all African countries.



**Figure 3.** SAATM Signees 2024.

Some airlines still insist on adhering to Bilateral Air Services Agreements (BASAs), “tit for tat” in frequencies and seats offered by both origin airlines of the two countries. Competition is, of course, the name of the game. With SAATM, the already well-established African airlines have a head start and can easily dominate the African market. This is even more true for most countries that have not yet managed to give sufficient support to a domestic national carrier, privately or government-owned. As per **Figure 4** below, established by the author, there are only a few states with a sizeable local airline. Taking the EU as an example, one fear is that in the end, only three or four airlines will dominate the market, as Lufthansa, IAG and AirFrance/KLM do in Europe (together with a few large low-cost airlines). **Figure 4** also displays the risks of global aviation investment in most African countries: the lack of transparency, and fair and commercially viable finance and tax regulations.

African States - Key Figures										
No	Country	Capital	People (M)	Aerea (1000m2)	Transparency Index (Jan.2024)	State Form	SAATM Signee (Jan 2024)	Sched. Dom. Airlines (AC/Capacity)	National Airline (AC/Capacity)	International Airlines (non-African)
1	Algeria	Algier	44	2.382	104	Presidential Republic		Tassili (14/1529)	Air Algeria (48/11309)	Air France, Lufthansa, British Airways, Iberia, Its Qatar, Emirates, Royal Jordanian
2	Angola	Luanda	35	1.247	121	Authoritarian President	Yes	None	TAAG Angola Airlines (14/6,464)	Air France, Lufthansa, Brussels, Tap, Qatar, Emirates
3	Benin	Porto-Novo	13	115	70	Presidential Republic	Yes	None	None	Qatar, Turkish
4	Botswana	Gaborone	3	582	39	Presidential Republic	Yes	None	Air Botswana (3/257)	Qatar
5	Burkina Faso	Ouagadougou	22	274	83	Military Authoritarian	Yes	Liz Aviation (3/280)	Air Burkina (3/449)	Air France, Turkish, Qatar
6	Burundi	Gitega	13	28	162	Authoritarian Republic		None	None	None
7	Cameroon	Yaoundé	27	475	140	Authoritarian Republic	Yes	None	Camair (5/808)	Air France, Brussels, Turkish
8	Cape Verde	Praia	1	4	30	Presidential Republic	Yes	TICV (1/144)	Cabo Verde Airlines (2/294)	Tap
9	Central African Republic	Bangui	6	623	149	Authoritarian Republic	Yes	None	None	Air France
10	Chad	N'Djamena	17	1.284	162	Military Authoritarian	Yes	None	None	Air France, Turkish
11	Comoros	Moroni	1	2	162	Presidential Republic		None	None	None
12	Congo, Democratic Republic of	Kinshasa	96	2.345	162	Authoritarian Republic	Yes	flyCAA (6/1223)	Congo Airways (4/856)	Air France, Brussels, Turkish
13	Congo, Republic of	Brazzaville	6	342	158	Presidential Republic	Yes	None	TransAir Congo (1/553)	Air France
14	Djibouti	Dschibuti-Stadt	1	23	130	Presidential Republic		None	None	Air France, Qatar, Turkish
15	Egypt	Kairo	109	1.001	108	Authoritarian President	Yes	Air Arabia Egypt (4/696) Air Cairo (29/4750) Alexandria Airlines (2/487) Al Masri (5/1333) Fly Egypt (2/543) Nesma Air (2/872) Nile Air (6/1277) Cronos (1/175)	Egypt Air* (63/15,197)	Everybody
16	Equatorial Guinea	Malabo	2	28	172	Authoritarian Republic	Yes	None	CEIBA (3/118)	Air France, Lufthansa, Turkish
17	Eritrea	Asmara	4	118	161	Authoritarian President		None	None	Turkish
18	Eswatini	Mbabane	1	17	130	Kingdom	Yes	None	Eswatini Air (4/186)	None
19	Ethiopia	Addis Abeba	120	1.104	98	Parliamentarian Republic	Yes	None	Ethiopian Airlines* (126/31,300)	Emirates, Lufthansa, Qatar, Turkish
20	Gabon	Libreville	2	268	136	Authoritarian Republic	Yes	Afrijet (3/394)	None	Air France, Turkish
21	Gambia, the	Banjul	3	11	98	Presidential Republic	Yes	None	None	Turkish, Brussels, Tap
22	Ghana	Accra	33	239	70	Parliamentarian Republic	Yes	Africa World (4/450) Passion Air (4/306)	None	Air France, British, Delta, KLM, Brussels, Turkish, Qatar, Emirates
23	Guinea	Conakry	14	246	141	Authoritarian Republic	Yes	None	None	Air France, Turkish, Brussels, Tap, Emirates
24	Guinea-Bissau	Bissau	2	36	158	Presidential Republic	Yes	None	None	Tap
25	Ivory Coast	Yamoussoukro (Abidjan)	28	322	87	Presidential Republic	Yes	None	Air Cote d'Ivoire (9/1338)	Air France, Brussels, Turkish, Tap, Emirates
26	Kenya	Nairobi	53	580	126	Presidential Republic	Yes	AfricanExpress (3/297) AirKenya (6/222) Freedom (5/378) Jambojet (8/628) Safarilink (3/176) Skyward (5/454)	Kenya Airways*** (31/4,813)	Everybody
27	Lesotho	Maseru	2	30	93	Kingdom	Yes	None	None	None
28	Liberia	Monrovia	5	111	145	Presidential Republic	Yes	None	None	Brussels
29	Libya	Tripolis	7	1.760	170	Transitional Parliament		Afriqiyah (5/1776) Bernie (5/806) Buraq (2/470) Crown (1/150) FlyOya (2/415) Libyan Wings (4/496) MedSky (1/444)	Libyan Airlines (2/1551)	None

30	Madagascar	Antananarivo	29	587	145	Presidential Republic		Tsaradia (3/477)	Air Madagascar (1/275)	Air France, Turkish
31	Malawi	Lilongwe	20	118	115	Presidential Republic		None	Malawi Air (1/339)	None
32	Mali	Bamako	22	1.240	136	Presidential Republic	Yes	None	Sky Mali (2/328)	Air France, Turkish
33	Mauritania	Nouakchott	5	1.031	130	Presidential Republic		None	Mauritania Air (6/636)	Air France, Turkish
34	Mauritius	Port Louis	1	2	55	Parliamentarian Republic		None	Air Mauritius (11/3,654)	Air France, British, Turkish, Emirates, Austrian,
35	Morocco	Rabat (Casablanca)	37	447	97	Kingdom	Yes	Air Arabia Maroc (9/1,755)	Royal Air Maroc** (47/9,611)	Everybody
36	Mozambique	Maputo	32	786	145	Presidential Republic	Yes	None	LAM (4/1228)	Qatar, Turkish, Tap
37	Namibia	Windhoek	3	824	59	Presidential Republic	Yes	None	FlyNamibia (3/137)	Qatar
38	Niger	Niamey	25	1.267	125	Military Authoritarian	Yes	None	Niger Airlines (1/50)	Air France, Turkish
39	Nigeria	Abuja (Lagos)	213	924	145	Presidential Republic	Yes	AeroContractor (2/1009) AirPeace (15/5595) ArikAir (3/1537) DanaAir (4/853) GreenAir (2/210) IborAir (5/2122) MaxAir (3/2730) NGEagle (5/591) Overland (5/578) Rano (3/250) UnitedNigeria (2/516) ValueJet	None	Air France, British, Delta, KLM, Lufthansa, Turkish, Emirates, Qatar
40	Rwanda	Kigali	14	26	49	Authoritarian Republic	Yes	None	Rwanda Air (12/1946)	KLM, Qatar, Brussels, Turkish
41	São Tomé and Príncipe	São Tomé		1	67	Parliamentarian Republic	Yes	None	None	Tap
42	Senegal	Dakar	17	197	70	Presidential Republic	Yes	Transair (4/384)	Air Senegal (5/2441)	Air France, Delta, Iberia, Tap, Brussels, Turkish, Emirates
43	Seychelles	Victoria		1	20	Presidential Republic		None	Air Seychelles (6/481)	Air France, British, Emirates, Qatar, Turkish
44	Sierra Leone	Freetown	8	72	108	Presidential Republic	Yes	None	None	Air France, Brussels, Turkish
45	Somalia	Mogadishu	17	638	180	Authoritarian Republic		None	None	Qatar, Turkish
46	South Africa	Pretoria (Johannesburg, Cape Town)	59	1.219	83	Presidential Republic	Yes	Airlink (52/5030) CemAir (18/1671) Safair (31/6369)	South African Airlines* (8/2379)	Everybody
47	South Sudan	Juba	11	644	177	Authoritarian Republic		None	None	None
48	Sudan	Khartum	46	1.879	162	Military Republic		Badr (2/670) Tarco (16/1651)	Sudan Airways (1/148)	Turkish, Emirates
49	Tanzania	Dodoma (Dar Es Salaam)	64	947	87	Presidential Republic		Precision (5/556)	Air Tanzania (10/2110)	Emirates, Swiss, KLM, Qatar,
50	Togo	Lomé	9	57	126	Presidential Republic	Yes	None	ASKY (14/2274)	Air France, Brussels
51	Tunisia	Tunis	12	164	87	Presidential Republic		NouvelAir (11/2465) TunisExpress	Tunis Air (15/5712)	Air France, Lufthansa, Turkish, Emirates, Qatar,
52	Uganda	Kampala	46	242	141	Authoritarian Republic		None	Uganda Airlines (6/820)	KLM, Brussels, Qatar, Emirates, Turkish
53	Zambia	Lusaka	20	753	98	Presidential Republic	Yes	Proflight (7/334)	Zambia Airways (2/232)	Turkish, Emirates
54	Zimbabwe	Harare	16	391	149	Presidential Republic	Yes	Fastjet (3/309)	Air Zimbabwe (2/1381)	Emirates, British
	Total		1392							*=Star Alliance **=OneWorld Alliance ***=Sky Team Alliance

Figure 4. African states & airlines, by author. [8]-[10]

Speaking of low cost, which originated in the US with SouthWest, this might be a specific solution for SAATM and the inner African air transport. The successful model of RyanAir and EasyJet is based on concentrating on Europe, opening bases in many European capitals and offering high-frequency connections between all regional cities in Europe. No connection to an international carrier, just within Europe.

However, most African nations would like to get a share of the profitable business from the international non-African airlines that are charging high ticket

prices, especially on African routes. They fail to recognize the opportunities of inner-African SAATM and instead focus on international destinations outside Africa. This brings with it several pitfalls. First, SAATM can support international connections only as long as passengers have no direct connection from their country to international destinations. Second, intercontinental connections are managed by BASAs, and every African airline flight can be matched by a non-African competitor. Third, not being part of one of the three airline alliances, OneWorld, Star, or SkyTeam, and having access to a global network with code shares and more, would present a significant disadvantage, with loyalty cards and network options being a major competitive advantage for alliance members. Fourth, safety, security, and regulatory compliance are not sufficient in many African countries. Airlines from such countries would not get access to European and North American markets, despite BASAs.

This paper intends to open the discourse of solutions, some of which are developing already, to accelerate the growth of the aviation industry in Africa, not only to reach the targets of the Agenda 2063 of the AU, but also the 2050 commitment of NetZero CO<sub>2</sub>-emissions, to allow Africa and its fast-growing population to profit from the economic impact of aviation in Africa as a cohesive continent.

## 2. Research Questions

Next to the current 37 African States and the AU, ICAO and IATA are involved in launching African support for the development of a competent aviation industry. However, other than regular aviation conferences, the aviation sector in Africa seems to be in decline rather than growing. The main reason is the lack of independence in the aviation industry in individual countries. SAATM agreements are easily signed, but the governments are keeping their hands on airlines, airports and other aviation-related companies, including aviation schools and universities.

The author, together with his MSc students, has interviewed key aviation stakeholders in Africa for their opinions and suggestions. An interview with the Secretary General of AfCAC, in September 2024, adds to the expectations, African aviation leaders target in the next 25 years.

Specifically, the research questions are:

- a) How can SAATM lead to a successful African aviation industry?
- b) Why do African airlines resist the implementation of SAATM?
- c) How is the African aviation industry realizing the 2050 NetZero CO<sub>2</sub> emission targets?

As **Figure 4** shows, there are only a few countries in Africa that have significant operating airlines. An interesting contrast in airline success can be found by comparing Ethiopian Airlines and airline industry in Nigeria.

All data in this paper was supported by the ongoing research of MSc Aviation Management students at AAAU, and the author's 20 years of experience in African aviation, particularly in Nigeria and Ethiopia, as well as many African aviation leaders who want their continent to thrive.

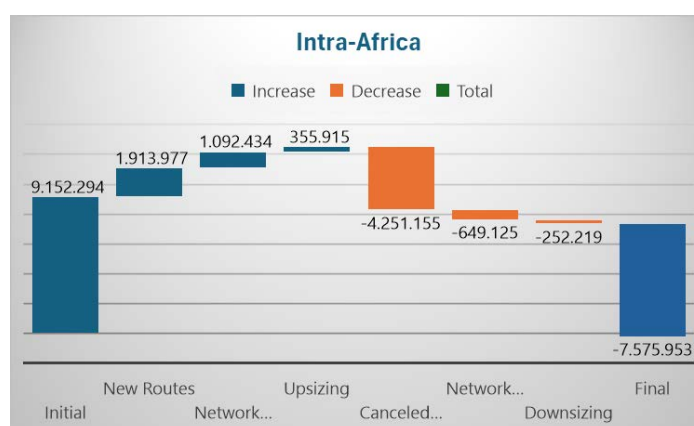
### 3. SAATM and African Airline Economics

#### 3.1. African Airline Operations

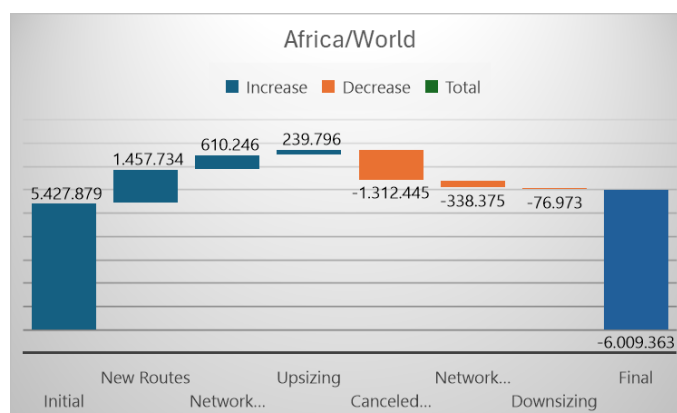
In January 2024, as per the monthly AFRAA/OAG report, summarized in **Figures 5-10** [11], the African airline industry offered over 9 million intra-African seats, which increased by new routes, network growth and upsizing, but decreased more significantly by over 4 million seat cancellations and further network attrition and downsizing to 7.2 million seats. Africa-to-the-World seats grew slightly to 6 million seats offered, so overall, with initially over 20 million seats planned, 13.4 million seats were offered for the whole African airline market. It is concerning that of the 12 million seats planned for inner-African air traffic, only 7 million could be offered. This is likely attributable to the airport, aircraft, and governmental restrictions still present in inner-African air travel.

The passenger numbers in Africa have grown back to 2019 levels. Almost 100 million passengers are expected in 2024 [11].

The revenue for all African air transport remained constant at \$1.7 billion per month, for the first time the 2024 revenue shall surpass the 2019 revenues. The ASKs and RPKs have also reached 2019 levels at 28 billion ASKs and 22 billion RPKs per month.



**Figure 5.** Intra-African seats Jan/24.



**Figure 6.** Africa/World seats Jan/24.

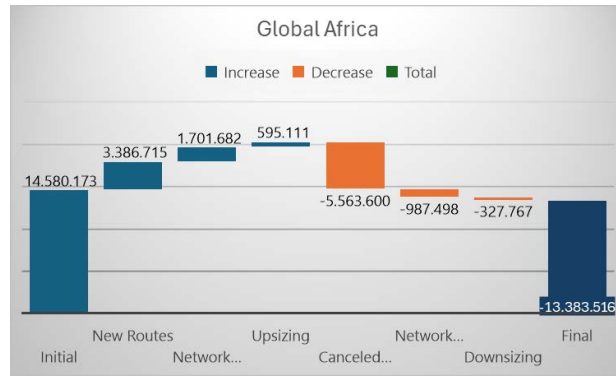


Figure 7. Global African seats Jan/24.

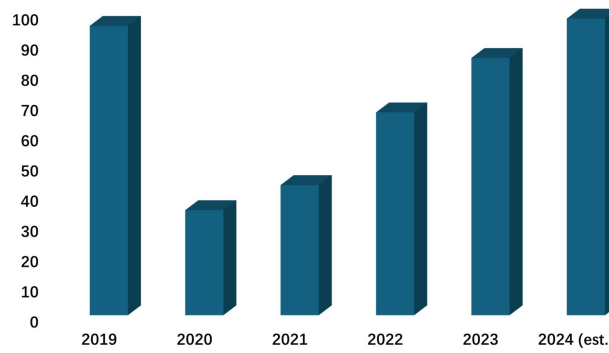


Figure 8. African airline revenues in billion \$.

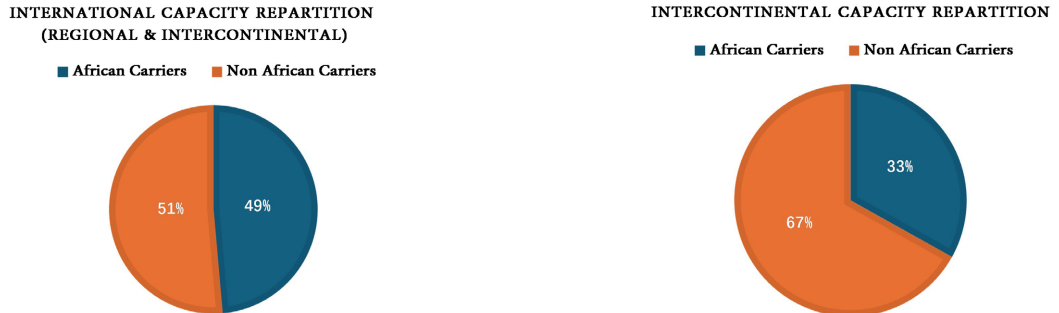


Figure 9. Share of African airlines in total African flights.

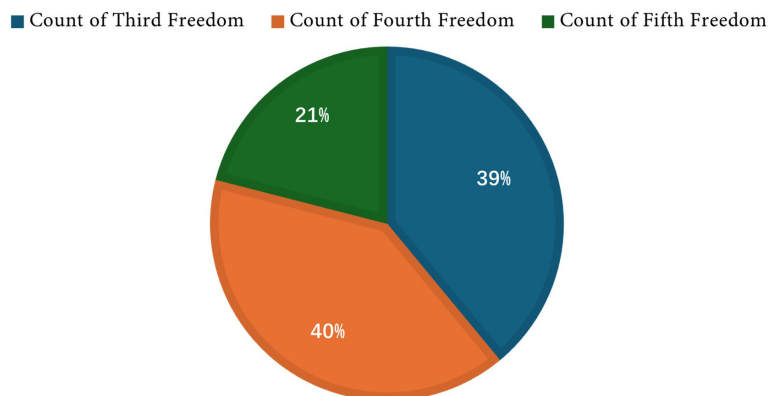


Figure 10. 3rd/4th/5th freedom segmentation in African air traffic.

The distribution between African and non-African airlines in January 2024 shows the deficit of African airlines on intercontinental routes, where only 33.1% of flights are handled by African airlines. Even on all flights originating in Africa, half of the flights are handled by non-African airlines. The distribution between 3rd, 4th and 5th freedom (January 2024) shows that only 21% of the flights originate from the home country of the airline and therefore create domestic revenue, meaning 79% of the revenues are made completely or in part by other airlines [11].

SAATM promotes the 5th freedom growth, however, the African airspace needs restructuring, for more capacity and reliability. Further efforts need to go into airport management and automated air traffic control to reduce the delays and subsequent cancellations of flights. The lost revenue is one, and the delays contribute to fuel use and CO<sub>2</sub> emissions.

### 3.2. Outside Influences on African Airlines

Currently, the US dollar is dominating Africa, especially in aviation. Together with the significant over-indebtedness of most African states, high inflation, unstable democracies and corruption, investors need securities: financial, regulatory, and long-term. Aviation investments cannot be driven by democratic or non-democratic changes every four years, where the lack of political decisions one year before and one year after elections force inactivity. **Figure 4** shows the latest corruption rankings on the Transparency International index, with Seychelles leading the African Nations at number 20, but most African countries ranking in the latter half of the 196 global nations [8]. The Chinese Foreign Direct Investment (FDI) has increased from USD75 million in 2003 to USD5.4 billion in 2018, with a further USD10 billion committed between 2022 and 2025 [12]. With this FDI, financed mostly by Chinese banks with low-interest loans, China has become Africa's largest trading partner since 2009, with exports of natural resources, oil, minerals, and agricultural products. From 2000 till 2023, China amassed \$182 billion in loans to almost every African state (Ethiopia \$14.5 billion, Nigeria \$9.6 billion), as displayed in **Figure 11** from the Boston University database [13]. The other major trading partner, the US, is trying to counter this Chinese dominance, and so is the EU. Russia also, as the fourth "Great Power" competition, competes for trade and influence.

China has grown in the last 20 years to be the largest lender in Africa [12].

As the IMF shows in **Figure 12**, with an average growth of 4.1% for the years 2024-28, sub-Saharan Africa is one of the promising areas in today's world. With an expected GDP growth of 6.6% in 2024, Ivory Coast is one of six African countries with the highest expected growth in 2024 [14].

Of concern is the future development of the USD, as it is the currency most African states are dependent on. The over-indebtedness of the US, coupled with the current conflicts, will further reduce USD liquidity and availability.

The Nigerian Naira and the Central Bank of Nigeria (CBN) are an example of how the USD shortfall has driven the Naira devaluation and the inability of the

CBN to serve USD obligations for foreign trade. This is especially valid for aviation, where most costs are in USD, but the revenues are in Naira. Foreign airlines like Emirates were not serving Nigeria any longer, as the exchange of Naira ticket revenues could not be paid out by CBN in USD. ET as the largest African operator in Nigeria is using a currency swap with the Nigerian cement industry Dangote via the two National Banks of both countries. Dangote has revenues locked at the Ethiopian National Bank from its cement sales in Ethiopia, while ET has ticket revenues locked at CBN.

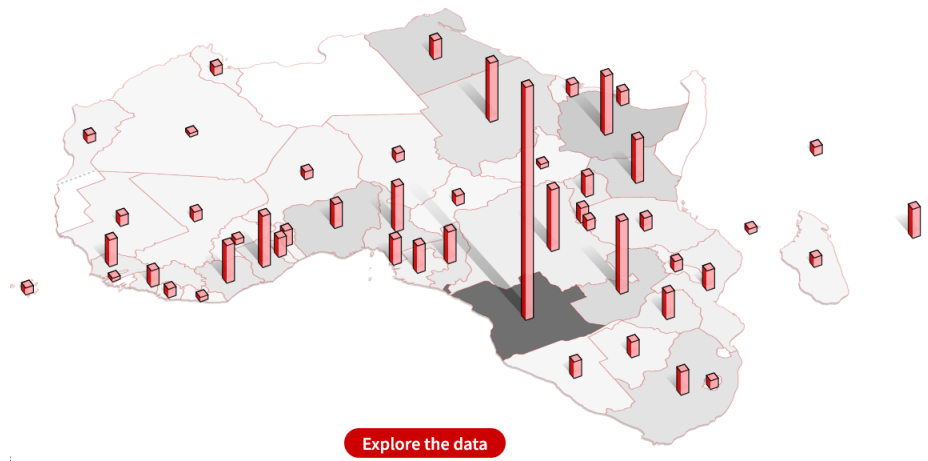


Figure 11. Amount of Chinese loans in Africa from 2000-2023.

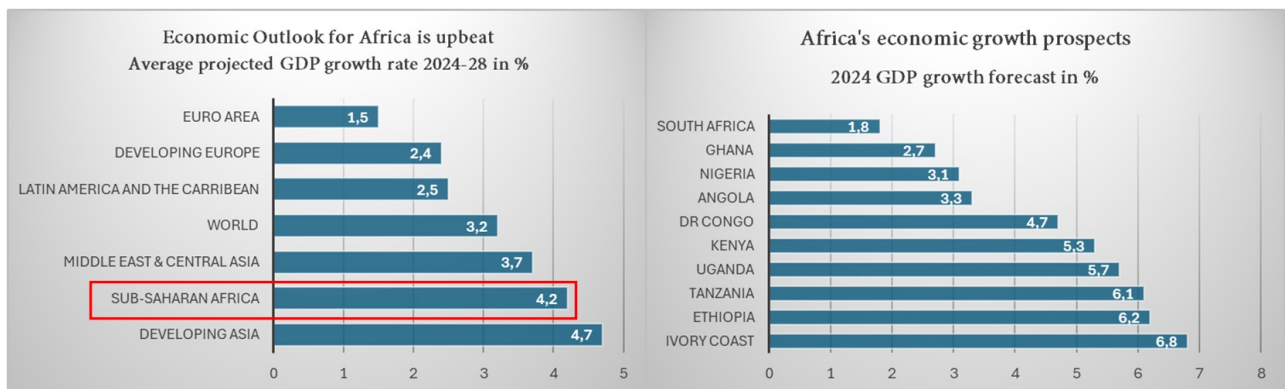


Figure 12. High GDP growth in West & East Africa.

As the interest rates of the Federal Banks are forecasted to remain high between 2.5% and 4%, the African central banks will continue to lack USD [14]. Revenues in local currencies are therefore difficult to exchange into USD and extradite.

The liquidity in USD will remain a key factor in the African growth. The aviation sector with its high USD costs for aircraft, repairs, aviation fuel and even staff (aviation professionals like pilots are a global resource and therefore drive an international competitive payscale), will need to find creative solutions to find USD funds, in barter, in interest low credits and as revenue equivalent.

### 3.3. The SAATM Role Model: Ethiopian Airlines

When Ethiopian Airlines (ET) was launched in 1946 in one of the poorest countries in Africa, a few intellectuals in Ethiopia anticipated the impact of having airline connections as a prerequisite to developing the Ethiopia industry. These visionaries contracted TWA, the legendary US carrier, which helped set up the airline and initially provided all aviation experts, pilots, engineers, and managers. TWA helped to launch ET from DC3 (twin-prop for gravel landing strips) to the first Boeing 720 Jet in 1962. By 1975, after 25 years of slow expansion, ET operated some 16 aircraft on 30 destinations [15].

After a further 25 years under a totalitarian military regime and the democratic transition until 2000, when ET was struggling to remain free of governmental influence, the government recruited the Ethiopians Girma Wake, from Gulf Air, and Tewolde Gebremariam, from the New York office of ET, both ET veterans with global experience. They came on board with the government's commitment not to interfere in ET's development. It was also clear that ET could not expect government funds to bridge losses [15].

Today, Girma Wake is still serving on the board of the Ethiopian Aviation Group and coaches many talented Ethiopians following in his steps. The success story until 2019 is impressive. With Vision 2010 and Vision 2025, ET always had a clear path for growth and financial success: 100 aircraft and 120 destinations, mainly on the African continent. While COVID-19 hit the global aviation industry in 2020/21, the ET team grew their cargo capacity and achieved 20% net profit margins despite COVID-19. ET's strong African network is shown in **Figure 13** [16]. The Vision 2030 now calls for 200 aircraft and with a young vibrant team under CEO Mesfin Bekele, the future of ET is set [16].

The current aircraft listing of ET, as established by author in **Figure 14** [9] below shows 129 active aircraft with an average age of 11.9 years and a capacity of 31,271 seats. 64 aircraft are on order to bring ET on track to 200 aircraft.

Next to joining the Star Alliance in 2011 (Lufthansa, United, Turkish, *et al.*), ET has engaged with several African airlines, ASKY Togo, Air Malawi, Guinea Airlines, Chad Airlines, Zambia Airlines, in Equatorial Guinea and Mozambique. The most advanced partner airline in West Africa is ASKY with fifteen active B737 [9].

As Ethiopia had very few schools and training facilities, ET started its campaign in 2000 for a complete academy for all professions needed to run a successful airline, building the technical capability and the skill competencies needed for all aviation staff. With a pilot school, a technical school, a cabin crew school and all other necessary training, ET's academy became the basis for its success. In the global market of aviation professionals, who are able to work anywhere with their licenses, many airlines experience high attrition rates, ET however, manages to retain employees through a unique corporate spirit which keeps the cost for recruitment and training low and the team focused on the vision ahead.



**Table 2.** The history of Nigerian airlines.

S/N	AIRLINES	CALL SIGN	LAUNCH YEAR	CEASE YEAR
1	ADC Airline	ADCO	1984	2006
2	Afrijet Airline	AFRIJET	1998	2009
3	Air Atlantic Cargo	-	1994	1999
4	Air Nigeria	NICON FLIERS	2010	2012
5	Albarka	AL-AIR	1999	2005
6	Al-Dawood Air	AL-DAWOOD AIR	2001	2005
7	Amako Air	-	2002	2003
8	Amed Air	-	1994	1996
9	Arax Airlines	-	1977	1988
10	Axiom Air	-	2009	2011
11	Barnex Air	-	-	1991
12	BellView Airline	BELLVIEW AIRLINES	1992	2010
13	Capital Airline (Nigeria)	-	2003	2010
14	Chrome air service	Chrome Air	1999	2006
15	Dasab airline	Dasab Air	2001	2006
16	Earth Airline	-	2001	2004
17	EAS Airline	ECHOLINE	1993	2006
18	Easy Link Aviation	FLY ME	2001	2007
19	Freedom Air Service	INTER FREEDOM	1998	2005
20	Fresh Air (Airline)	Fresh Air	1999	2006
21	GAS Air Nigeria	-	1973	2000
22	Hamsal Air	-	2008	2009
23	Harco Air Service	-	1992	1998
24	Hold-Trade Air	-	1991	2000
25	IAT Caro Airlines	-	1994	1998
26	Intercontinental Airlines (Nigeria)	-	1978	1990
27	Mangal Airlines	-	2006	2008
28	Meridian Airlines	-	2004	2008
29	Nicon Airways	NICON AIRWAYS	2006	2007
30	Nigeria Airways	NIGERIA	1971	2003
31	Nigeria One	-	2013	2013
32	Nigeria Eagle Airline	-	2009	2010
33	Nigeria Global Aviation	-	2003	2003
34	Okada Air	Okada Air	1982	2002
35	Overnight Cargo Nigeria	-	1992	1994
36	Pan African Airline	-	1961	2000
37	Premium Air Shuttle	-	1995	2006
38	Sosoliso Airline	SOSOLISO	1994	2006
39	Space World International Airlines	-	2002	2006
40	TAT Nigeria	-	2003	2012
41	Trans Sahara Air	-	2001	2004
42	Trans-Air Service	-	1992	1994
43	Triax Airlines	-	1992	2000
44	Virgin Nigeria	-	2004	2009
45	Wings Aviation	-	2001	2012

From Pan African Airlines in 1961 to Medview and others in recent years, the number of failed airlines in Nigeria is stunning. Nigeria Airways from 1971 to 2003 was the only true National Airline, but it was eventually shut down, as governmental mismanagement, corruption and overstaffing led to a debt of \$528 million (\$809 million in 2022 money). In the end, Nigeria Airways had three aircraft flying, with unclear revenue management, and plenty of staff, all unionized and with retirement plans, challenging the Nigerian government still today [17].

The current ten active Nigerian scheduled airlines, as listed by author in **Figure 15 [9]** are far from providing a sustainable scheduled airline service with a large enough modern fleet, maintenance and training facility, and the required funding to grow into a reputable international carrier. **Figure 15 [9]** shows the dilemma of lack of funds and political support for airport and air traffic facilities, roads, and regulatory environment. Out of 100 aircraft owned by the 10 airlines, only 41 are active, most of them too old for a reliable and cost-efficient operation, or too small (E145, CRJ) to serve the Nigerian customer. As a way out of costly investments, several airlines are using wetleases (B737, A320) from European operators, for an ACMI rate (wetlease under Aircraft, Crew, Maintenance, and Insurance paid by an hourly rate) of around \$4000 per block hour (150 guaranteed hours per month).

Nigerian Active Scheduled Carriers (20.Nov.24)						
Airline	Base	IATA	ICAO	Total Aircraft	Active	WetLeased
Aero Contractors	Lagos (LOS)	N2	NIG	8	B733 (2)	B777 (1)
Air Peace	Lagos (LOS)	P4	APK	30	B733 (3) B777 (2) E145 (4) E190 (1)	B737-7 (2)
Arik Air	Lagos (LOS)	W3	ARA	14	B737-7 (1) B737-8 (1)	
Green Africa Airways	Lagos (LOS)	Q9	GWG	3	ATR72 (2)	
Ibom Air	Uyo (QUO)	QI	IAN	9	A220 (2) CRJ900 (5)	
MaxAir (Nigeria)	Katsina (DKA)	VM	NGL	11	B734 (1) Legacy600 (1)	
Overland Airways	Lagos (LOS)	OF	OLA	8	ATR42 (4) ATR72 (1) ERJ700 (2)	
Rano Air	Kano (KAN)	R4	RAN	5	EMB145 (3)	
United Nigeria Airlines	Enugu (ENU)	UN	NUA	6	EMB145 (2)	A320 (1) ERJ190 (1)
ValueJet	Lagos (LOS)	VK	FVJ	6	CRJ700 (1) CRJ900 (3)	
<b>Total 10</b>				<b>100</b>	<b>41</b>	<b>5</b>

**Figure 15.** Active scheduled airlines in Nigeria.

In March 2024, Air Peace started a Lagos-London Gatwick route with its Boeing 777. With attractive ticket prices, Air Peace is trying to lure passengers away from British Airways, which sees the Lagos-Heathrow flights likely as their most profitable. Every traveller continuing from London elsewhere via Heathrow will continue to fly with British Airways. The British Airways loyalty card, their frequent and reliable schedules, and the One World network will constitute a challenge for Air Peace to make this route a longstanding success. British Airways, in March 2024, has already matched Air Peace on its low teaser price, which BA can feasibly offer for a long time. Air Peace initially started this route with a wetlease B787

from North Air (Norway) but is meanwhile using its own B777.

Wetleasing is a common airline practice to bridge peak travel times, new aircraft delivery delays, or large maintenance events. The regulator normally allows a wetlease contract for 6 months, extendable by another 6 months. The wetlease operation is overseen by the regulator of the airline providing such wetlease and not the regulator of the lessor and actual operator. Building the success of the local airline on wetleases is therefore not permissible long-term and is questionable, as these wetleases provide not one direct local job (except sometimes for a few local cabin crew). The wetlease operator is looking for the highest paying contracts as there are many other opportunities (especially in the high-priced charter summer in Europe). When a wetlease aircraft has a technical problem, it is the local Nigerian airline which must take care of stranded passengers, as there is usually no alternative aircraft by the wetlease operator.

Currently, Air Peace seems to be the only airline in Nigeria to expand into a seasoned airline ready for SAATM. Fittingly, the Nigerian government, in October 2024, revised the BASA with the UAE to allow any UAE airline to commence an open sky policy between Nigeria and the UAE [18]. This could be the beginning of transatlantic flights from Lagos and Abuja for UAE airlines, considering the problems Nigeria currently encounters with its US country status. Certainly not a SAATM intention but collaborating with non-African airlines seems to be more convenient.

#### **Nigeria Air**

The Nigeria Air project started as one of the key tasks of the Aviation Roadmap, approved by the Federal Executive Council (FEC) and announced by Nigerian President Buhari in 2016, soon after his first election. The Nigeria Air project was initiated as a Private Public Partnership (PPP), overseen by the Nigerian Infrastructure Concession Regulatory Commission (ICRC). The Outlined Business Case (OBC) for Nigeria Air was finished in 2016/17, and was approved by ICRC and FEC.

Due to the elections in 2018/19 and the COVID-19 shutdown, the Nigeria Air project was delayed several times. In fall 2021, the OBC was again updated, ICRC licensed and approved a further two times by FEC and President Buhari. In January 2022, the government restarted the PPP process and wanted to launch Nigeria Air at the same time. In spring 2022 the RFP for the Nigeria Air ownership was launched. The only bid received was assessed by ICRC and the government, due diligence was performed of the bidders, and a decision was made. The only bidder was a consortium of MRS, SAHCO, other Nigerian investors, and a 49% Ethiopian Airline share. The Nigerian government were to hold 5%. The initial investment of the consortium was USD250 million, of which the 5% for the Nigerian government would have been USD12.5 million. Next to the bid decision, the launch of Nigeria Air was already far advanced, the interim executive team had been recruited and approved by the Nigerian Civil Aviation Agency (NCAA), the manuals had been written, and the initial three lease aircraft for the launch were secured. In June 2022, Nigeria Air. was

able to achieve the first milestone in the launch, as the NCAA issued the Air Transport License (ATL) to Nigeria Air which is valid for five (5) years.

As Nigeria Air was working on the issuance of the Aircraft Operation License (AOC), a few domestic airlines started a legal court case against the decision for Ethiopian Airlines. The judge prohibited further development until he had time to evaluate the case, and the launch of Nigeria Air came to a halt. The court case became part of the election process in 2022/23 and the new government had new perspectives on the project, preferring the further development of local airlines instead of allowing ET to continue their PPP award and launch Nigeria Air.

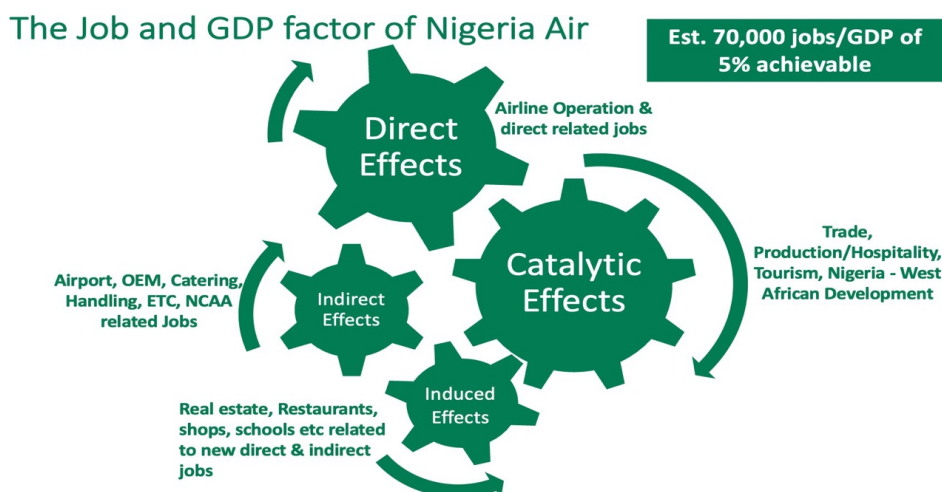
The original Nigeria Air OBC, approved by FEC, for an international Nigerian Airline, called for an investment of \$350 million in the first three years, with a turn to profit in year four. The OBC, and the requirements for PPP bidders, stated that an international airline can only succeed with an international airline partner and membership in one of the three global airline alliances. According to the approved Final Business Plan of the winning consortium, Nigeria Air would have been launched by now, flying with new B737 and B787, and bringing Nigerian colours all around the world, as a part of the Star alliance.  
(by author)

Nigeria demonstrates how difficult it can be to start a national airline by the government, or by a Minister of Transportation or Aviation. Although it is tempting to establish a national flag carrier, it must be recognized that most of these initiatives eventually fail [17]. Not a government nor a minister (who typically change every four years in democracies) should be in the airline business, but seasoned experts, as demonstrated in Ethiopia. The airline can be owned partially or in majority by the government (see ET), but even if an airline is government-owned, the company involvement should be limited to a seat on the Board of Directors. National budgets should only be used to build the infrastructure: airports, runways, and air traffic control, but even these facilities should be run by private companies, stock companies or the equivalent, as successfully proven in most other parts of the world. Airlines and all aviation companies should be driven by profitability, efficiencies, and adherence to environmental protection. Once this is understood, a long-term strategy would likely succeed: a blossoming economy of trade, industry, and tourism is based on a well-functioning aviation industry, contributing five or more per cent of the national GDP, and providing 100,000 direct, indirect and induced jobs, followed by the catalytic effects of new businesses and industries coming with a functioning aviation industry in a specific location, as shown in **Figure 16** by Sirika (2021) [19].

### 3.5. SAATM Airline Model

Similar issues alike Nigeria have developed in South Africa and Kenya. Both national carriers are managed by the government, and losses are funded by national budgets. Looking for private investors has so far not been successful, as the government wants to keep domestic majority ownership of the national carrier for

BASA reasons and international aviation regulations. However, according to the latest operational risk forecast of the Economist Intelligence Unit (EIU), South Africa, Namibia, and Botswana have improved and could become one of the main aviation centres for leasing, maintenance and education [20].



**Figure 16.** The relation of jobs created by aviation.

The EU used to have a national carrier in every one of the current 27 member countries, mostly state-owned and mostly not profitable. Today, the EU has a few low-cost airlines connecting all destinations in Europe, and three major airline groups, Lufthansa, IAG and Air France/KLM, all of them privatized (stock companies), bare of governmental influence. All three groups (and the low-cost ones) achieved heavy profits in 2023. Lufthansa, for example, owns Swissair and Austrian Airlines, both retaining their national carrier image of Switzerland and Austria. IAG, with about 25% owned by Qatar, owns British Airways, Iberia and Air Lingus, which are all proud national airlines. In the US, there are five major airlines (United, American, Delta, Southwest, JetBlue), none of them a national carrier of the USA, but all are in profitable positions, with the US market divided among the five airlines. For African states, these examples should become guidance for the concentration on a few airline entities in Africa, which are profitable and reliably serve most African states.

#### **What airline model will be sustainable in SAATM Africa?**

First and foremost, most of the 54 African states shall accept their inability to start a domestic, state-owned national carrier, and ET is not counterproof, as explained above. Can the ET model be copied? Of course, with a strong minority partner, as Qatar Airways is planning with RwandAir and AirLink (S.A.). Kenya Airways is currently looking for foreign investors but may not attract many, as the influence of government ownership is significant, and Nairobi may not be suitable for a major East African hub due to the altitude of the airport. South Africa is too far south for an International African hub but has a strong South African market around it (Zimbabwe, Namibia etc.) as a continental African hub. The focus is on

West Africa, also as a hub for East Africa, as their airports are mostly too high and out of range for North- and South American flights (though Ethiopia has just published plans for a new airport in Addis Ababa at a lower altitude).

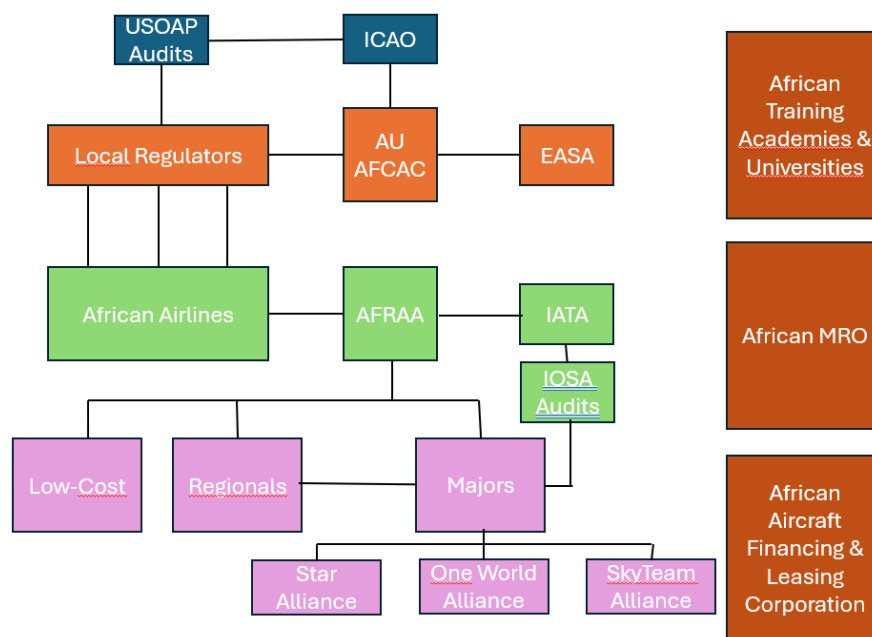
A model under SAATM would likely have a few low-cost operators in various African regions connecting the African cities. The transcontinental connections would remain predominantly with the international airlines and the three alliances. The African Union could create a continental alliance model, with African airlines having multinational African owners, similar to the European airlines that can be owned by any European citizen or group. ET has already adopted this model with several subsidiary airlines in other African states (see 3.2), not yet owned by ET as the majority holder. Small West-African Togo is connected via ASKY to the Addis hub of ET and serves many African destinations from Togo.

The standardization of ICAO regulations in all African countries is an imperative mission for AU's African Civil Aviation Commission (AfCAC), which should ideally provide, like EASA in Europe, the same regulations and standards in all African countries. With standardized regulatory software, the licenses for staff, aircraft and operators can be managed with high transparency. The same holds for MRO and training institutions, serving all African aviation with good access to well-served airports. Aviation is a global business driven largely by the USD. Therefore, most licensed aviators (pilots, technicians, air traffic controllers) can work anywhere in the world and have similar salaries and benefits. The demand for these aviators will drive their high-level incomes even further. Trying to start a local "island" solution in SAATM Africa will therefore most likely fail.

As **Figure 17** by the author shows, the African aviation organizations need standardization and efficiency for a safe, secure, and competitive airline operation. The EU can serve as an example. EASA has taken on a central role under the European Commission and lately is also supporting AfCAC. The financial infrastructure, important for the provision of new aircraft should be centralized under Worldbank-, IMF-, African Development Bank-, and Afreximbank-backed leasing company structures, which are adjusted to the African revenue and payment processes. Adherence to the Capetown Convention for lease aircraft is a prerequisite for any airline and its country's jurisdiction to be part of such aircraft procurement.

Another important aspect is an African solution for Maintenance, Repair & Overhaul companies (MRO), supported by the main aircraft and engine manufacturers. It is especially complicated to set up MROs locally because of licensing issues and prohibitive costs. The same reason should lead to centralized training academies for the personnel needed for every airline by the same global standards.

In summary, successful African airlines should embrace SAATM and the African continent, with a subtle shareholder structure, a long-term vision and seasoned management, as well as a centralized AfCAC regulatory body for safety, security and compliance for all African nations unilaterally.



**Figure 17.** Organizational scope of national, African & global relations.

### 3.6. Environmental Regulations Affecting SAATM

In addition to the challenges facing Open Sky African aviation, it is important to include the UN/ICAO Climate Change targets, which also have critical consequences for African airlines. By 2050, global aviation aims to reach a net zero CO<sub>2</sub> emission scheme. Africa, so far, is widely unprepared for this strategic UN goal to reduce global warming. The ICAO CO<sub>2</sub> trading partnership Corsia has been signed by 115 states so far, amongst them 21 African countries (Nigeria is a signee, Ethiopia is not). Only 36 countries are in an active Emission trading partnership (see **Figure 18** below) [21]. Corsia allows for trading CO<sub>2</sub> certificates between CO<sub>2</sub> emitters and CO<sub>2</sub> retainers. Another component is the production and use of Sustainable Aviation Fuels (SAFs). Africa could produce significant amounts of SAF in the future (from sugar cane, palm oil, or corn, for example) to be added to aircraft fossil fuels to reduce CO<sub>2</sub> emissions.

The use of old aircraft with high CO<sub>2</sub> emitter engines in Africa, is also critical, as the African airlines would need to buy significantly more CO<sub>2</sub> certificates for each flight, and would at some point not be allowed to enter Western airspace.

The global warming initiatives will have a regulating effect but also prohibit airline start-ups which are not well prepared for this additional constraint.

A further initiative was launched in Addis in May 2024 by AFRAA, the Free Route Airspace (FRA), in line with the EU/Eurocontrol strategy, eliminating all borders in aircraft routings for direct flights, thus saving flight time and therefore CO<sub>2</sub> emissions [22]. AFRAA estimates that by shortening the flight time by FRA, 292 metric tons of fuel consumption and 340 metric tons of CO<sub>2</sub> emissions would be avoided, leading to a fuel cost reduction of approximately \$310,000 for the operator. Assuming similar savings on 20 daily flights, operators' carbon footprint

would be reduced by 5 million metric tons and airlines would save over \$1.2 million on their fuel bills [22]. However, these FRA and SAATM policies will challenge the national sovereignties of the African states, by reducing the political influence and fee collection for the countries.

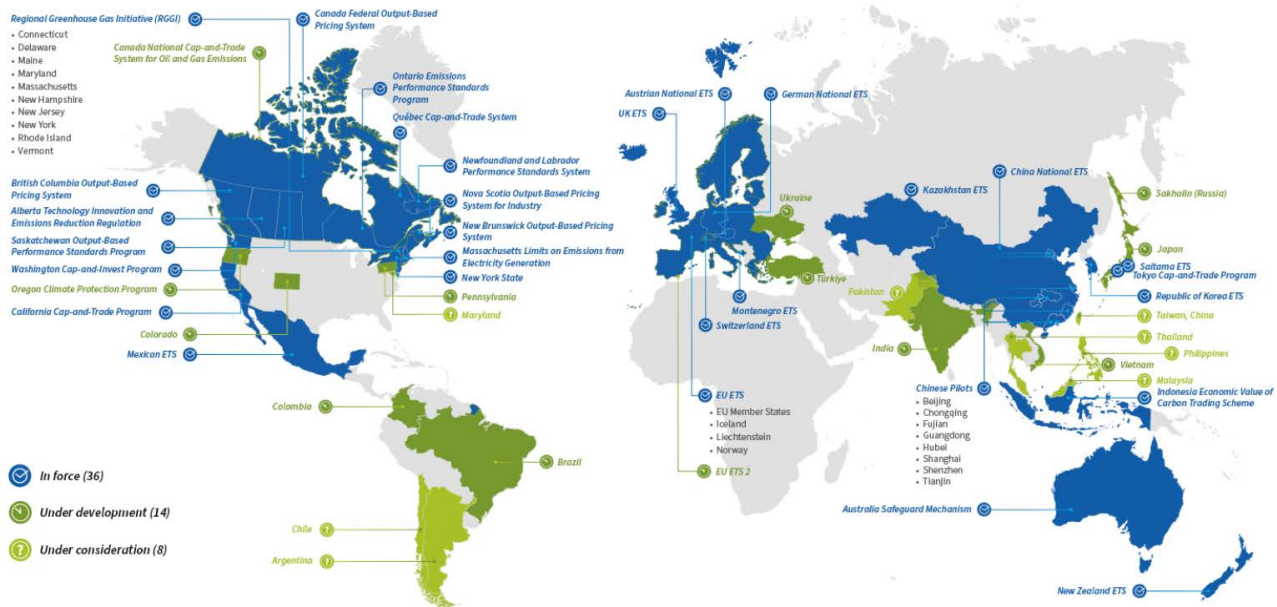


Figure 18. Corsia trading 2024.

#### 4. Interviews with SAATM Leaders

In his MSc dissertation about SAATM and African aviation, Hadi Sirika (former Minister of Aviation in Nigeria) interviewed several key opinionators in African Aviation in 2021 [19]. The author used these interviews from 2021 to return to the key SAATM propagator, Ms Adefunke Adeyemi, meanwhile the Secretary General of the African Civil Aviation Council (AfCAC), for an update on 13 Sept. 2024 (see summary in Annex 1).

Ms Adeyemi's key statement was: *“The Single African Air Transport Market (SAATM) represents a transformative initiative aimed at liberalizing the African aviation industry, fostering socio-economic development, and enhancing intra-African connectivity. Since its launch in 2018, SAATM has made significant strides, including the establishment of over 60 new intra-African routes and the increase in fifth freedom traffic capacity. The Pilot Implementation Project (SAATM-PIP) has further accelerated these efforts by clustering countries to address implementation challenges and promote the benefits of liberalized air transport.”*

*“Under SAATM, any current or future air service agreement signed between any of the 37 member States, must be YD compliant and must meet the following requirements:*

- *Free exercise of 1st, 2nd, 3rd, 4th and 5th freedom traffic to Eligible Airlines*
- *Liberalized air tariffs*

- *Unrestricted frequency and capacity*
- *Full liberalization of cargo services*
- *Recognition of the powers and function of the Executing Agency—African Civil Aviation Commission*
- *Adherence to the uniform rules for fair competition, consumer protection and dispute settlement.*

*As the Executing Agency, we, at the African Civil Aviation Commission (AFCAC), are charged with the responsibility of managing air transport liberalization across Africa. This responsibility includes SAATM, which ensures that aviation assumes its rightful role and that it contributes to intra-African connection. SAATM underscores Africa's social, economic, and political integration across the region while boosting intra-African trade and tourism as per the AU-Agenda 2063."*

The patience necessary to unite 54 countries, of which only 37 have signed the SAATM agreement, and only a few of those are part of the first round of introduction under PIP, is mainly in the hands of Ms Adeyemi. With the SAATM Pilot Implementation Project (PIP), AfCAC wants to "smooth" and "streamline" the implementation of SAATM. Ms Adeyemi further explained:

*"Progress to-date:*

- *Subsequently, the African Union Assembly officially launched SAATM in January 2018 during its 30th Ordinary Summit Session;*
- *29 AU Member States covering almost 80% of intra-African air traffic have signed the Solemn Commitment to establish SAATM;*
- *18 AU Member States have signed a Memorandum of Implementation (MoI) to ensure the removal of any air service agreement restrictions that are not in compliance with the Yamoussoukro Decision;*
- *32 Member States have signed new bilateral air services agreements that are compliant with the Yamoussoukro Decision.*

*Challenges:*

- *Slow pace of member States in implementing YD/SAATM;*
- *Strengthen advocacy efforts under the leadership of the SAATM champion to achieve and increase acceleration and implementation of YD/SAATM by Member States;*
- *Work out modalities for regional champions to add impetus to advocacy efforts at RECs level;*
- *Finalise the Administrative Council for Dispute Settlement Mechanism for the SAATM;*
- *Speed up the elaboration of the aviation infrastructure masterplan (airports, navigation facilities, etc.) with priority projects to be included in the second phase of the Programme for Infrastructure Development in Africa-Priority Action Plan (PIDA-PAP) and the African Infrastructure Gap Analysis project."*

A large part of the discussion with Ms Adeyemi focused on Nigeria and West

Africa, a region which should carry a prime interest in SAATM, as Nigeria and all West African states lack competitive and customer-friendly airline services (Togo and ASky possibly an exception). Why would SAATM bring better airline service in these countries, especially when the existing airlines are very defensive against outside African competition? States Ms Adeyemi:

*“SAATM would increase 5th freedom, which is a right that allows an airline to carry passengers between two foreign countries as part of a service that originates or ends in its own country. There would be traffic rights and designation authorization and there will be subregional hubs such as: Gabon/Nigeria, Nigeria/Togo, Nigeria/Cote d’Ivoire, Nigeria/Senegal/Ghana/Niger/Sierra Leone/(Niger and Ghana resolved).*

*In West Africa well-known airlines will dominate intra-connectivity services, which would include Transair-Senegal—Dakar-Abidjan-Bamako; Air Cote d’Ivoire—Abidjan-Abuja-Lome; Air Cote d’Ivoire—Abidjan-Kinshasa-J’burg; Asky—Lome-Ouagadougou-Lagos and Lome-Praia-Bissau; Afrijet—Libreville-Cotonou-Sao Tome.*

*SAATM will do for Nigeria and West Africa what Europe has achieved decades ago with their liberalization policy and the same with some parts of Asia that are already enjoying the system.*

*When Europe adopted the single sky system, known as the European Single Aviation Market (1970-late 90s), the benefits include generation of an incremental 44 million passengers was recorded, with an increase in post-liberalization years of about 33 per cent as contrasted with pre-liberalization growth of about 4 per cent-six per cent per year. Europe created 1.4 million full-time jobs resulting from the liberalisation and the European GDP grew by \$86 billion.”*

The interviews of key African opinionators in 2021 by Sirika [19] showed an optimistic attitude towards SAATM, their acceptance-rating between 1 and 10 was on average 7.5. However, Ms Adeyemi and a few other interviewees did not hold back with their concerns regarding a fast implementation of SAATM. Said Ms Adeyemi in 2021 to Sirika (2021) [19]: *“Fortunately, for every SAATM sceptic, there are stakeholders dedicated to the realization of an open sky agreement across Africa. Therefore, Africa will always have a 100% chance. A lot has happened in the last six years and the momentum continues to grow. Under the leadership of the African Union and the African Civil Aviation Commission, stakeholders such as AFRAA, AASA, IATA, AfDB, UNECA and many more continue to coordinate efforts towards the realization of the SAATM”.*

Progress is slow, where the first-tier state principals and second-tier ministries may support SAATM in the interest of more airline traffic to their airports, but where the third tier, the users (the airlines and the AFRAA representation), are requesting many more KPIs in line with the SAATM implementation (see above). While the 5th freedom routes account for only 21% (as shown in **Figure 10**), ASKY Airlines, Ethiopian Airlines, Uganda Airlines and Kenya Airways are the African airlines operating the highest number of 5th freedom routes [23]. For these airlines, SAATM is a reality in their strategies.

SAATM is progressing very slowly. At the recent 33rd Annual General Assembly & Regional Conference of AFRAA, held on 19 September 2024 in Johannesburg, the AFRAA Director raised the following SAATM concerns [23]:

**The key challenges highlighted by airlines on SAATM implementation:**

- 80% reported a lack of reciprocity and political will to implement SAATM.
- 65% pointed to regulatory barriers, including bilateral agreements that did not accommodate or encourage SAATM Implementation.
- Infrastructure challenges
- Political instability
- Sabotage of air traffic rights
- Poor ratification of SAATM agreements by States
- Non-domestication of legislation
- Financial constraints to facilitate fleet modernization and upgrade.

**The key pillars for effective implementation of SAATM were requested as follows:**

1. Continuous improvement in Safety and Security
2. Regulatory & policy harmonization
3. Optimized infrastructure and establishment of a seamless Airspace Architecture.
4. Reduced taxes and charges (Competitiveness)
5. Ease of intra-African mobility (Visas/customs)
6. The effective operationalization of the SAATM through notification of implementation of the SAATM concrete measures.
7. Human capacity development (Skills and personnel pipeline)
8. Strengthening the capacity of implementing agencies and Member States
9. Multi-sector collaboration (Tourism, Finance, Health, Agriculture, Education, etc.).

Why has there been so little progress since the Yamoussoukro Decision (YD) in 1999? Mainly because one prime prerequisite is non-existent in most African countries: free and uninterrupted aviation entrepreneurship. Aviation is recognized as an enhancer of economic development, both industrial and touristic, but it is governed in the old restrictive way Europe handled aviation in the 1950s to 90s; government-managed and -regulated. This mindset hinders a continental-wide embracing of aviation groups, not only for airlines but also airports, MROs, training facilities and Air Traffic Control centres. The author is convinced that Africa shall not experience the same path which Europe did from 1950 to 2000. For one, governmental funding is not available for such a path, and compliance with the 2050 CO<sub>2</sub> NetZero emission goals is required of all African states.

## 5. Conclusion

The African continent is lagging in key prerequisites for a functioning aviation infrastructure, thus hampering trade, industry, and modern development. ET, one successful exception, leads the development of African aviation infrastructure.

Some countries, like Rwanda and Kenya, would like to copy this success, while others still believe that only a local/national solution is suitable. As seen in **Figure 19**, Africa, a continent with 1.4 billion people today (15% of the world population), holds only 2% of the global airline traffic, while the US, with 333 million people and the EU, with 450 million people hold 24 and 27% of the global RPKs [24].

Air Passenger Market in Detail					
AUGUST 2024 (% YEAR-ON-YEAR)	WORLD SHARE <sup>1</sup>	RPK	ASK	PLF(%-PT) <sup>2</sup>	PLF(LEVEL) <sup>3</sup>
<b>Total Market</b>	<b>100%</b>	<b>8.6%</b>	<b>6.5%</b>	<b>+1.6%</b>	<b>86.2%</b>
Africa	2.1%	9.6%	6.7%	+2.1%	77.9%
Asia Pacific	31.7%	13.4%	8.7%	+3.6%	86.0%
Europe	27.1%	7.8%	7.3%	+0.4%	87.9%
Latin America	5.5%	6.5%	8.1%	-1.3%	84.0%
Middle East	9.4%	5.0%	5.9%	-0.7%	82.3%
North America	24.2%	4.8%	2.4%	2.0%	87.1%

1) % of industry RPKs in 2023 2) Year-on-year change in load factor 3) Load Factor Level

**Figure 19.** Global airline market shares.

No airline, government or privately owned, is sustainable with three old aircraft. The business case of Nigeria Air, for example, promised profitability after four years with 30 aircraft and USD350 million starting capital. This “rule of thumb” for capital and fleet size when starting any airline with domestic and international operations is true everywhere in the world as costs, US\$ dependency and regulations unite all airlines worldwide. The task of governments and ministers is to provide the basic infrastructure investments of airports and regulations, nothing else. Europe went through the same development until the late 20<sup>th</sup> century: government-owned national carriers, run by ministers and state secretaries, challenged by unions and government election campaigns. Still today, these elements present a lethal combination when running a modern, profitable airline. With industrial globalization and our habits of travelling, aviation, more than most other industries, demands a global standard, also in employment. The worldwide shortfall in pilots gives the pilot a choice as a global employee with one comparable pay structure worldwide.

Conditions are as they are, and Africa would do well to look at the future, taking the experiences of other continents into account and adopting best practices or even better practices in Africa. No country needs an airline if it cannot sustain itself. The connection between the main cities can be handled by other airlines, which is far cheaper for the national budget. Furthermore, as exemplified by Lufthansa Technik and Training, it is not necessary for every airline to start its own MRO and flight academies. There is no competition in training and maintenance in aviation. Strict regulations and timelines determine, therefore, universal centres of excellence and availability, independent from specific airlines, who are most reactive in maintenance and training after fleet decisions have been made.

Certainly, a few MRO and training academies should be centralized in Africa, available in key airport locations.

With the MRO facilities and African technicians selected and trained for this prestigious job, Original Equipment Manufacturers (OEM) like Airbus, Boeing, or Embraer can develop such workforce further and establish aircraft manufacturing (whole or in part) in Africa. As the global focus points towards the immense workforce available in Africa, this path looks promising.

Aviation in Africa provides a major opportunity, not for the “faint-hearted”, not for government officials, but for the investors and aviation experts who see the opportunities in Africa as a whole. The African Union and a few national governments are needed to support a successful African aviation industry and align the political, regulatory and SAATM strategies around it. The other African countries will follow. SAATM can provide the space. SAATM and AfCFTA will open opportunities for borderless travel and movement, thus fostering air transport and the development of African countries in terms of trade, tourism, GDP, and jobs.

## 6. Recommendations

This study focused mainly on two states, Ethiopia and Nigeria. More research regarding the other 52 African states about their attitude and possible resistance towards SAATM as well as the requirements of all aviation industry, airlines, airports, ATMs, and fuel suppliers, to comply with the 2050 NetZero emission scheme, is recommended. Finally, this research highlights the need for African countries to accept the benefits of open aviation skies, to bring new impulses to air connections, GDP growth, and job creation for their countries, by fostering predominantly private ownership and management of all aviation companies. Further research in propagating these economic relationships, which have already been demonstrated in Europe, the US, and some parts of Asia, will be ongoing.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

## References

- [1] flightradar24 (2024). <https://www.flightradar24.com/9.45.9.48/6>
- [2] IATA1 (2024) The Value of Air Transport to Nigeria. <https://www.iata.org/en/iata-repository/publications/economic-reports/the-value-of-air-transport-to-nigeria/>
- [3] IATA2 (2024) The Value of Air Transport to the United States of America. <https://www.iata.org/en/iata-repository/publications/economic-reports/the-value-of-air-transport-to-the-united-states-of-america/>
- [4] Anfofum, A.A., Zakaree, S.S. and Iluno, C. (2015) Air Transportation Development and Economic Growth in Nigeria. *Journal of Economics and Sustainable Growth*, **6**, 1-11.
- [5] United Nations Department of Economic and Social Affairs, Population Division (2022) World Population Prospects 2022: Summary of Results. UN DESA/POP/2022/TR/NO.3.

- [https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022\\_summary\\_of\\_results.pdf](https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf)
- [6] African Union (2024) Agenda 2063: The Africa We Want. <https://au.int/en/agenda2063/overview>
- [7] AfCFTA (2024) SAATM Signatory States. [https://www.afcac.org/saatm\\_states/](https://www.afcac.org/saatm_states/)
- [8] Transparency International (2024) Corruption Perception Index. <https://www.transparency.org/en/cpi/2023>
- [9] ch-aviation (2024) Aviation Database. <https://www.ch-aviation.com/>
- [10] World Bank Country Data (2024). <https://data.worldbank.org/country>
- [11] AFRAA/OAG (2024) Quarterly Online Aviation Industry Report by AFRAA. <https://www.afraa.org/our-work/statistics/>
- [12] de Freitas, M.V. (2023) The Impact of Chinese Investments in Africa: Neocolonialism or Cooperation? Policy Center for the New South. [https://www.policycenter.ma/sites/default/files/2023-08/PB\\_30-23\\_Marcus%20Freitas.pdf](https://www.policycenter.ma/sites/default/files/2023-08/PB_30-23_Marcus%20Freitas.pdf)
- [13] Boston University (2024) Chinese Loans to Africa Database. <https://www.bu.edu/gdp/chinese-loans-to-africa-database/>
- [14] International Monetary Fund (IMF) (2023) “At a Crossroads: Sub-Saharan Africa’s Economic Relations with China” in Regional Economic Outlook: Sub-Saharan Africa—Light on the Horizon? Washington DC.
- [15] Oqubay, A. and Tesfachew, T. (2019) The Journey of Ethiopian Airlines: Technological Learning and Catch-Up in Aviation. In: Oqubay, A. and Ohno, K., Eds., *How Nations Learn: Technological Learning, Industrial Policy, and Catch-Up*, Oxford Academic, 235-261. <https://doi.org/10.1093/oso/9780198841760.003.0011>
- [16] ET Annual Report (2022). [https://corporate.ethiopianairlines.com/docs/default-source/annual-performance-reports/et-annual-report-2021-22.pdf?sfvrsn=4c9d7852\\_2](https://corporate.ethiopianairlines.com/docs/default-source/annual-performance-reports/et-annual-report-2021-22.pdf?sfvrsn=4c9d7852_2)
- [17] Adeoye, A.B., Musa, A. and Afolabi, O.J.A. (2018) An Evaluation of the Challenges, Prospect and Opportunities of Air Transport Operation in Nigeria. *International Journal of Science & Technology*, 7, 78. <https://doi.org/10.4314/stech.v7i2.8>
- [18] Shadare, W. (2024) Nigeria Reviews BASA, Open Skies for UAE, Signs 5th Freedom Rights. <https://newtelegraphng.com/nigeria-reviews-basa-open-skies-for-uae-signs-5th-freedom-rights/>
- [19] Sirika, H. (2021) The Development of Airline Traffic in Nigeria and the Relevance of the Single African Air Transport Market (SAATM). [https://www.academia.edu/124306041/The\\_Development\\_of\\_Airline\\_Traffic\\_in\\_Nigeria\\_and\\_the\\_Relevance\\_of\\_the\\_Single\\_African\\_Air\\_Transport\\_Market\\_SAATM](https://www.academia.edu/124306041/The_Development_of_Airline_Traffic_in_Nigeria_and_the_Relevance_of_the_Single_African_Air_Transport_Market_SAATM)
- [20] EIU (2023) Africa Operational Risk Outlook. The Economist Intelligence Unit Limited. <https://www.eiu.com/n/wp-content/uploads/2023/08/Africa-operational-risk-outlook-FINAL.pdf>
- [21] ICAO (2024) Environmental Protection. <https://www.icao.int/environmental-protection/pages/climate-change.aspx>
- [22] FAR (2024) Free Rout Airspace, AFRAA Conference, Addis Ababa, 24 May 2024. [https://www.afraa.org/wp-content/uploads/2024/07/Edition\\_speciale\\_AFRAA-Newsletter.pdf](https://www.afraa.org/wp-content/uploads/2024/07/Edition_speciale_AFRAA-Newsletter.pdf)

- [23] AFRAA (2024) Better Skies for Africa, 20 Sep. 2024.  
<https://www.afraa.org/pillars-for-successful-implementation-of-saatm-afraa-intervention-at-the-aci-conference/>
- [24] IATA3 (2024) Air Traffic Growth August 2024.  
<https://www.iata.org/en/pressroom/2024-releases/2024-10-03-02/>
- [25] AfCAC (2024) The SAATM PIP Progress. [https://www.afcac.org/saatm\\_pip/](https://www.afcac.org/saatm_pip/)

## **Annex 1**

Summary of the presentation of & discussion with the Secretary General of AfCAC, Ms. Adefunke Adeyemi, on 13 September 2024 in the AAAU MSc Aviation Management Class, approved by Ms. Adefunke Adeyemi on 16 Oct. 2024.

### **A1.1. SAATM & AfCAC**

The Single African Air Transport Market (SAATM) is an initiative that aims to liberalize the African aviation industry, transforming it into a single market by deregulating air services and opening regional air markets to transnational competition. The undertaking is expected to support the advancement of the continent's socio-economic development and to increase Intra-African Air Connectivity.

Launched in 2018 at the Ordinary Summit of the African Union Assembly of Heads of State and government, the SAATM is a flagship project of the African Union's Agenda 2063. It follows the 1999 Yamoussoukro Decision (YD) that has been signed by 44 member countries.

Under SAATM, any current or future air service agreement signed between any of the 37 member States, must be YD compliant and must meet the following requirements:

- Free exercise of 1st, 2nd, 3rd, 4th and 5th freedom traffic to Eligible Airlines
- Liberalized air tariffs
- Unrestricted frequency and capacity
- Full liberalization of cargo services
- Recognition of the powers and function of the Executing Agency—African Civil Aviation Commission
- Adherence to the uniform rules for fair competition, consumer protection and dispute settlement.

As the Executing Agency, we, at the African Civil Aviation Commission (AFCAC), are charged with the responsibility of managing air transport liberalization across Africa. This responsibility includes SAATM, which ensures that aviation assumes its rightful role and that it contributes to intra-African connection. SAATM underscores Africa's social, economic, and political integration across the region while boosting intra-African trade and tourism as per the AU-Agenda 2063.

#### **A1.1.1. SAATM PIP**

The SAATM PIP (Pilot Implementation Project) is an initiative aimed at accelerating the implementation of the YD and SAATM through an approach which clusters small groups of countries to promote the benefits and address the impediments of implementation [25].

The multi-stakeholder approach is designed to facilitate a harmonized and consistent approach towards increasing traffic through 5th freedom routes between and across the cluster of countries to 30% by 2025.

#### **A1.1.2. Achievements of SAATM PIP**

1) Over sixty new intra-Africa routes have been established and being operated

since 2022, of which 13 are 5th freedom routes.

- 2) Operational assistance in safety to SAATM member states.
- 3) Fifth freedom traffic capacity in Africa has increased from 15% in 2018, to 19% in 2023.
- 4) Development of Africa template economic Regulation.
- 5) Regulation of different market access, authorization and designation challenges amongst states by AFCAC.
- 6) Operationalization of the secretariat of the Dispute settlement mechanism (DSM).
- 7) Industry certification program for African Airlines—IOSA/ISSA Certification project.
- 8) Development of a roadmap to address the next generation aviation professionals-(AWAYA).
- 9) More awareness of SAATM was created through advocacy, publishing and dissemination of the regulatory texts of the YD.

## **A1.2. African Union Context**

Recognizing the importance of aviation in achieving the AU vision of an integrated continent, in January 2015 the African Union Assembly adopted the Declaration on the establishment of a Single African Air Transport Market (SAATM) as well as the Solemn Commitment towards advancing concrete and unconditional implementation of the Yamoussoukro Decision.

### **A1.2.1. Progress To-Date**

- Subsequently, the African Union Assembly officially launched SAATM in January 2018 during its 30th Ordinary Summit Session;
- 29 AU Member States covering almost 80% of intra-African air traffic have signed the Solemn Commitment to establish the SAATM;
- 18 AU Member States have signed a Memorandum of Implementation (MoI) to ensure the removal of any air service agreement restrictions that are not in compliance with the Yamoussoukro Decision;
- 32 Member States have signed new bilateral air services agreements that are compliant with the Yamoussoukro Decision.

### **A1.2.2. Challenges**

- Slow pace of Member States in implementing YD/SAATM;
- Strengthen advocacy efforts under the leadership of the SAATM champion to achieve and increase acceleration and implementation of YD/SAATM by Member States;
- Work out modalities for regional champions to add impetus to advocacy efforts at RECs level;
- Finalise the Administrative Council for Dispute Settlement Mechanism for the SAATM;
- Speed up the elaboration of the aviation infrastructure masterplan (airports,

navigation facilities, etc.) with priority projects to be included in the second phase of the Programme for Infrastructure Development in Africa-Priority Action Plan (PIDA-PAP) and the African Infrastructure Gap Analysis project.

### **A1.3. Advantages for Nigeria and West Africa**

Despite the initial scepticism around the introduction of Single African Air Transport Market (SAATM), it has emerged that Nigerian airlines are now optimistic and are currently looking at ways to take advantage of the \$4.2 billion market.

Nigeria is a supplier of home products to most of West and Central Africa countries, including manufactured products and agricultural produce.

Also, Nigerian airlines are the most active in these regions and at different times Nigerian carriers have operated West and Central African destinations.

Currently many Nigerian traders and other traders from different countries in these sub-regions come to Nigeria to buy goods but most of these traders move their goods by road and by sea. Nigerian airlines will be recording high load factor daily if they can make 60 per cent of traders who crisscross these countries to Nigeria by road and could change their mode of transport and travel by air.

The major reason the traders that traverse West and Central Africa travel more by road was because of high cost of flight tickets, noting that although some of them can afford it, the unit cost of their goods may not justify air travel.

Nigerian airlines can explore this market if they can bring down the fares. If more people travel by air the fares will come down. This is the objective of SAATM, which aims to bring down the cost of air travel in Africa, as passenger traffic grows.

Industry experts posit that SAATM has the potential to significantly enhance Nigeria's aviation sector, boost economic growth, and foster greater intra-regional integration.

SAATM would increase 5th freedom, which is a right that allows an airline to carry passengers between two foreign countries as part of a service that originates or ends in its own country. There would be traffic rights and designation authorization and there will be subregional hubs such as: Gabon/Nigeria, Nigeria/Togo, Nigeria/Cote d'Ivoire, Nigeria/Senegal/Ghana/Niger/Sierra Leone/(Niger and Ghana resolved).

In West Africa well-known airlines will dominate intra-connectivity services, which would include Transair-Senegal—Dakar-Abidjan-Bamako; Air Cote d'Ivoire—Abidjan-Abuja-Lome; Air Cote d'Ivoire—Abidjan-Kinshasa-J'Burg; Asky—Lome-Ouagadougou-Lagos and Lome-Praia-Bissau; Afrijet—Libreville-Cotonou-Sao Tome.

SAATM will do for Nigeria and West Africa what Europe has achieved decades ago with their liberalization policy and the same with some parts of Asia that are already enjoying the system.

When Europe adopted the single sky system, known as the European Single Aviation Market (1970-late 90s), the benefits include generation of an incremental

44 million passengers was recorded, with an increase in post-liberalization years of about 33 per cent as contrasted with pre-liberalization growth of about 4 per cent-six per cent per year. Europe created 1.4 million full-time jobs resulting from the liberalisation and the European GDP grew by \$86 billion.

ASEAN single Aviation Market (2009-2011) provided the following 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 per cent after the ASEAN signature; low cost carriers led much of that growth: between 2009 and 2012 full service carriers grew by 6.1 per cent annually while ASEAN's low cost carriers grew about 3.5 time faster (21.8 per cent) annually on average; ASEAN market share grew 40% in main city-pairs markets and 55% in secondary markets.

When fully embraced, SAATM will provide the following benefits: additional 588,750 jobs and \$4.2 billion additional GDP (0.17 percent); fare will reduce by 26% overall, resulting in a total fare saving of \$1.46 billion per annum; consumer surplus increase by \$2.85 billion and traffic will grow 15.9 million additional passengers (31 per cent increase) and 6.7 million passengers increase in 35 SAATM States (representing 37 per cent growth).

In terms of connectivity, it is expected that SAATM will enhance and expected that +145 additional City Pairs will be created (direct flights) and shorter traveling time. It will create 96.440 jobs in Aviation; 268.530 new jobs in tourism and additional four million tourists; and 1.1% increase in trade within the continent (GDP).

#### **A1.4. Summary**

The Single African Air Transport Market (SAATM) represents a transformative initiative aimed at liberalizing the African aviation industry, fostering socio-economic development, and enhancing intra-African connectivity. Since its launch in 2018, SAATM has made significant strides, including the establishment of over 60 new intra-African routes and the increase in fifth freedom traffic capacity. The Pilot Implementation Project (SAATM-PIP) has further accelerated these efforts by clustering countries to address implementation challenges and promote the benefits of liberalized air transport.

The African Union's commitment to SAATM, as part of its Agenda 2063, underscores the importance of aviation in achieving a more integrated and prosperous continent. With 29 member states signing the Solemn Commitment and 18 states removing restrictive air service agreements, the progress made so far is commendable. The continued efforts of the African Civil Aviation Commission (AfCAC) in managing and promoting SAATM are crucial for realizing the full potential of this initiative, ultimately contributing to Africa's social, economic, and political integration.