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Final Study Report

Continental Study on the Benefits of the Single African Air Transport Market (SAATM) and Communication Strategy for SAATM Advocacy

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Introduction

Aviation has the potential to make an important contribution to economic growth and development within Africa. Air transport can open and connect markets, facilitating tourism and trade, and enabling local firms to link into regional and global supply chains. Enhancing air connectivity can help raise productivity, by encouraging investment and innovation and improving business operations and efficiency. Aviation also contributes to the social wellbeing of the populace, supporting jobs, providing aid and relief, supporting access to education and healthcare, and providing opportunities for learning. Many regions and countries in the world have benefited immensely from these attributes of aviation, leading to socio-economic growth and development of their economies and people. Aviation in Africa however is yet to fully realise these benefits, as the development and growth of aviation has been hampered by several factors, including political considerations, market fragmentation and restrictive policies, especially relating to bilateral air service agreements (BASAs).

In 1999, the Yamoussoukro Decision (the Decision) was adopted to promote a pan-African aviation landscape where African cities would be seamlessly connected by air to support and promote Africa's integration, prosperity and unity. The Decision commits its 44 signatory countries to deregulate air services and promote transnational competition in regional air markets within the continent. However, the implementation of this agreement has been slow and limited, and thus the potential benefits of liberalising intra-African air markets remain largely unrealised. The restrictive BASAs prevalent across Africa have had a detrimental effect on intra-African connectivity. This in turn has reduced its beneficial impact, on safety, security and other key pillars of the African air transport industry. Other negative effects of the slow implementation of the Decision and of restrictive BASAs, include poor market access, regulatory gaps on ownership and control, a patchwork of consumer protection regulations, high air fares and other longstanding industry challenges that have repressed air traffic growth in Africa for several decades.

As part of the African Union Agenda 2063, the Single African Air Transport Market (SAATM) project was launched in January, 2018 in order to give fresh impetus to the goal of liberalising air transport across Africa and to fully implement the Yamoussoukro Decision. To date, a total of 35 Africa Union members states have signed the solemn commitment to establish and implement SAATM. The AU Agenda 2063 also includes initiatives linked to the SAATM such as the African Continental Free Trade Area (AfCFTA) and the African Passport and Free Movement Protocol of People, which were also launched in 2018.

One of the factors contributing to the slow take-up of the Decision's principles is a lack of clear and specific information regarding the impacts and potential benefits of enacting or implementing such liberalisation. While there is a growing body of evidence on the impacts of air service liberalisation generally, these have largely focused on the experience in Europe and North America, and there is less research on its impacts and potential benefits in Africa.

The purpose of this Continental Study on the Benefits of the SAATM is to attempt to close some of the information gaps around the impact and potential benefits of implementing the Decision in Africa, and to help develop credible resources to support the advocacy efforts of the AU and other relevant stakeholders on implementation of the SAATM. The study is sub-divided in three main parts:

1. Part 1: Mapping Implementation of the Yamoussoukro Decision
2. Part 2: Value and Benefits of SAATM for the Member States of the African Union
3. Part 3: Communication Strategy and Advocacy Material

Part 1 of the study examines the current status of implementation of the Decision in each African Union Member State and then identifies the reasons for it not being fully implemented. Over 600 bilateral air services agreements to assess compliance with YD requirements, and then performed a comprehensive analysis of aviation enablers to identify the impediments and constraints to YD implementation. All the results of the assessment are

summarized in the form of a Dashboard, which resides on the study website. Part 1 also looks in detail at the outcomes of the current level of liberalization in Africa by studying an array of metrics including the level of coordination amongst African airlines (such as interlining, code share, alliance membership, franchise, subsidiary or joint-ventures), as well as actual traffic data to assess the level of connectivity of intra-African air transport.

Part 2 of the study goes on to provide a comprehensive overview and analysis of the impacts of SAATM air service liberalization. Our analysis combines global evidence on the impacts of liberalizing Bilateral Air Service Agreements (BASAs) with local data, analysis and understanding to provide a robust examination of the economic and social impacts of liberalization. The Study presents estimates of traffic impacts resulting from the liberalization of the African air transport markets consistent with the goals of SAATM, as well as the substantial benefits for passengers including fare reductions, time savings and increased connectivity. We go further by analysing how the increase in air service can facilitate a range of other sectors of the economy by supporting increased tourism, trade, investment, productivity, and other economic benefits – ultimately leading to increased employment and economic output (Gross Domestic Product). A separate scenario was also modelled which examined the impacts from liberalizing BASAs (or signing a MASA) between the 35 current participants of SAATM.

Part 2 further looks at the potential of increased air service and connectivity resulting from liberalization to enhance and support a wide range of activities and opportunities that improve the quality of life in local communities, as well as throughout the country and continent. The Study evaluates how air liberalization further supports priority areas of the African Union's Agenda 2063, the UN Sustainable Development Goals (SDGs), and priorities of the African Development Bank.

Finally, Part 3 of the study presents the Advocacy and Communication strategy materials which are the result of translating the content of Parts 1 and 2. The advocacy and communication materials comprise of the following:

- Country Specific Executive Summaries (per country)
- Country Fact sheets (per country)
- Inspirational Video (1x2 minutes) describing the whole Study
- Short Social Media Adaptations of the Inspirational Video (2 x 30s adaptations of the full video)
- SAATM Advocacy Campaign Website with editable Implementation Dashboard
- Advocacy Presentation distilled from the Study

These materials will be used by the AUC and other stakeholders to promote and support the implementation of the SAATM across the continent. Also developed is a High-Level Communication Plan (HLCP) which provides a high-level outline of how the above resources can be deployed by the AUC to maximum effect.

Executive Summary

Part1: Mapping Implementation of the Yamoussoukro Decision

Chapters 1 - 4 of the study:

- Assess the status of implementation of the YD by the 55[1] members of the African Union
- Assess the challenges and impediments faced by states in Africa in implementing the YD
- Summarize the results of the assessment in the form of a dashboard

The aim of this section is to provide a holistic overview of the current situation regarding implementation of the YD and help identify ways to progress to full application of the YD through the SAATM.

Following a literature review of notable publications on the liberalization of air transport in Africa, the approach applied is based on the view point that full YD implementation is achievable and necessary to the realisation of the SAATM under two separate but connected approaches as elaborated in the literature review in Chapter 1 of this Study, namely:

1. Implementation of YD via the application of its operational principles; and
2. Implementation of YD via policy administration requirements

To this end, YD implementation assessment in Chapter 1 of our study will focus on a State's BASA compliance within the operational principles of the YD as contained primarily in Articles 2, 3, 4, 5 and 6 of the YD Text. The scope of this Study is limited to the assessment of these YD operational principles deemed critical to the practical application of the YD. These operational principles also align with some of the KPIs in the Implementation methodology for monitoring the implementation of the YD sponsored by the United Nations Economic Commission for Africa (UNECA)[2].

In addition to these operational principles stated above, the additional YD Implementation assessment criteria used in this Study include an assessment of a States' air transport industry based on certain parameters or policies that contribute to a holistic aviation framework. This will be assessed later in Chapter 2 of this report via the SAATM Enablers Index, directly related to the YD text are the Safety and Security compliance of States and Airlines (Articles 6.9, 6.12 of YD Text). Our outlined approach leads to the below question:

Is Africa Implementing the Yamoussoukro Decision?

Analysis from the Study shows that YD is still only partially implemented between African States and there is need to move to full implementation to fully realise the SAATM and the significant benefits of aviation to African economies. The free exercise of the rights of the first, second, third, fourth and fifth freedoms of the air, as contained in Article 3 of the YD text is a critical and fundamental aspect of the operational or practical aspects of YD implementation. Part A of this section analyses air traffic liberalization within the African Union by analysing the BASAs concluded between States.

With information from over 600 BASAs, we have reviewed YD compliance for 55 countries, having substantial samples (at least 15 BASAs) for a large majority of these – 41 countries. From these countries, the top 5 countries with the highest proportion of YD compliant BASAs were Cape Verde (76% YD compliant BASAs), Mozambique

[1] No BASA information was available for Sarahawi Republic

[2] Methodology for Monitoring the Implementation of the Yamoussoukro Decision Developing a Checklist of Key Performance Indicators

(75%), Mali (73%), Senegal (68%) and Cameroon (67%), while the countries with the least proportion of YD compliant BASAs were Uganda (4% YD compliant BASAs), Burundi (6%), Libya (8%), Seychelles (8%), and Morocco (9%). States with less than 15 BASAs have been included in our analysis for reference purposes, and highlighted in red, although their compliance classification could differ with additional BASA information. The conclusion therefore is that no State is presently complying 100% with YD implementation based on their BASAs.

Table ES-1: Summary of BASA compliance with YD per State

States	YD Compliant BASAs as a % of Total BASAs	Compliance
Cape Verde	76%	High Compliance
Mozambique	75%	High Compliance
Mali	73%	High Compliance
Liberia	71%	High Compliance
Senegal	68%	Medium Compliance
Cameroon	67%	Medium Compliance
Ghana	66%	Medium Compliance
Botswana	65%	Medium Compliance
Gambia	64%	Medium Compliance
Guinea-Bissau	63%	Medium Compliance
Burkina Faso	62%	Medium Compliance
South Africa	61%	Medium Compliance
Benin	61%	Medium Compliance
Sao Tome & Principe	60%	Medium Compliance
Guinea	53%	Medium Compliance
Congo	52%	Medium Compliance
South Sudan	50%	Medium Compliance
Nigeria	50%	Medium Compliance
Ethiopia	50%	Medium Compliance
Niger	50%	Medium Compliance
Chad	50%	Medium Compliance
Rwanda	49%	Medium Compliance
Eswatini	47%	Medium Compliance
Central African Republic	46%	Medium Compliance
Namibia	41%	Medium Compliance
Comoros	38%	Medium Compliance
Sudan	36%	Medium Compliance
Sierra Leone	35%	Medium Compliance
Togo	34%	Medium Compliance
Djibouti	33%	Medium Compliance
Tunisia	33%	Medium Compliance
Mauritania	33%	Medium Compliance
Lesotho	33%	Medium Compliance
Ivory Coast	31%	Medium Compliance
Equatorial Guinea	29%	Low Compliance
Gabon	25%	Low Compliance
Zimbabwe	25%	Low Compliance
DRC	21%	Low Compliance
Zambia	20%	Low Compliance

Eritrea	20%	Low Compliance
Algeria	19%	Low Compliance
Kenya	18%	Low Compliance
Madagascar	17%	Low Compliance
Tanzania	14%	Low Compliance
Malawi	12%	Low Compliance
Angola	11%	Low Compliance
Egypt	11%	Low Compliance
Mauritius	10%	Low Compliance
Morocco	9%	Low Compliance
Seychelles	8%	Low Compliance
Libya	8%	Low Compliance
Burundi	6%	Low Compliance
Uganda	4%	Low Compliance
Somalia	0%	Low Compliance

Source: Country Survey, ICAO WASA Database, secondary research, IATA Analysis; Countries with less than 15 known BASAs highlighted in red; No known BASAs for Western Sahara.

Furthermore, we analyzed the key reasons why 372 BASAs were deemed as non-Compliant. Of these BASAs, 105 (28%) failed to meet just one of the pre-requisites for YD Compliance, while the remaining 267 BASAs (72%) failed because of non-compliance on two or more pre-requisites. Almost all of the non-compliant BASAs (327 BASAs, 88%) are restrictive in terms of 3rd, 4th or 5th traffic rights, with 306 BASAs being restrictive in terms of 3rd and 4th traffic rights. The provision of full 3rd and 4th traffic rights is, therefore, considered a key obstacle towards the full implementation of the YD in Africa.

Other elements of YD Implementation

After the exchange of traffic rights, the next critical area of YD implementation assesses the adequate levels of Safety and Security of Air Transport. Africa continues to maintain a positive air safety record due to increased compliance with global aviation standards, effective regulation and younger fleets. In 2018, airlines in Africa (excluding North African States) experienced a third consecutive year of zero jet hull losses and zero fatalities in jet operations and Africa was the only region to see a decline in the all-accident rate compared to 2017. Africa is making significant improvements to its safety and security levels and it is important to continue to monitor this trend.

Through the SAATM Enablers Index[3] (see section below), we are able to identify States that have adequate levels of Safety and Security based on their last ICAO audit results which measures the Effective Implementation threshold of States' Safety compliance. 21 of the 55 African Union Member States were found to be below the ICAO EI 60% threshold for Safety. 10 were SAATM members - Tchad, Central African Republic, Democratic Republic of Congo, Eswatini, Guinee, Guinea Bissau, Lesotho, Liberia, Sierra Leone, Zimbabwe whilst 11 were non SAATM members - Burundi, Comoros, Djibouti, Eritrea, Libya, Malawi, Sao Tome and Principe, Seychelles, Somalia, South Sudan and Western Sahara.

What are the impediments to YD implementation?

To understand what has constrained African aviation from implementing the YD, it is equally useful to understand what fundamental policies will enable it to succeed. To this end, the SAATM Enablers Index is comprised of

[3] Chapter 2, section 2.1 – 2.5 (starting from page 80)

parameters loosely termed “SAATM enablers”. A SAATM enabler is a standalone air transport feature or policy that contributes to the holistic aviation framework. We see the SAATM enablers as essential ingredients that lead to a successful aviation sector.

- The SAATM Enablers Index is split into four broad classifications namely: **Country Performance Indicators, Safety & Security, Infrastructure and Aviation Policies and Regulations.**
- Each classification contains several aviation specific features and policies to measure or indicate how a State is tracking with respect to each SAATM enabler.

Through the SAATM Enablers Index[4], we assess States across a range of critical air transportation factors and identify the impediments and constraints to YD implementation. It is important to look at aviation holistically because whilst the granting of the free exercise of the rights of the first, second, third, fourth and fifth freedoms of the air is very important as operational necessities of YD implementation, the air transport market created must be supported by policies that will accelerate YD (and SAATM) implementation.

When assessing the level of YD implementation and the efficacy of SAATM operationalization for each State and arriving at a ‘preparedness’ rating, our analysis produced the following results:

1. The SAATM Enablers_Index reveals 13 SAATM States with a favourable environment for successful SAATM implementation.
2. The SAATM Enablers Index also reveals another set of 12 States that need improvements to optimize successful SAATM implementation as they have some constraints that might hinder implementation.
3. The SAATM Enablers Index further reveals 10 SAATM States that need significant improvements to optimize SAATM Implementation.

Full details on the above findings, including specific impediments, is presented in Chapter 2.

Some of the non-physical impediments to YD implementation observed through the preliminary analysis include the long-standing issue of protectionist policies by some States, non – prioritization of aviation (as a strategic pillar of economic growth) and lack of visa openness. The criticality of these issues will be elaborated upon in the next section.

Overarching impediments

As a result of the analysis, several States emerge as having a deliberate strategy to develop a holistic air transport industry, which is encouraging. Our analysis also indicates some challenges to implementation. It is our considered opinion from the analysis from the data collected on the BASAs, the literature review and the SAATM Enablers Index that two overarching YD implementation impediments emerge:

1. A culture of non-prioritization of aviation by governments; and
2. A policy of protectionism.

1. A culture of non-prioritization of aviation

[4] Supra

The analysis in Chapter 2 shows that at least 21 States have not met the 60% "Effective Implementation" (EI) mark (as at December, 2020). The EI score is a measure of a State's Safety oversight capability and an indication of a State's degree of compliance with ICAO standards and recommended practices. This international standard should be the minimum a State should aspire to. Therefore, a States inability to meet 60% EI should be considered a significant indicator of the overall state of their air transport industry.

Beyond the ICAO EI score, other factors were evaluated to develop a holistic picture of YD implementation and some common indicators emerge amongst these 21 States, namely:

- The States have no major airline, or their airline does not meet the aviation industry's minimum safety requirements as per the IATA Operational Safety Assessment (IOSA) standard.
- The States are ranked low for their airport and airspace infrastructure.
- The States rank very low on the AU/AfDB Visa Openness ranking.
- The States do no prioritize ratification of Air Law treaties.
- The States have a small aviation market (based on 2019 passenger figures and 2039 forecasts).

The consequences of the above do not only negatively affect YD/SAATM implementation but critically also constrain the State's aviation sector and its economic growth. The SAATM Enablers are essential for successful aviation sector development.

2. A policy of protectionism

The analysis in Chapter 2 shows that at least 28 of the 55 AU member States have interests (ownership or stakes) in the national or main air carriers in those States, whilst several other States also have plans to launch their own national carriers. Based on publicly available information, it appears that 14 of the State-owned airlines are struggling to survive. This could also explain the lack of full YD compliance in the BASAs analysed. It is difficult to see notable improvements in national carrier performance if the supporting environment for aviation – be it airport and air space infrastructure efficiency or supporting policy and regulation – is not efficient or optimized. When a national carrier continues to underperform and clear business strategies are not deployed to address the issues, protectionist policies will continue to persist, and YD implementation will continually be constrained.

Through the analysis of the SAATM Enablers Index and selected country commentaries, the following other subjective impediments to YD implementation were also identified, namely:

1) Weak political will resulting in a patchwork of YD implementation across States (either due to protectionism or lack of prioritization of aviation by States due to their small market size). Weak political will is a major impediment to YD implementation due to its consequences on the industry. Weak political will starting from the top leads to a lack or limited central administration of YD implementation within such State, and a lack of multisectoral cooperation resulting in a lack of harmonization of policies. Where the SAATM Enablers index identifies a State with a low EI score, it could also be a reflection of that State's political will. Such States will require additional advocacy and support.
2) Poor Visa openness by a large number of States resulting in additional entry visa fees, can be quite expensive in some States, reduces connectivity, airline demand and leads to weak trade facilitation.
3) High Taxes and Charges - Airlines cannot thrive in a multiple taxation environment. High taxes, charges, surcharges and fees remain an existential threat to the growth of African aviation and YD implementation. There must be concerted efforts to bring down the high taxes and charges environment across Africa.
4) Poor air and ground infrastructure across a large number of States increase airline costs and further hinder aviation growth.

5) Limited Airline cooperation and collaboration (please refer to Chapter 3 for more information)
6) Shortages in skilled Staff to support a thriving aviation industry
7) Lack of a harmonized, standardized, and simplified approach for the operationalization of Article 6 of the Chicago convention - Under the SAATM, overflight (OVFC) permissions, for scheduled operators wishing to overfly a territory of another State or make a non-commercial (technical) stop for contingency reasons. 'File n Fly' should be a fundamental aspect of the SAATM.

Addressing these strategic issues would lead to significant improvements to the implementation of the YD and SAATM.

What are the consequences of the current status of YD implementation?

Our analysis in Chapter 3 looks in details at the outcomes of the current level of liberalization in Africa by studying an array of metrics including the level of cooperation and coordination amongst African airlines (including interlining, code share, alliance membership, franchise, subsidiary or joint-ventures), as well as actual traffic data to assess the level of connectivity of intra-African air transport.

Our analysis shows that while cooperation does exist between African airlines, there is scope for further coordination especially between smaller or medium-sized operators. This will be particularly important during the recovery from the COVID-19 pandemic where demand will be weaker for some time (forecasted until 2023-2024) and airline finances will be further stressed. In most industries that would mean downsizing and consolidation. Ownership and control restrictions as well as national interests may limit the extent of consolidation in Africa in the near term. However strategic implementation of the forms of airline cooperation examined in Chapter 3 will play an important part in ensuring the ongoing sustainable development of air transport connectivity across the continent.

Air transport's unique benefit is to connect cities that cannot otherwise be connected in a timely manner, enabling flow of key economic activities and people. When placed in the global context for comparison, we see even more clearly that the need to improve air connectivity within Africa is pressing. In terms of airport pairs growth intra-Africa, the number of airport pairs has grown much slower than in intra-Asia (30% vs 137% respectively) for example. In terms of competition, we also see less activity than in more developed regions. This difference is expected given that Africa is still at a lower level of maturity of its aviation market. In terms of affordability, Africa is the region where airfares are by far the highest within the continent, as compared with the proportion of income. Given that in Africa the GDP per capita is significantly lower – almost around four times lower than Asia Pacific and five times than South America – we would expect it to translate into a lower fare. On the contrary, the average fare in Africa is higher in absolute terms than all other regions due to factors further elaborated in this study.

Addressing the issues around liberalization of air services would significantly improve connectivity in Africa and enable not only gains in air transportation benefits, but also benefits to the broader economy and society. Indeed, the benefits of a liberalized air transport market in Africa have been examined in detail in our study.

Conclusion for Part 1

The following conclusions and recommendations are made and elaborated in the Study:

1. Without uniformity of safety measures across Africa, YD implementation will certainly be more difficult. All outstanding States are to achieve the minimum 60% Effective Implementation score in order to foster the harmonized implementation of SARPs for a safe and reliable aviation system.
2. All airlines with IOSA certification should be encouraged to maintain their good standing on the registry as evidence of minimum compliance with industry best practise.

3. The challenges to achieving the projected growth for African aviation become even greater when a State has poor infrastructure on the ground and/or air. Africa needs to urgently address its aviation infrastructure gaps.
4. High taxes and charges stall aviation growth. Domestic airlines cannot thrive in a multiple taxation environment. There must be concerted efforts to bring down the high taxes and charges environment across Africa.
5. SAATM States, need to remove the requirement for approval for Foreign Operations Specification (Foreign OpSpecs) as this is an unnecessary (operational) impediment to the establishment of the SAATM. 'File n Fly' should be a fundamental aspect of the SAATM.
6. Governments across Africa need to prioritize aviation if their economies are to realize their full potential.
7. The legacy of protectionism must be reconsidered. Protectionism by preventing other airlines from operating into a country to protect a State's interest in an airline provides little benefits. Rather it promotes inefficiency, restricts trade and stifles a State's economic growth.

The underlying concerns for the future of a State's domestic carrier(s), if SAATM is fully implemented, should be addressed. Such measures include:

8. Following the identification of States ready, willing and able to proceed with full and immediate SAATM implementation, there should be a framework for a phased approach for States. States that opt for a phased approach should commit to a clear and actionable timeline for the gradual implementation of the YD.
9. There should be a balance between a competitive environment and a level playing field so that stronger African carriers will not exert market dominance to the detriment of a State's domestic carrier. Innovative models such as promoting codeshares and other forms of airline partnership between SAATM members can be explored.
10. The ongoing support of the efforts led by the Africa Civil Aviation Commission (AFCAC) should be maintained. The Institutional and Regulatory Texts essential for the successful operation of the SAATM must be recognized by all States.
11. The continued support of the functions of the Executing Agency will enable the application of the Competition regulations which address issues such as abuse of dominant position, prohibition of discrimination in national regulations and regulations on other anti-competitive behaviours. There should also be a scheduled period for review of the Institutional and Regulatory Texts to address issues not originally envisaged.
12. A situation where a State has YD compliant BASAs with certain States should no longer be considered as YD implementation but as a bilateral agreement between States. If a State has a YD compliant BASA with one State, then it should have YD compliant BASAs with all States. To reverse this current trend, two options are available:
    a. States either continue to bilaterally amend BASAs that are not YD compliant until full BASA compliance is achieved.
    b. States sign a multilateral agreement (MASA) granting the free exercise of fifth freedom air traffic rights amongst the signatories and clearly abolish the need for future BASAs between them.

Using the current YD Regulatory Text as the foundation, there must be a new path that avoids doing the same thing and expecting a different result. The new option must not result in lengthy new processes and consultations

but should consolidate on current gains. The central steering of the African Union Commission, the African Civil Aviation Commission and the African Airlines Association and other partners are key.

Overall, the assessment is that YD implementation as originally envisaged has stalled, primarily due to protectionism or a lack of prioritization of aviation by States. Nevertheless, there is an appetite for full YD implementation by States and there are States with favourable environments where YD/SAATM implementation can be successful.

In order to consolidate on decades of progress, sometimes fast (as seen in the last few years) but often slow, there must be a definitive, fast, multilateral solution steered at a central level by the AUC and AFCAC. Otherwise, if States are left to slowly amend BASAs that do not comply with the YD on a bilateral basis, YD implementation will continue to lull.

Part 2: Value and Benefits of Aviation for the Member States of the African Union

Evidence on Benefits of BASA Liberalization

A substantial body of evidence has developed over the last 20 years examining the impacts of BASA liberalization for both the aviation sector and the wider economy. Repeatedly, these studies from around the globe found that liberalization allowed new carriers to enter the market and existing carriers to better respond to demand. This resulted in lower fares for passengers and more travellers being able to access air services. More recently, research has found similar effects occurring in Africa where governments have chosen to remove restrictions on air services.

The impacts of BASA liberalization are realised primarily through a variety of specific channels and mechanisms, including but not limited to improved market access, greater connectivity, increased competition, reductions in passenger air fares and higher traffic demand levels. Moreover, air service liberalization also generates a number of wider economic and socio-economic benefits, primarily through increases in output, value added contributions, income levels, jobs, reductions in poverty and overall welfare improvement effects. The mechanisms are summarised in the following diagram:

Modelling the Impacts of SAATM Implementation of Air Traffic in Africa

The impact of liberalization of BASAs between the Africa nations was analysed using a Gravity model which forecasts traffic between any two countries based on the economic characteristics of the two countries, trade levels, their geographic relationship, and the characteristics of the BASA between the two countries. By specifying changes to the terms of the BASA to make them YD compliant, the model can be used to estimate the traffic impact resulting from liberalization.

Results of the Impacts of SAATM Implementation of Air Traffic in Africa

The traffic results from the gravity model are provided in Table ES-1, showing the projected increase in intra-Africa traffic volumes to/from each of the countries. BASA liberalization is projected to increase intra-Africa passenger traffic by 51%, from 31.2 million to 47.1 million. This represents an additional 15.9 million passenger trips that currently are unable to take place for reasons of cost, flight availability or service convenience.

The traffic increases in each country are a function of how much liberalization has already taken place, the conditions of the aviation sector and general economic conditions. The highest percentage increases are projected for Central African Republic (102%), Angola (95%), Guinea-Bissau (94%), Algeria (94%) and Sudan (84%) and Democratic Republic of the Congo (82%) due to in part to the limited air service and restrictive BASAs the countries have currently. Other countries have relatively low percentage increases in traffic as many of their key BASAs are already liberalized and currently enjoy relatively good air access. The largest absolute growth in air traffic is South Africa, followed by Kenya, Tunisia and Morocco due to the relatively large size and maturity of these air markets.

Table ES-2: Intra-Africa Passenger Traffic Impact of Liberalization

Country	Traffic Before (000's)	Traffic After (000's)	Increase (000's)	% Increase
Algeria	698	1,354	656	94%
Angola	290	564	274	95%
Benin	402	577	175	44%
Botswana	435	616	181	42%
Burkina Faso	364	534	170	47%
Burundi	119	182	63	53%
Cameroon	581	723	142	24%
Cape Verde	89	128	39	44%
Central African Republic	95	192	97	102%
Chad	142	234	92	64%
Comoros	81	129	48	59%
Congo (Republic of the Congo)	258	419	161	63%
Côte d'Ivoire	920	1,404	485	53%
Democratic Republic of the Congo	336	609	274	82%
Djibouti	146	262	116	79%
Egypt	1,225	1,874	649	53%
Equatorial Guinea	158	239	81	51%
Eritrea	164	241	77	47%
Eswatini	53	91	39	73%
Ethiopia	1,200	1,709	510	42%
Gabon	452	687	235	52%
Gambia	178	241	63	36%
Ghana	916	1,350	434	47%
Guinea	265	422	157	59%
Guinea-Bissau	77	149	72	94%
Kenya	2,024	2,954	930	46%
Lesotho	56	93	37	67%
Liberia	174	304	129	74%
Libya	1,181	1,733	552	47%
Madagascar	231	358	127	55%
Malawi	212	331	119	56%
Mali	468	675	207	44%
Mauritania	193	342	150	78%
Mauritius	569	858	289	51%
Morocco	1,589	2,353	764	48%

Country	Traffic Before (000's)	Traffic After (000's)	Increase (000's)	% Increase
Mozambique	418	607	189	45%
Namibia	596	874	278	47%
Niger	325	530	206	63%
Nigeria	1,128	1,742	614	54%
Rwanda	491	683	191	39%
Saharawi Arab Democratic Republic	N/A	N/A	N/A	N/A
São Tomé and Príncipe	58	84	27	46%
Senegal	958	1,439	481	50%
Seychelles	145	261	115	79%
Sierra Leone	148	215	67	45%
Somalia	279	456	177	64%
South Africa	4,236	5,529	1,293	31%
South Sudan	282	443	162	57%
Sudan	570	1,050	480	84%
Tanzania	945	1,592	647	68%
Togo	233	326	93	40%
Tunisia	1,556	2,396	840	54%
Uganda	842	1,426	584	69%
Zambia	661	1,055	394	60%
Zimbabwe	1,001	1,492	492	49%
Total African Union	**31,210**	**47,132**	**15,922**	**51%**

Source: Before traffic volumes taken from IATA PaxIS database for 2019; after volumes based on InterVISTAS analysis. Figures are for the total originating and departing passengers in each country.

Air service liberalization is projected to bring about other substantial benefits for passengers:

- **Fare savings**: passengers travelling between these countries are expected to benefit fare reductions averaging 26.4% across the continent and ranging between 18.6% and 39.7% within individual countries, providing a saving of US$ 1.46 billion per annum.
- **Increased consumer welfare:** liberalization also results in additional passengers travelling who previously were unable to do so, due in part to the lower cost of travel. The benefit to these additional passengers is captured in a concept known as consumer surplus. Consumer surplus is a term in economics that refers to the amount that consumers benefit by being able to purchase a product for a price that is less than they would be willing to pay. The total increase in consumer surplus is estimated to be US$ 2.85 billion across the African Union countries.
- **Greater connectivity**: of the 1,431 country pairs between the African Union countries, only 19% had some form of significant direct service in 2019 (operated at least once weekly on an annual basis). With liberalization, it is forecast that an additional 145 country-pairs will receive direct service.
- **Greater convenience:** in 2019, only 35% of the Africa routes were operated on a daily basis or better, and only 13% were operated on twice daily or better basis. Many had seasonal services or services operated at less than daily frequency. Such services offer passengers very limited choice in terms of their journey timings and prevent passengers obtaining a convenient itinerary (e.g., conducting a trip over a single day, which is important to companies trying to minimise the time their staff are out of the office i.e. productivity). With liberalization, it is estimated that frequencies on existing routes will increase by 27%, providing greater convenience and choice for consumers.
- **Time savings:** new routes and greater frequencies will shorten the flying time between many cities. For example, in 2019 there was no regular direct service between Central Africa Republic and Democratic Republic of the Congo. The most convenient routing available was via West Africa or Morocco. The minimum journey time for this routing was 9.5 hours, but depending on connecting times could be as much as 15 hours. A direct service (which is forecast by the gravity model) would reduce the travel time between the two countries to approximately 2 hours.

Benefits of Liberalization to the Wider Economy

The impacts of liberalization extend beyond the benefits to passengers and the aviation industry. The increased air service levels will stimulate employment in the aviation industry to handle the additional passengers and their baggage and to operate, service, and maintain aircraft. Liberalization is also expected to stimulate tourism between the countries, generating an estimated US$ 1.65 billion in additional tourism spending. Perhaps most significantly, the increase in air service can facilitate a range of other sectors of the economy by supporting increased trade, attracting new businesses to the region, encouraging investment and enhancing productivity. Industries and activities that would otherwise not exist in a region can be attracted by improved air transport connectivity.

The increased aviation activity, tourism, trade, investment, productivity, and other economic benefits will generate considerable employment and economic output (Gross Domestic Product). Across the African Union countries, BASA liberalization is projected to result in an additional 588,750 jobs and US$ 4.0 billion additional GDP (0.17% of the total GDP of the African Union countries). The impact for individual countries is a function of the degree of liberalization already undertaken, as those markets that have not significantly liberalized air service are likely to see the biggest impacts from full liberalization, the size of the air traffic markets and the economic structure of that country. The incremental GDP represents a 0.06%-2.21% increase on 2019 GDP levels, with all countries expected to gain economically from liberalization.

Table ES-3: Total Economic Impact Stimulated by Liberalization

Country	Employment (Jobs)	Incremental GDP (US$ Million)	GDP Impact*
Algeria	21,320	273.9	0.16%
Angola	17,960	145.7	0.16%
Benin	10,840	47.1	0.33%
Botswana	4,840	82.2	0.45%
Burkina Faso	11,020	40.5	0.25%
Burundi	5,050	5.6	0.19%
Cameroon	6,840	35.4	0.09%
Cape Verde	720	7.5	0.38%
Central African Republic	3,860	8.3	0.37%
Chad	12,410	40.5	0.36%
Comoros	1,140	8.5	0.73%
Congo (Republic of the)	3,920	29.3	0.24%
Côte d'Ivoire	18,920	168.0	0.29%
DR Congo	23,880	72.5	0.14%
Djibouti	3,730	28.8	0.86%
Egypt	12,390	171.9	0.06%
Equatorial Guinea	2,110	50.0	0.45%
Eritrea	1,970	5.0	0.24%
Eswatini	1,290	22.9	0.51%
Ethiopia	21,730	81.8	0.09%
Gabon	3,490	77.7	0.46%
Gambia	1,080	4.1	0.22%
Ghana	23,810	156.8	0.23%
Guinea	5,850	30.0	0.24%
Guinea-Bissau	2,140	6.7	0.50%
Kenya	39,060	201.5	0.21%
Lesotho	2,290	10.0	0.42%
Liberia	5,600	14.3	0.47%
Libya	11,230	228.1	0.44%
Madagascar	12,550	20.8	0.15%
Malawi	7,920	13.2	0.17%
Mali	17,430	73.7	0.43%
Mauritania	3,630	32.7	0.43%
Mauritius	3,070	91.6	0.65%
Morocco	9,170	148.7	0.12%
Mozambique	6,540	13.2	0.09%

Country	Employment (Jobs)	Incremental GDP (US$ Million)	GDP Impact*
Namibia	3,490	67.4	0.55%
Niger	17,300	48.8	0.38%
Nigeria	33,610	262.6	0.06%
Rwanda	7,050	21.9	0.21%
Saharawi ADR	N/A	N/A	N/A
São Tomé and Príncipe	1,050	8.4	2.00%
Senegal	13,130	104.7	0.44%
Seychelles	1,060	37.7	2.21%
Sierra Leone	4,210	10.4	0.25%
Somalia	9,110	4.0	0.44%
South Africa	17,650	322.0	0.09%
South Sudan	9,350	43.8	0.37%
Sudan	21,190	77.2	0.25%
Tanzania	42,960	143.0	0.23%
Togo	2,310	6.5	0.12%
Tunisia	9,380	125.7	0.32%
Uganda	30,280	102.6	0.29%
Zambia	12,800	63.9	0.27%
Zimbabwe	12,020	64.8	0.30%
Total African Union	**588,750**	**3,963.7**	**0.17%**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.
** GDP impact is the incremental GDP as a percentage of national GDP in 2019.*

Social Benefits of Liberalization to the African continent

The benefits of air liberalization are not just confined to employment and GDP related impacts. The increased air service and connectivity resulting from liberalization has the potential to enhance and support a wide range of activities and opportunities that improve the quality of life in local communities, countries and the entire continent. In addition to generating economic growth and alleviating poverty, air transportation enables access to healthcare, food, and education, necessary aid and relief, while enhancing mobility and connecting different cultures.

Table ES-4 summarises how SAATM further supports priority areas of the African Union's Agenda 2063 and the UN Sustainable Development Goals (SDGs), which is further documented in the main report.

Table ES-4: Contribution of SAATM to the AU Agenda 2063 Goals and UN SDGs

AU Agenda 2063 Goals	UN SDGs	Impact
1. A high standard of living, quality of life and well-being for all citizens.	**#1.** No Poverty **#2.** Zero Hunger **#8.** Decent Work and Economic Growth **#10.** Reducing Inequality **#11.** Sustainable Cities and Communities	SAATM implementation will result in higher employment and national income growth. Liberalization will lead to greater employment opportunities and access to higher income employment, helping to alleviate poverty.
2. Well educated citizens and skills revolution underpinned by science, technology and innovation. **18.** Engaged and empowered youth and children.	**#4.** Quality Education	SAATM liberalization will promote better access to education by supporting the movement of international students relying on air transportation to study in other countries in Africa or abroad. Jobs in the aviation industry are also highly skilled positions that require different levels of training and education.
3. Healthy and well-nourished citizens.	**#3.** Good Health and Well-being	By providing increased air access, especially to remote areas, SAATM will help ensure good health and well-being of citizens through increased connectivity to health and medical services, and through the transportation of essential supplies.
4. Transformed economies. **10.** World class infrastructure across Africa.	**#9.** Industry, Innovation and Infrastructure	The catalytic impacts released by SAATM will enhance economic productivity and attract greater investment in the economy and in people. New, improved infrastructure will be necessary to handle the growth in air traffic and economic activity.
7. Environmentally sustainable and climate resilient economies and communities.	**#6.** Clean Water and Sanitation **#7.** Affordable and Clean Energy **#12.** Responsible consumption and production **#13.** Climate Action **#15.** Life on Land	The aviation industry is committed to improving efficiencies and focusing on sustainability, taking a lead role in Environmental stewardship. Liberalization will assist in the shift to more efficient means of transport, reducing the continent's overall environmental footprint.
8. United Africa (Federal or Confederate). **16.** African cultural renaissance is pre-eminent. **19.** Africa as a major partner in global affairs and peaceful co-existence.	**#17.** Partnership for the goals	SAATM liberalization will contribute to intra-Africa unity, culture and connectivity.
17. Full gender equality in all spheres of life.	**#5.** Gender Equality	SAATM liberalization can result in increased female employment, as the aviation industry aims to increase greater workforce diversity.

Conclusion for Part 2

This section of the report considers the value of YD liberalization to the member states of the African Union. From this analysis, a number of conclusions can be made:

- Decades of experience and research have established that air service liberalization has led to increase traffic volumes, greater connectivity and consumer choice, and reduced air fares. Furthermore, the benefits of air service liberalization extend well beyond the aviation industry and passengers – it contributes to greater trade and tourism, inward investment, productivity growth, increased employment and economic development. More recently, research has found similar effects occurring in Africa where governments have chosen to remove restrictions on air services.

- Analysis and modelling conducted in this study substantiates the idea that African Union members fully implementing YD liberalization will lead to substantial benefits in the Africa aviation sector. Intra-Africa traffic volumes are projected to increase by 51%, and all countries in the Africa Union are expected to experience increases in traffic. Furthermore, average fare levels are projected to decline by 26%, providing fare savings of US$ 1.46 billion per annum.
- The impacts of liberalization extend beyond the benefits to passengers and the aviation industry. Combining the aviation activity, tourism, trade, investment, productivity, and other economic benefits, YD liberalization is projected to result in an additional 588,750 jobs and US$ 4.0 billion in additional GDP (0.17% of the total GDP of the African Union countries). The impact for individual countries is a function of the degree of liberalization already undertaken (those markets that have not significantly liberalized air service are likely to see the biggest impacts from full liberalization), the size of the air traffic markets and the economic structure of that country. The incremental GDP represents a 0.06%-2.21% increase on 2019 GDP levels, with all countries expected to gain economically from liberalization.
- The benefits of air liberalization are not just confined to employment and GDP related impacts. The increased air service and connectivity resulting from liberalization has the potential to enhance and support a wide range of activities and opportunities that improve the quality of life in local communities, as well as throughout the country and continent. In addition to generating economic growth and alleviating poverty, air transportation enables access to healthcare, food, and education, while enhancing mobility and connecting different cultures, and can contribute to social mobility.
- While the COVID-19 pandemic has had an acute impact on the Africa aviation industry, it has not fundamentally changed the argument for liberalizing the African aviation market. The pandemic has severely reduced air traffic levels in Africa, as it has in most parts of the world, and so the initial gains from liberalization may be smaller in the short term. However, liberalization will play a role in speeding up the recovery of traffic and will be critical to the long-term development and robustness of air transport markets. If anything, COVID-19 gives greater impetus to the need for liberalization, by allowing private capital and expertise to have a greater role in facing the challenges resulting from the pandemic.
- The results of this study provide renewed impetus for the rapid and complete YD liberalization of African air markets. The gains to member state economies and societies are evident and substantial, and will contribute to the long term development goals for the continent.
- The benefits of liberalization can be enhanced by other related measures such as infrastructure investment, tax optimisation, visa and trade policies, and increased training of aviation professionals.

Part 3: Communication Strategy and Advocacy Material

The content of Parts 1 and 2 has been translated into advocacy and communication strategy materials which constitute Part 3 of our study. The advocacy and communication materials comprise of the following:

- Country Specific Executive Summaries (per country)
- Country Fact sheets (per country)
- Inspirational Video (1x2 minutes) describing the whole Study
- Short Social Media Adaptations of the Inspirational Video (2 x 30s adaptations of the full video)
- SAATM Advocacy Campaign Website with editable Implementation Dashboard
- Advocacy Presentation distilled from the Study

These materials will be used by the AUC and other stakeholders to promote and support the implementation of the SAATM across the continent. We have also developed a High-Level Communication Plan (HLCP) is to

provide a high-level outline of how the above resources can be deployed by the AUC to maximum effect. This HLCP will also identify the key targets for the materials, the key messaging from the Study and the events and opportunities for presenting the messaging. The Continental Study and the advocacy materials will form the heart of every engagement.

Overarching Study Conclusions and Recommendations

The main aim of the Study is to encourage the full implementation of the SAATM across all AU Member States. In addition, with the new information provided by this Study and the new communication materials the SAATM is expected to receive enhanced visibility, publicity and increased awareness of the social and economic benefits amongst all stakeholders.

Based on the overall aim of the Study, there are two specific objectives:

1. Encourage existing SAATM Members to fully implement the SAATM.
2. Encourage the outstanding non SAATM States to sign on to the SAATM and fully implement.

Based on the output from the Study, in order to achieve these specific objectives, African States have the following high-level policy requirements:

i. Sign the SAATM Solemn Commitment Letter (non SAATM States only)

ii. States either continue to bilaterally amend BASAs that are not YD compliant until full BASA compliance is achieved.

iii. States sign a multilateral agreement (MASA) granting the free exercise of first to fifth freedom air traffic rights amongst the signatories and clearly abolish the need for future BASAs between them.

   a. All BASAs (or MASA) must comply with Articles 2, 3, 4, 5 and 6 of the YD Text

   b. Grant, as a minimum, first to fifth freedom traffic rights to SAATM Member States

   c. Recognition of all designated African eligible airlines

iv. Adherence to ICAO and other best practice on Safety (e.g. IOSA)

v. Fully implement all SAATM Concrete Measures

vi. Focus on adherence to SAATM Enablers to support a holistic aviation sector

PART 1: Mapping Implementation of the Yamoussoukro Decision

Chapter 1: Assessment of the implementation of the YD

The Study commences by undertaking an assessment of the implementation of the Yamoussoukro Decision (the Decision). Given the history and complexity surrounding efforts to liberalize air transport in Africa, the Study provides a comprehensive background and information in order set up our basis of assessment.

The start of this chapter provides readers with a review of existing relevant literature about the implementation of the Decision and its implementation. The studies we review include:

- Open Skies for Africa: Implementing the Yamoussoukro Decision - Charles E. Schlumberger, World Bank, 2010
- Continental Evaluation of the Implementation of the Yamoussoukro Decision - African Union Commission/Infrastructure & Energy Department and UNECA, 2011
- Transforming Intra African Air Connectivity: The Economic Benefits of Implementing the Yamoussoukro Decision - InterVistas and IATA, 2014
- Liberalization of Air Transport in Africa: 2019's Status and Way Forward - African Development Bank, 2018

Our review of these studies addresses key defining questions concerning what the Decision is, moving into how the Decision is to be implemented, and the impediments that have been identified with respect to YD implementation. Our assessment of these studies helps us to outline the criteria we will use in this study to assess the States' implementation of the YD.

Prior to commencing our assessment of the States' compliance with YD, we provide a comprehensive definition of requirements and provisions, as well as key stakeholders. The chapter then concludes with a detailed assessment of the primary YD implementation criteria and the status of the State's bilateral air service agreements.

1.1. Literature Review of Existing YD Implementation Studies

Background

There are 4 major policy events when it comes to air transport liberalization in Africa:

1. The Yamoussoukro Declaration of 1988.

2. The Yamoussoukro Decision of 1999 (endorsed by Africa Heads of State and Government in July 2000, entry into force in 2001). The Decision was signed by 44 Member States and is deemed binding.

3. 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. Eleven African Member States

championed the Declaration by signing the Solemn Commitment to actualise the Decision creating the single market.[5]

4. The launch of the Single Africa Air Transport Market (SAATM) in January 2018 where 23 States committed to implementation at the time of launch. As at the time of this study, 35 member States have committed.

The main objective of the SAATM is the implementation of the 1999 Yamoussoukro Decision. Implementation of the YD refers to total air transport liberalization across Africa. Today, in practical terms, this means an eligible airline from one African State can fly into another African State using only a prior notification procedure. At the heart of YD implementation is cooperation and integration in a competitive environment.

The full implementation of the YD is also important because it provides a framework to improve the fragmented regulatory landscape across Africa through harmonized air transport rules and regulations. The YD provides a set of rules that gives African airlines equal commercial opportunities under one African market. It also guarantees the uniform application of rules which ensures the same high standards (for example on Safety and Security) apply across all SAATM signatory States.

Introduction

There are many opinions, articles and schools of thought on the state of African aviation and more particularly the critical need for liberalization of air transport services across Africa (including YD and SAATM implementation). For the purpose of this Study, we will focus the scope of the literature review on 4 defintive contributions to existing literature on the implementation of the Yamoussoukro Decision. These studies are:

- Open Skies for Africa Implementing the Yamoussoukro Decision - Charles E. Schlumberger, World Bank, 2010
- Continental Evaluation of the Implementation of the Yamoussoukro Decision, African Union Commission/Infrastructure & Energy Department, 2011
- Transforming Intra African Air Connectivity: The Economic Benefits of Implementing the Yamoussoukro Decision, InterVistas and IATA, 2014
- Liberalization of Air Transport in Africa: 2019's Status and Way Forward, African Development Bank, 2018

These reports or studies were selected for their diverse approach and thorough analysis on YD implementation. The first two studies review in depth YD implementation and all the prevailing issues at the time of publication whilst the third study was conducted within the scope of the SAATM as an implementation mechanism of the YD.

A. Open Skies for Africa: Implementing the Yamoussoukro Decision - Charles E. Schlumberger, World Bank, 2010

Charles E. Schlumberger is currently the Lead Air Transport Specialist at The World Bank in Washington, DC and is considered an authority on African aviation. In his book, he thoroughly addresses the following:

- Africa's progress towards liberalizing air services
- What the term implementation means in the context of applying the principles of the Yamoussoukro Decision
- The shortcomings of efforts towards liberalizing air services in Africa

[5] Benin, Capo Verde, Republic of Congo, Côte d'Ivoire, Egypt, Ethiopia, Kenya, Nigeria, Rwanda, South Africa, and Zimbabwe.

- Challenges posed by the poor aviation Safety and Security standards in most African countries.
- The impact of certain policy steps of the Decision and the economic significance of air transportation and its full liberalization in Africa.
- Policy recommendations for completing implementation to fully liberalize Africa's air services.

B. Continental Evaluation of the Implementation of the Yamoussoukro Decision, African Union Commission/Infrastructure & Energy Department, 2011

This report was prepared under a consulting contract on behalf of the African Union Commission. The main findings, conclusions and recommendations can be summarized as follows:

- An overall assessment of the implementation of the Yamoussoukro Decision in order to provide suitable recommendations to African Ministers of Transport. This assessment included key analysis which includes:
  - Regional evaluations of the extent and how the mechanisms of the Yamoussoukro Decision's different articles have been applied
  - Analysis of the text of the Yamoussoukro Decision
  - Evaluation criteria for the implementation of the Yamoussoukro Decision
- Weaknesses and corresponding needs
- Recommendations on the way forward

C. Transforming Intra African Air Connectivity: The Economic Benefits of Implementing the Yamoussoukro Decision, InterVistas and IATA, 2014

IATA commissioned InterVISTAS to undertake a study (The "**2014 12 Country Study**") to examine the impacts of liberalising intra-African air markets. IATA also contributed to the Study with economic analysis. The study involved modelling the transmission mechanisms by which liberalisation leads to greater air connectivity, resulting in increased traffic volumes and ultimately generating wider economic benefits. The analysis examined the impact of liberalising air markets between 12 countries within four sub-regions of Africa. Chapter 5 of the Study briefly discusses the principles and application of the Yamoussoukro Decision and draws the following conclusions:

- Protectionist policies have obstructed liberalisation
- Discriminatory practices have hampered the pace of liberalisation
- Severe restrictions have been imposed by regulators outside the continent
- The efficient utilization of infrastructure has been hindered by non-physical barriers

D. Liberalization of Air Transport in Africa: 2019's Status and Way Forward, African Development Bank, 2018

The African Development Bank Group ("AfDB") 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 objectives of this study were as follows:

- Assess the status of air transport liberalization in Africa as an indicator of the implementation of the SAATM provisions by African States
- Provide an overview of air transport connectivity in Africa (at intercontinental, continental and regional level) including the analysis of different connectivity scenarios
- 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 AfDB Study recognizes the relationship between the Yamoussoukro Decision and the SAATM. It also further recognizes the importance of a holistic approach to air transport which has liberalization as one of the strategic pillars of an air transport master plan.

The focus of the scope of this Study (as it relates to YD implementation) is to:

- Assess the status of implementation of the YD by the 55 members of the African Union
- Assess the challenges and impediments faced by States in Africa in implementing the YD
- Summarize the results of the assessment in the form of a Dashboard

As at the time of publishing the Schlumberger and African Union report, the SAATM had not come into operation; thus our Study considers the implication of the SAATM in the implementation of the YD.

The scope of our literature review of these four publications will also be limited to the implementation of the YD.

1. BACKGROUND OF THE YAMOUSSOUKRO DECISION

In his book, Schlumberger provides a detailed history of the state of intra Africa markets at the time and the need for the YD. In the era before the Yamoussoukro Decision and even back to the initial Declaration in 1989, African aviation was characterized by the following main attributes, amongst others:

- Most African national carriers pursued a business model that consisted of using profitable international routes to and from the territories of former colonial masters to cross-subsidize costly, yet extensive, domestic {and regional} route networks (Guttery 1998, p. 1).
- Governments tended to view the development of regional air services as secondary, especially when they had to maintain a costly domestic and regional network.
- African carriers faced difficulties in obtaining traffic rights into other African states. Sometimes, they obtained fifth freedom rights by paying “royalties” or commissions (UNECA 2004, p. 33).
- Intra- African air traffic remained costly and inefficient, especially in those cases where the bilateral agreements protected a State-owned carrier.
- The typical bilateral agreements of the 1960s were based on the traditional predetermination model, under which market access and capacity were predetermined (Doganis 2001, p. 19).2 This model controlled the market by effectively restricting competition.
- Most African carriers were State owned. These carriers were mostly run as government entities and lacked the necessary economic and commercial focus to ensure market-based profitability.

To address this, UNECA organized a conference in Mbabane, Swaziland, in November 1984, to discuss why African carriers faced difficulties in obtaining traffic rights into other African states. The conference ended with the Declaration of Mbabane, which called for the creation of a Technical committee that would develop “a common African approach for the exchange of third and fourth freedom rights” and “encourage the exchange of fifth freedom rights” (UNECA 1988, p. 1) (box 1.1). It further proposed an additional set of measures that focused primarily on closer cooperation between African carriers. These measures later became the core of the Yamoussoukro Declaration and on 17 October 1988, the Ministers in charge of civil aviation of 40 African States met in Yamoussoukro, Côte d’Ivoire, and announced a new African air transport policy that was subsequently named the Yamoussoukro Declaration. Interestingly, based on conducted interviews, the author asserts that the Yamoussoukro Declaration was widely understood to be a general, nonbinding expression of strategy[6].

[6] Interviews with Jorge Lima Delgado Lopes, minister of infrastructure and transport of Cape Verde, on 13 May 2002; Sama Juma Ignatius, director general of the Cameroon Civil Aviation Authority on 27 August 2003; and António Pinto, director general of the Instituto De Aviação Civil de Moçambique on 30 March 2004

The Yamoussoukro Declaration enforced the notion that the air transport sector in Africa primarily needed to be liberalized and set in motion further initiatives aimed at liberalizing the African air transport market. In 1994, having evaluated the steps required to implement the Yamoussoukro Declaration, the African Ministers in charge of civil aviation met in Mauritius and agreed on a set of measures to facilitate the granting of third, fourth, and fifth freedom rights to African carriers. Most remarkable was the understanding that fifth freedom rights should be granted on routes where third and fourth freedom flights did not exist (UNECA 2004, p. 32). This led UNECA to include the liberalization of air services in its work program. Furthermore, it was UNECA that, in November 1999, initiated the conference in Yamoussoukro that resulted in the Yamoussoukro Decision.

The 2014 12 Country Study also notes that the Yamoussoukro Decision (YD) was a follow up on the Yamoussoukro Declaration of 1988 and the YD was adopted out of recognition that the strict regulatory protection that sustains national carriers had detrimental effects on air safety records, whilst inflating air fares and dampening air traffic growth.

2. WHAT IS THE YAMOUSSOUKRO DECISION?

There is consensus amongst the reports that the Yamoussoukro Decision is a landmark initiative to develop the industry by promoting the full liberalization of intra-African air transport services in terms of market access, the free exercise of first, second, third, fourth and fifth freedom traffic rights for scheduled and freight air services by eligible airlines. The YD also aims to harmonize air transport policies.

It is also well established that the YD has precedence over any multilateral or bilateral agreements on air services between State parties, that are incompatible with the Decision and State parties are clearly bound by the Decision.

3. WHAT DOES YD IMPLEMENTATION INVOLVE?

Despite the legally binding nature of the YD and despite its precedence over incompatible agreements, implementation across the continent has not been standardized and has not yielded the expected results. Despite progress in some areas, it is not in contention that overall, YD implementation has not significantly progressed as intended since it came into effect in August 2002.

Implementation of the YD is seen through two classifications in the Schlumberger report (page 30):

1. Implementation of a public policy; and
2. The application of its operational principles

Implementation of YD as a public policy

Implementation of the YD as a public policy refers to a process of “rule-making, rule-administration and rule-adjudication”. At a State level, implementation of the YD has undoubtedly been affected (positively or otherwise) by factors such as “the legislative intent and administrative capacity of the implementing government, interest group activity and opposition, and presidential or executive support”. At the continental level it refers to the provisions of the YD Text that prescribe formal elements for YD implementation such as specialized agencies and regulations (Articles 7, 8, 9 of the YD and Annexes 2, 3, 4, 5, 6 of the YD).

Implementation of YD based on the application of operational principles of the Text

Implementation of the Yamoussoukro Decision could also be understood as the application of its operational principles. These operational principles are defined in Articles 2, 3 and 6 of the YD. It includes such principles as the granting of traffic rights and designation of airlines. To this end, 3 categories of States were identified:

- States that typically maintain a small, often struggling, State-owned carrier and that generally remain very protective in their bilateral agreements (generally not supportive of YD implementation)
- States that have strong, and often market–dominant, air carriers. These states are typically able to compete on an operational, as well as on a financial, level (generally supportive of YD implementation)
- States that have lost or never had a significant national carrier. These states are typically keen to attract more flights to serve their country and are open to other African carriers servicing and thereby developing their air transport market (generally supportive of YD implementation).

These categories of States are still applicable today and are further assessed in this Study.

Based on a case study of Ethiopian Airline's network, Schlumberger produced the following conclusions:

a) YD implementation, when understood as an application of the principles of the Yamoussoukro Decision, can be done successfully on a purely operational basis.

b) Implementation of the Yamoussoukro Decision does not depend primarily on carrying out public policy based on a law or treaty. Even if certain elements of the Yamoussoukro Decision such as the Executing Agency are absent, implementation can be achieved between two or more states on a bilateral basis.

c) Certain elements of the Yamoussoukro Decision that are considered crucial for implementation, for example, Competition regulations, could be substituted by a bilateral understanding.

d) Should a conflict arise in the application of a bilateral agreement that conforms with the Yamoussoukro Decision, a solution would most likely be sought in negotiations rather than by calling upon a third party institution such as the Executing Agency or the Monitoring Body of the YD.

This analysis is critical because it rings true today. YD implementation is fulfilling or implementing all the Articles of the YD text. However, there are some key provisions that are critical to YD implementation whilst some are more supportive of these critical YD components. These YD critical articles are primarily the "operational principles" mentioned above.

In the Study by the African Union, implementation of the YD focused on the "application of the mechanisms set out in the text of the Decision and on the conditions (including institutional ones) necessary for their application". To this end, five regional evaluations prepared by the Regional Economic Communities (RECs) - COMESA, SADC, ECOWAS, ECCAS and North Africa were analysed.

The role of the RECs will be explored in the section below, however, it is interesting to note that each study had its own characteristics and its own perspective on what YD evaluation should entail. Some, such as the ECOWAS and North Africa reports, provided a comprehensive vision of all air transport components (a holistic approach to the issue) and others, such as the COMESA and SADC reports, mainly concentrate on whether, to what extent and how the mechanisms of the Yamoussoukro Decision's different articles have been applied.

This is noteworthy because YD implementation, particularly in the current era of the SAATM, is affected by several external factors other than what is provided for in the YD text and these are applied differently on a State level. It must be appreciated that YD implementation has taken on additional meaning within the context of the SAATM. YD implementation is going beyond mere market access provisions to consider aviation in a more holistic fashion.

The report also provides a set of evaluation criteria to evaluate the implementation of the YD. The criteria are based on the 2005 Sun City Resolution of the Conference of African Ministers responsible for Air Transport and are as follows:

a) The completion of constitutional requirements for implementation, where applicable.
b) The completion of national and regional institutional mechanisms to support implementation.
c) The multiple designation of airlines between all city pairs in Africa.
d) The harmonisation of national and/or regional air transport policies.
e) Compliance with International Civil Aviation Organisation (ICAO) standards and recommended practices, policies and guidelines.
f) Total liberalisation of passenger and cargo services.
g) Conformity with the eligibility criteria in the Yamoussoukro Decision.
h) Frequencies between any two States Parties.
i) Exchange of fifth freedom traffic rights.
j) Dual disapproval of tariffs by governments, taking into consideration applicable Competition rules.
k) Relevance of the Yamoussoukro Decision in the current air transport situation in Africa and worldwide.

Based on the above, the following criteria was developed with an action plan for follow up[7]:

a) Drafting and approval of a white paper on the liberalisation of air transport in Africa
b) Strengthen AFCAC financial and human resources
c) Finalization, approval and monitoring of Competition rules
d) Development, approval and monitoring of Passenger rights regulations
e) Development and monitoring of a continental traffic statistics system and an African air transport observatory
f) Development of a continental template for completely liberal bilateral agreements
g) Development and monitoring of a dashboard of bilateral intra- African aviation agreements
h) Carry out a feasibility study on continental certification of airlines eligibility
i) Promote autonomy of national Civil Aviation Authorities
j) Support cooperation between airlines

In September 2020, the United Nations Economic Commission for Africa (UNECA) sponsored a report that developed a methodology for monitoring the implementation of the Yamoussoukro Decision by developing a checklist of Key Performance Indicators (KPIs). The identified checklist of indicators can be categorized under the following Key Performance Areas:

Member State/Aeronautical Authority

i. Readiness: (regulations/organisation/training)
ii. Market access (openness obligations)
iii. Oversight, including surveillance obligations
iv. Dispute settlement mechanism and enforcement obligations
v. Competition regulations compliance
vi. Consumer protection compliance
vii. Safety and security compliance
viii. COVID-19 mitigation obligations compliance; and
ix. Communication and reporting requirements.

[7] Presented in 2011

Designated African Eligible Airlines

x. YD regulation texts compliance; and
xi. Operation of SAATM obligations.

These KPIs, once adopted, will provide an objective and reliable tool for tracking implementation of the Yamoussoukro Decision on both a public policy and operational principles approach.

4. THE IMPACT OF THE SAATM ON YD IMPLEMENTATION

The AfDB report states that the SAATM is aimed at the effective implementation the Yamoussoukro Decision (YD), which calls 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, dispute settlement and consumer protection.

Therefore, the objectives of the SAATM are the same as the YD. As has been stated, the Yamoussoukro Decision (YD) provides for the full liberalization of intra-African air transport services in terms of market access, allowing the free exercise of first, second, third, fourth and fifth freedom traffic rights for passenger and freight air services by eligible airlines. The SAATM is a continental effort to reinvigorate the implementation of the YD, with 35 out of 55 African Union States being signatories.

Further on in this Study, the effect of subsequent policy decisions of the SAATM on YD implementation will be summarized. Such policy decisions include:

- The “Memorandum of Implementation of the Yamoussoukro Decision by Signatory States of the Decision on the Establishment of the Single African Air Transport Market (SAATM MOI).
- Immediate Measures Towards Actualizing the Declaration of Solemn Commitment by African Union Member States to the Implementation of the 1999 Yamoussoukro Decision and the Establishment of a Single African Air Transport Market By 2017 (Concrete Measures).

5. SAFETY AND SECURITY REQUIREMENTS

Overall, all four reports recognize the critical importance of Safety and Security of African aviation as an element of successful YD implementation. The YD itself has several provisions on Safety and Security and these are evaluated in varying degrees in the World Bank and AUC study.

The AUC report evaluated Safety and Security from a synthesis of the five regional reports and their application of Article 6 (Designation and Authorization). Each region clearly prioritized Safety and Security.

- For the COMESA, the final regional evaluation report submitted in 2009
- For the SADC, the final regional evaluation report submitted in 2009
- For the ECOWAS, the final regional evaluation report submitted in 2011
- For the ECCAS, the AU Commission questionnaires completed by eight states in 2011

For North Africa, the country evaluation report submitted in 2010

The Schlumberger report listed different parameters to assessing the overall Safety situation in Africa namely:

- ICAO Universal Safety Oversight Audit Programme

- ICAO Universal Security Audit Programme
- U.S. Federal Aviation Administration (FAA) International Aviation Safety Assessment Program.
- Operational Safety Audit Program of the International Air Transport Association (IOSA)
- Continental comparison of Africa's accident statistics

Today, from a State perspective, the objective criteria for monitoring safety remains the ICAO Audit results and for an airline, the Operational Safety Audit Program of the International Air Transport Association has become the widely recognised and accepted proof of minimum compliance with Safety. These two criteria were applied in this Study in evaluating African States' level of YD implementation and SAATM preparedness. The low levels of Safety in some African States posed a significant challenge to YD implementation. This challenge of low Safety levels, both at the Airline and State levels still persists today as can be seen in the analysis.

6. THE ROLE OF THE RECs

The Schlumberger and African Union Studies strongly support the notion that implementation of the Yamoussoukro Decision depended mainly on regional initiatives that were to be carried out by regional economic groupings. It does so because Africa is a fragmented continent with heterogeneous economic and {geo)political organizations (Schlumberger, 2010).

The synthesis of the regional reports conducted by the African Union report shows the role the RECs play in implementing the YD, namely:

1. Clearly defining the political and legal status of the Yamoussoukro Decision within the REC; and
2. Application of Articles 3 – 9 and 11 of the YD
3. Regional harmonisation of air transport regulations
4. Promoting autonomy of national Civil Aviation Authorities
5. Strengthening the Safety and Security supervision competencies within the REC
6. Transition from bilateral agreements between Member States to multilateral agreements.

In the Schlumberger report, the author provides a detailed history and analysis of the RECs implementation of the YD. A grading of RECs on their liberalization of air services[8] provided a snapshot of YD implementation within the RECs as follows:

- AMU - No implementation has occurred.
- CEMAC - The principles of the Yamoussoukro Decision have been agreed upon in an air transport program. Some minor restrictions remain.
- COMESA - Full liberalization has been agreed on (Legal Notice No. 2), but application and implementation remain pending until a joint Competition authority has been established.
- EAC - The EAC Council issued a directive to amend bilateral agreements among EAC States to conform to the Yamoussoukro Decision.
- SADC - No steps toward implementation have been taken, even though SADC's Civil Aviation policy includes the gradual liberalization of air services within SADC.
- WAEMU - The Yamoussoukro Decision has been fully implemented.

The 2014 12 Country Study reports that the Economic Community of West African States (ECOWAS), has failed to take meaningful progress towards liberalising air services and further reports that the West African Economic and Monetary Union (WAEMU), has gone beyond the provisions of the Decision and agreed to an EU model that

[8] As of 30 June 2009

includes cabotage rights. Finally, it was also reported that the Banjul Accord Group (BAG)[9] had agreed to a multilateral air service agreement that creates a liberalised regime in line with the provisions of the Decision.

7. WHAT ARE THE IMPEDIMENTS TO YD IMPLEMENTATION?

One of the major constraints related to the implementation of the YD observed by the Studies was in the policy implementation elements of YD implementation namely:

a. Competition regulations – although mentioned in Article 7, the YD text did not provide any further principles or rules that would better define fair and unfair competition between operators.
b. Settlement of Disputes - Article 8 of the Yamoussoukro Decision addresses dispute settlement. Arbitration procedures are also provided for in Annex 2 of the Decision. However, Annex 2 of the Decision makes no reference to arbitration procedures but defines the duties and responsibilities of the Monitoring Body established by Article 9 of the Decision.
c. Consumer Protection regulations – Article 9.6 provides for the Executing Agency of the YD to ensure that consumer rights are protected.
d. Central steering of YD implementation by the Executing Agency and Monitoring Body of the YD – the proper functioning i.e. need to be given enough powers to enforce Competition rules and regulations and to successfully arbitrate and settle disputes arising from unfair competition. At that time, neither the rules and regulations nor the arbitration procedures and the dispute settlement mechanism were elaborated.

The absence of the above elements was stressed as a missing element in the implementation of the Yamoussoukro Decision. The African Union report recognizes that the ambiguities of the Decision's text were widely recognized as an obstacle to its proper implementation as the ambiguities in the text leave room for varied and subjective (often restrictive) interpretations.

Today, those ambiguities no longer exist. The Executing Agency has been significantly strengthened and has assumed a strong leadership and ownership of YD implementation. In addition, the Competition and Consumer Protection Regulations have been adopted and the Dispute Settlement Mechanisms has been developed awaiting final adoption by AU Policy Organs.

Apart from the policy implementations of the YD, there are other issues preventing the full potential of the Decision from being realized. Some of them are highlighted in the 2014 12 Country Study.

a. Protectionist policies have obstructed liberalisation - a number of countries continue to restrict market access under the pretext that their national airline is not ready to compete in a liberalised market.
b. Discriminatory practices have hampered the pace of liberalisation e.g. while some states in Africa have refused to open their skies to each other, they have opened up to carriers from other continents.
c. Severe restrictions have been imposed by regulators outside the continent - the EU, in particular, was highlighted for its non-transparency in the manner in which it applies its airline safety bans.
d. The efficient utilization of infrastructure has been hindered by non-physical barriers e.g. severe shortages of foreign exchange, onerous intra Africa visa requirements. burdensome documentation procedures for airlines, etc.

8. CONCLUSION

[9] The BAG is a framework of Western African States non Member of Yaounde Treaty. It is not a REC.

In the Africa Union report, the rate of implementation of the YD was assessed through the analysis of the progress made since the YD came into force, summarized as follows:

1. Awareness of the project's sense and stakes has been widespread;
2. A large number of institutional actors are involved;
3. Real groundwork has been carried out (including the development of draft regional Civil Aviation codes and regulations, some of which have been approved);
4. There has been progress in national Civil Aviation Authorities' expertise;
5. There has been considerable progress in the economic dimensions and professionalism of several airlines, particularly in East Africa (Ethiopian Airlines, Kenya Airways, RwandAir etc.);
6. New private airlines based on seemingly sound economic models are beginning to emerge (Asky, for example).
7. Traffic has increased within Africa.

Despite this sequence of improvements, progress has been slow and today, the following reality persists:

1. Awareness of the importance of the YD and SAATM
    - Awareness has not led to acceptance by all stakeholders which has constrained the full implementation of the YD. At various levels of engagement, stakeholder commitment continues to wane. The YD has 44 signatories, the SAATM has 34 (started off with 23 and has gradually increased), the Memorandum of Implementation has 18 signatories and the Concrete measures for YD have only been fully implemented by 10 States.
    - Awareness is a very key issue because YD implementation's slow progress is not due to lack of awareness. The AU report recognizes this and states that "all of the competent African authorities are convinced that future progress will resolutely move towards liberalisation, and that there will be no going back. The question, therefore, is not about in which direction to go, but how and at what pace. Should all the parties cross all the stages at the same dates, or would it be appropriate and realistic to recognise that some advance faster than others, so as to create a knock-on effect?" This sentiment reflects the intent behind Article 2 of the YD which recognises "*a gradual process of liberalisation of air services"*
    - Awareness also does not translate to full understanding of the spirit, intent and operationalisation of the YD by some States. A comparison of the above observations seems to indicate that certain States separate their own specific case from the wider global approach to liberalisation, which they understand and accept. Some States believe what works for others, or for larger States (with established carriers), will not necessarily work for them, at least not at present.
2. Support from the institutional actors requires the requisite political will at the national level to be effective.
3. The progress as reflected by Civil Aviation authorities' expertise is not uniform. Some States still lag behind significantly when it comes to expertise on both operational and air transport regulatory areas.
4. The dominant carriers 10 years ago are still the dominant carriers today with a lot of them witnessing a downturn in fortunes. This represents a lack of growth in African aviation.
5. Although new airlines are emerging, but existing airlines are also dying.
6. Whilst traffic has increased, it has had very little positive impact on African aviation's 2 – 4 % market share over the last decade.

Recommendations

1. Whilst a more homogenous approach to YD implementation is fine-tuned, the commercial aspirations of airlines present another pathway to YD implementation. African aviation needs more dedicated actions by Airlines and States that focus on the operational application of the YD and the SAATM.
2. What is required are States that recognize the opportunity provided by the SAATM and YD and are willing to operate within the current YD framework and its regulatory texts rather than focus on the areas that pose challenges.
3. The contradiction between the States' political commitment[10] on the one hand, and the subjective practice of issuing traffic rights and permits on the other hand needs to be addressed in a transparent fashion. Transition towards a genuine multilateral approach based on the common interest, as opposed to pursuing reciprocal interests through bilateral discussions is required.
4. The role of the RECs – the gains achieved by the RECs identified by the Studies need to be consolidated and enhanced. It was recommended to encourage the various sub regional and regional organizations that are involved in air transportation to begin implementing the steps of the Yamoussoukro Decision, whilst pan-African efforts are driven by the Executing Agency and other stakeholders. The underlying idea clearly seems to be to reach a situation where many RECs have applied the Yamoussoukro Decision and then start to agree on liberalizing air traffic between them.

1.2. Defining the criteria to be used for evaluating the implementation of YD in this Study

The approach of this Study is based on the view point that YD implementation is achievable under two separate but connected approaches as stated in the above literature review, namely:

1. Implementation of YD via the application of its operational principles; and
2. Implementation of YD via policy administration requirements

To this end, YD implementation assessment in this Part A will focus on a State's BASA compliance within the operational principles of the YD as contained primarily in Articles 2, 3, 4, 5 and 6 of the YD Text. The scope of this Study is limited to the assessment of these YD operational principles deemed critical to the practical application of the YD. These operational principles also align with some of the KPIs in the YD Implementation methodology for monitoring the implementation of the Yamoussoukro Decision sponsored by UNECA.

More explicitly, via the BASA analysis later in this chapter, Part A of this Study will be assessing:

i. YD regulatory texts compliance and Market access (openness obligations) (Articles 2, 3, 4, 5, 6 of YD Text and KPIs 2, 2.1, 14, 14.1 of YD Implementation methodology report)

In addition to these operational principles stated above, the additional YD Implementation assessment criteria used in this Study include an assessment of a States' air transport industry based on certain parameters or policies that contribute to a holistic aviation framework. This will be assessed later in Chapter 2 of this report through our analysis of the SAATM Enablers Index.

More explicitly, via the SAATM Enablers Index, Chapter 2 of this Study will assess:

[10] Through their signing to the Yamoussoukro Decision and the ministerial resolutions adopted within regional and sub-regional institutions

i. Safety and Security compliance of States and Airlines (Articles 6.9, 6.12 of YD Text and KPI 9 of YD Implementation methodology report)

Whilst this Study does not focus on State compliance with the public policy requirements of the YD text as outlined in the YD Implementation Methodology report, the "YD Implementation assessment" Dashboard prepared under the terms of reference of this Study will incorporate all the KPIs from the YD Implementation methodology report (UNECA), in addition to the criteria selected in this report. This will allow for additional analysis of a State's compliance. The Dashboard will be interactive and will be hosted online.

In the next section, prior to commencing our assessment of the States' compliance with YD, we will provide a comprehensive summary of the regulatory instruments, as well as key stakeholders relevant to YD implementation.

1.3. Summary of the main requirements under the YD and its Regulatory Instruments[11]

Introduction

The regulatory texts of the YD provide the legal basis and requirement upon which the SAATM operates. These rules are consistent for all the above listed Stakeholders. There are provisions for the enforcement of the rules to ensure a level playing field as well as legal certainty to States and airlines. Membership of the SAATM by a State is an agreement to (a gradual or immediate) relaxing of the legal/regulatory constraints that currently exist between States with restrictive BASAs and other practices incompatible with the YD. The YD Regulatory Instruments provides a harmonized framework for relaxing these legal/regulatory constraints.

This section presents a summary of the following documents as it is useful to understand what is required under YD implementation:

1. Decision Relating to the Implementation of the Yamoussoukro Declaration Concerning the Liberalization of Access to air Transport Markets in Africa [AHG/OUA/AEC/DEC.1(IV)]
2. Decision on the Establishment of a Single African Air Transport Market Doc. EX.CL/1067(XXXII)
3. Annex 2: Duties and Responsibilities of the Monitoring Body of the Yamoussoukro Decision
4. Annex 3: Draft Dispute Settlement Mechanism (DSM)
5. Annex 4: Regulations on The Powers, Functions and Operations of the Executing Agency
6. Annex 5: Regulations on Competition in Air Transport Services within Africa
7. Annex 6: Regulations on the protection of Consumers of Air Transport Services
8. African Civil Aviation Policy (AFCAP)
9. Immediate Measures Towards Actualizing the Declaration of Solemn Commitment by African Union Member States to the Implementation of the 1999 Yamoussoukro Decision and the Establishment of a Single African Air Transport Market by 2017 (SAATM Concrete Measures)

[11] (Competition and consumer protection regulations; Dispute Settlement Mechanism; etc)

10. Memorandum of Implementation of the Yamoussoukro Decision by Signatory States of the Decision on the Establishment of the Single African Air Transport Market (SAATM MOI).

11. Methodology for Monitoring the Implementation of the Yamoussoukro Decision Developing a Checklist of Key Performance Indicators (Report by the United Nations Economic Commission for Africa).

1. DECISION RELATING TO THE IMPLEMENTATION OF THE YAMOUSSOUKRO DECLARATION CONCERNING THE LIBERALIZATION OF ACCESS TO AIR TRANSPORT MARKETS IN AFRICA [AHG/OUA/AEC/DEC.1(IV)]

The Yamoussoukro Decision ("YD") finds it origins in the Yamoussoukro Declaration of 1988[12]. The poor state of African aviation as articulated in Article 1.2.4 of the AFCAP provided the impetus for African Ministers of transportation to agree in principle to liberalize African skies. The objectives of the said Declaration were summarized as follows:

a) To integrate African airlines within a period of eight years spread out in three phases during which the problems of traffic rights, tariffs and improvement of the management of African airlines will be examined with a view to *reaching a compromise and finding appropriate solutions*;
b) *To define a common African position* regarding the Computer reservation systems and all new decisions on noise standards;
c) To establish an African aircraft financing and leasing company in order to facilitate the procurement of aeronautical equipment.

The 1999 Yamoussoukro Decision ("YD") was adopted to accelerate the implementation of the Yamoussoukro Declaration, especially in the area relating to the granting of traffic rights, regional cooperation in air transport and the role of Governments. The YD was also borne out of the identified need to centralize, harmonize and coordinate the different efforts in the African sub-regions to merge, privatize and liberalize air transport services.

The YD recognized the different levels of air transport development in Africa and specifically speaks to the need to adopt transitional provisions in order to achieve full liberalization of air transport in Africa. The aim of the YD is to progressively establish a liberalized intra-African aviation market and enhance cooperation among African airlines.

To this end, States retain important sovereign rights around:

- Refraining from a full grant of 5th freedom rights (for a period of 2 years)
- Increasing and decreasing tariffs
- Increasing volume, frequency and capacity of traffic, subject to exceptions and rules of fair competition
- A right to designate an airline to operate under the Decision, including an Eligible airline (as defined under the YD) from another State
- Removal of authorization of designation in cases where the airline loses eligibility
- Maintaining or developing (on a bilateral basis or otherwise) arrangements that are more flexible than those contained in the Decision
- Not granting Cabotage privileges

[12] In 1988, sharing the opinion that liberalization of the skies would address the referenced concerns, African ministers of transportation met in the capital city of Yamoussoukro, Cote d'Ivoire to declare their common view and agree in principle to liberalize African skies

Despite providing for the retention of these sovereign rights, the YD is the blueprint for liberalization of air transport services in Africa. Some of the key provisions and their implications are examined below.

a) Article 2 - Scope of Application

This sets the tone for one of the key objectives of the YD – the gradual liberalization of scheduled and non-scheduled intra-Africa air transport services. It is also considered an "arrangement among State Parties" which speaks to the multilateral nature of the YD.

Two other key elements are listed:

1. Precedence over any multilateral or bilateral agreements on air services between State Parties which are incompatible with this Decision.
2. The provisions which are included in these agreements and which are not incompatible with this Decision remain valid and are supplementary to the Decision.

b) Article 3 - Granting of Rights

This section is one of the key provisions of the YD. State Parties are to grant to each other the free exercise of the rights of the first, second, third, fourth and fifth freedoms of the air on scheduled and non-scheduled passenger, cargo and/or mail flights performed by an Eligible Airline to/from their respective territories.

The gradual application stated in Article 2, is expanded upon in Article 3 as seen in Article 3.2 (and again in Article 10 - Transitional measures). The maximum amount of time granted to a State to limit its commitment, in respect to fifth freedom rights, is 2 years. It should be noted here that many States have far exceeded the 2 year timeframe contemplated under this article of the YD for various reasons, but primarily the overarching impediments recognized earlier in this report – a culture of non-prioritization of aviation and a policy of protectionism.

c) Article 4 – Tariffs and Article 5 - Capacity and Frequency

Consistent with the approach for the granting of rights, the YD provides for a liberal approach in terms of Tariffs, Capacity and Frequency.

For Tariffs, it states that "there shall be no approval required by the aeronautical authorities of State Parties concerned for tariffs to be charged by the designated airlines of State Parties for the carriage of passenger, cargo and mail."

Subject to the provisions of Article 3, Article 5 grants the following:

1. There shall be no limit on the number of frequencies and capacity offered on air services linking any city pair combination between State Parties concerned.
2. Each Designated Airline will be allowed to mount and operate such capacity and frequency as such airline deems appropriate.
3. Consistent with this right, no State Party shall unilaterally limit the volume of traffic, the type of aircraft to be operated or the number of flights per week, except for environmental, safety, technical or other special consideration.

d) Article 6 - Designation and Authorization

1. A State party has the right to designate in writing one airline to operate the intra Africa services. The airline can be from another State or it can be an African multinational airline in which a State party is a stakeholder. (Article 6.1 – 6.3)

2. On receipt of the notification of such designation, the other State Party shall, in accordance with its national laws,
    - speed up the process of authorization and licensing of the airline designated by the other State Party to operate the services.
    - Such authorization should be granted within 30 days,
    - the proposed schedule of flights should be submitted to the appropriate authorities for approval.

As stated earlier, governments do not give up their sovereignty and Article 6 provides options for Member States under the Decision. As a result, Article 6.5 gives a State Party the right to refuse authorization and a right to consultation to settle the issues giving rise to the refusal.

Access to SAATM is premised on being an "eligible airline", which means the airline must satisfy some of the basic rules of the single market and be regulated by a participating state. One basic principle is that a SAATM airline must be an "African air transport company". The criteria of Article 6.9 would prevent free riders from outside the SAATM area using an airline as a puppet company, while not blocking investment.

The full list of "eligibility criteria" laid out in Article 6.9 are:

(i) legal establishment in a YD State;
(ii) HQ, central administration and principal place of business in this YD State;
(iii) licensing in the YD State under Chicago requirements (Annex 6);
(iv) the airline should actually have an aircraft (owned or leased) - no 'on paper' airlines;
(v) the airline should be insured properly;
(vi) the airline can demonstrate compliance with ICAO standards;
(vii) the airline is "effectively controlled by a State Party" (which should mean by nationals of a State party, rather than the government of a State)

Article 6.10 provides for revocation of authorization by a State and provides a period of 30 days before the revocation takes effect.

Article 6.12 addresses Security by setting out that State parties explicitly reaffirm their obligation to comply with civil aviation safety and security standards and practices.

Article 7 and 8 provide for Competition Rules and Settlement of Disputes respectively. These are further detailed in Annexes 5 and Annex 3 (draft regulations) respectively.

e) Article 9 - Monitoring Body

This provides for the establishment of the Monitoring Body and the Executing Agency of the YD and its duties and responsibilities.

f) Article 10 - Transitional measures

This provides for the transitional measures in line with the gradual implementation of the YD in Article 2 for a maximum period of 2 years.

g) Article 11 - Miscellaneous Provisions

By virtue of this section, the following rights are guaranteed:

1. The right to establish an office in the territory of the other State Party
2. The right to repatriate funds to their home country or country of its choice

3. The right to hire expatriate staff[13]
4. Airline operational flexibility in operating scheduled and unscheduled services14
5. the right to enter into cooperative marketing arrangements such as blocked-space, code sharing, franchising or leasing arrangement, with an airline or airlines of the other State Party[15].

Article 11.4 provides for Consultation between State Parties in respect to the interpretation or application of the Decision. Such consultation shall begin no later than 30 days from the date the other Party receives the request.

2. DECISION ON THE ESTABLISHMENT OF A SINGLE AFRICAN AIR TRANSPORT MARKET Doc. EX.CL/1067(XXXII)[16]

During the commemoration of the fiftieth anniversary of the OAU / AU in 2013, the African Union (AU) leadership expressed the desire to give a stronger and more ambitious impetus to the Continent's socio-economic development and integration agenda. On that occasion, the African Union (AU) Agenda 2063 was elaborated and flagship projects were selected based on their high potential for socio-economic integration across Africa which will improve the standard of living for all Africans. Among these projects is the creation of a Single African Air Transport Market (SAATM). This Decision is the final major pronouncement towards the establishment of the SAATM by the Assembly of the Heads of State and Governments of the AU. Just like the YD, the road to the establishment of the SAATM started as a "Declaration" in 2015[17]. In the same year, a "Solemn Commitment[18]" was declared by AU Member States towards the Implementation of the Yamoussoukro Decision towards the establishment of SAATM by 2017[19].

This Decision placed emphasis on Member States abolishing any provisions in their Bilateral Air Services Agreement (BASAs) for intra-African air services that were contrary to the provisions of the Yamoussoukro Decision. The expectation was for the intra-African market to operate without the need for bilateral air service agreements between Member States when the SAATM becomes fully operational. This is further reiterated with the notion of a "file and fly" procedure by eligible African airlines without any hindrance. These however are subject to Safety and Security concerns of the aviation authorities of Member States, Regional Economic Communities (RECs) and the Executing Agency[20].
Complementary to the simplified process outlined in Articles 8 (i) and (ii), the Decision recognizes the fact that the implementation of the SAATM is not based on BASA provisions alone. Article 8 (i) of the Decision also calls for Member States to "*go beyond the market access provisions of the Yamoussoukro Decision in order to accelerate the attainment of the objectives of the SAATM*".

Article 8 (v) further calls for awareness and dissemination of key continental aviation frameworks especially the Yamoussoukro Decision Regulatory and Institutional Texts, the African Civil Aviation Policy (AFCAP), and for "capacity building" of Member States and RECs on application and domestication of the instruments. These

[13] Article 11.1
[14] Article 11.2
[15] Article 11.3
[16] 30th Ordinary Session of the Assembly, 28- 29 January 2018, Addis Ababa, Ethiopia
[17] AU/Decl.1(XXIV) adopted at the Twenty-Fourth Ordinary Session of the Assembly of Heads of State and Government of the AU, in Addis Ababa, Ethiopia on 31 January 2015
[18] Supra
[19] Assembly AU Commitment (XXIV): Solemn Commitment by African Union Member States to the Implementation of the Yamoussoukro Decision towards the Establishment of a Single African Air Transport Market by 2017
[20] Articles 8 (i) and (ii)

instruments, policy frameworks, regulations, etc., as will be outlined in this section, detail the gaps in African aviation that need to be addressed in order to ensure successful SAATM implementation.

The SAATM is also recognized as key to boosting Intra-Africa Trade (BIAT) and fast tracking the African Continental Free Trade Area (AfCFTA). Other SAATM activities, that will ensure a successful SAATM, that were specifically mentioned in the Decision are:

i. A framework of establishing the Single African Sky architecture by 2023 in order to strengthen aviation safety and security as well as ensure efficient and harmonized seamless air navigational and communication systems;
ii. Funding partners to expedite the mobilization of resources for the operationalization of the Executing Agency to enable it to adequately carry out its functions in the management and supervision of the established SAATM;

Since the launch of the SAATM in 2018, under the leadership of AFCAC in its capacity as the Executing Agency, all the key activities mentioned in the AU Decision (and more) are being addressed along with industry stakeholders.

3. ANNEX 2: DUTIES AND RESPONSIBILITIES OF THE MONITORING BODY OF THE YAMOUSSOUKRO DECISION[21]

Further to the establishment of the Monitoring Body (MB) under Article 9 of the YD, it is charged with the following overall responsibilities:

a) Assist the Ministers responsible for Air Transport ensure the full implementation of the Yamoussoukro Decision and realization of the Single African Air Transport Market in Africa.
b) Oversight and advisory responsibilities over the functioning of the SAATM; and
c) The role of facilitating the smooth operation of the market at a strategic level, in support of the Executing Agency.

Consistent with its oversight and advisory attributions, the key function of the MB is to:

i. Ensure the implementation of Resolutions, Declarations, Directives and Decisions of the Ministers responsible for air transport, the AU Executive Council and Assembly as concerns air transport matters in Africa.
ii. Issue such Directives as necessary to the Executing Agency of YD, in accordance with the Powers and functions of the Executing Agency and AU procedures.
iii. Ensure the fair and equal application of the Yamoussoukro regulatory texts on Competition and Consumer protection

Other relevant duties of the MB are listed below:

iv. Ensure appropriate regulations are in place for the smooth functioning of the Single African Air Transport Market.
v. Bring to the attention of the Ministers responsible for Air transport, any provisions of the Decision that hinders the development of air transport in Africa and/or imposes difficulties in the application of the Decision, with recommendations for mitigation.

[21] Revised Duties and Responsibilities of the Monitoring Body of the Yamoussoukro Decision as amended by the African Union Specialized Technical Committee on Transport, Intercontinental and Interregional Infrastructure, Energy and Tourism, Lome, Togo March 2017

vi. Receive declarations made in accordance with the Decision, notification of withdrawals of any declaration of complaints and requests and inform the Depository (AUC) accordingly.

vii. Define and advice the sub-committee on Air Transport of the Committee on Transport, Communications and Tourism on the qualification of membership of the African Civil Aviation Tribunal

viii. Provide its opinion, when requested, on any disputes resulting from the application and/or interpretation of the Decision and recommend solutions to the dispute to the Africa Civil Aviation Arbitration Tribunal

4. ANNEX 3: DRAFT DISPUTE SETTLEMENT MECHANISM (DSM)

The DSM shall only apply to any dispute resulting from the application or interpretation of the African air transport legal instruments (*Yamoussoukro Decision, Annexes to the YD, Decisions of the African Union, the Regional Economic Communities and the Executing Agency of the Yamoussoukro Decision relating to the application of the YD and its Annexes*).

Administrative and enforcement decisions of regional and continental agencies charged with the enforcement of provisions of the African air transport legal instruments may be submitted for dispute settlement under this Regulation. The Regulation does not apply to internal decisions of State Parties solely affecting nationals of the State Party concerned. Furthermore, any dispute on the application or interpretation of the African air transport legal instruments shall first be settled through negotiations.

The main requirements under the DSM are as follows:

1. The establishment of an Administrative Council, an independent body responsible for administering the Regulation.
2. The appointment of a Chairperson of the Administrative Council to:
    a. Act as an appointing authority for arbitrators and conciliators
    b. take urgent decisions on behalf of the Council, provided that any such decision is reported to the Council at its next session
3. The establishment of a Secretariat to the Administrative Council.

These stakeholders will be primarily responsible for the application of the DSM.

4. Conciliation or mediation may be requested at any time by any party to a dispute. They may begin at any time and be terminated at any time by any of the parties to the dispute.
5. The request for arbitration shall be submitted to the Secretariat of the Administrative Council and the Secretariat can facilitate the process of conciliation or mediation if requested by a Party.
6. Articles 8 – 33 detail the process for arbitration and all the substantive elements.
7. Article 34 gives the Chairman of the Administrative Council the discretionary power to decide all matters relating to the administration of emergency arbitrator proceedings not expressly provided for in the rules issued by the Administrative Council.
8. Under Article 41 of the DSM, every award shall be final and binding on the parties.
9. The Arbitration award shall be borne by the parties and under Article 47, in the final award, the arbitral tribunal shall fix the costs of the arbitration and decide which of the parties shall bear them or in what proportion they shall be borne by the parties.
10. Article 48 provides for the composition of the Administrative Council namely:
    a. One representative of each administrative region of the African Union.
    b. The five (5) members of the Administrative Council shall be International legal experts nominated by the Monitoring Body of the YD and approved by the Ministers in Charge of Transport of the STC TTIET

11. Decisions of the Administrative Council can be reached by consensus or where consensus cannot be reached, by a majority of its members (Article 50)
12. The term of office of all members of the Administrative Council is for (4) years renewable once (Article 54).
13. The Administrative Council will be supervised by the Ministers of Transport and the Monitoring Body.
14. The Panels of Arbitrators, Conciliators and Mediators shall be established in accordance with Article 60. Some key considerations include:
    - The Secretariat shall establish and maintain ADR Panels of arbitrators, conciliators and mediators.
    - Each State Party may nominate three (3) individuals to the Secretariat for inclusion in the ADR Panels, indicating their area(s) of expertise.
    - The indicative list of individuals shall be submitted by the Secretariat for consideration and approval by the Administrative Council.
    - Members of the ADR Panels shall serve for a non-renewable period of six years.
15. The funds for managing this Regulation shall come from payments for the use of dispute settlement facilities by the parties.
16. Where the expenditure of the Administrative Council cannot be met out of charges for the use of its facilities, the excess shall be borne through sponsorships, grants, donations gifts, etc., save that no State Party shall be required to make regular contributions for the administration of this Regulation.

Once adopted, the DSM will ensure that the legal standards of the single market can be tested and can be enforced. It is very important for the DSM to be regularly reviewed in line with good regulatory practices to ensure the process is simplified and effective.

5. ANNEX 4: REGULATIONS ON THE POWERS, FUNCTIONS AND OPERATIONS OF THE EXECUTING AGENCY[22]

The scope of this Regulation is to provide detailed rules for the African Civil Aviation Commission, in its capacity as the Executing Agency of the YD, to supervise, manage, formulate and enforce measures for the successful implementation of the Yamoussoukro Decision (Article 2).

a) Article 2 – Scope of Application

i. Airlines shall be encouraged to operate profitably with least operating cost, preferably utilizing all logical fifth freedom routes and assisted to identify potentially attractive routes based on long term focused economic activities in different localities of Africa - Article 2 (c).
ii. Air transport activities shall be aimed at maximum utilization of airport slots and airports infrastructure and services and thereby encourage economic activities at and around all African airports - Article 2 (d)
iii. Continental and regional institutions and State Parties shall encourage active cooperation between eligible airlines and work towards multiple establishment of airlines and other air transport service providers in different regional economic communities - Article 2 (e)

b) Article 4 - Functions of the Executing Agency

[22] Adopted by Ministers responsible for Transport, Infrastructure, Energy and Tourism meeting at the First Ordinary Session of the African Union Specialized Technical Committee on Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism in Lomé, Togo, 17th March 2017

Article 4 empowers the EA to deal with all the key areas of implementation of the YD (limits of commitment, tariff notification, eligibility criteria enforcement, adherence to ICAO SARPS, etc). One key requirement of the EA is to enforce Competition and Consumer protection Regulations and ensure the efficient functioning of the Dispute resolution mechanisms - Article 4 (e) and (f).

c) Article 5 - Powers of the Executing Agency.

The key Powers of the EA are summarized in Articles 5 (b) and (c), (h), (i) and (l)

i. formulate and enforce appropriate rules and regulations that give fair and equal opportunities to all players and promote healthy competition in the air transport market - Article 5 (b).
ii. formulate opinions, make decisions, guidelines and guidance materials including clarifications of provisions of the Decision and acceptable means of compliance - Article 5 (c).
iii. impose sanctions on airlines and other air transport service providers including fines and any other penalty payments and - Article 5 (h) (also contained in Article 14)
iv. enforce the penalties including sanctions, interim measures and commitments of compliance from States and Eligible airlines set out in the Regulations on Dispute Settlement Mechanisms relating to the implementation of the Yamoussoukro Decision - Article 5 (i).
v. conduct investigations in the territories of the State Parties and undertake all necessary measures within the powers conferred on it by this Regulation or other legislation - Article 5 (l).

d) Article 6 - Implementing Measures at National and Regional Levels

The Executing Agency shall recommend the establishment by Regional Economic Communities and States parties of regional and national monitoring groups for the implementation of the Decision.

e) Summary of other provisions

i. In determining the application of the Yamoussoukro Decision, the EA has wide monitoring, evaluation (including data gathering), inspection and investigation powers as seen in Articles 5 (e), 5 (l), Article 8, Article 12 and Article 13.
ii. In Article 5.2 and Article 18, the EA and its Secretary General are given complete independence and authority in the performance of its duties.

6. ANNEX 5: REGULATIONS ON COMPETITION IN AIR TRANSPORT SERVICES WITHIN AFRICA[23]

This Regulation applies to scheduled and non-scheduled intra-Africa air transport services, including any practice, agreement or conduct thereto which might have an anti-competitive effect within the separate and joint territories of the regional economic communities and within the entire African continent.

Article 4.1 states that the overarching responsibility of States is to ensure that any agreement between airlines, any decision taken by an association of airlines and any concerted practice which negatively affects the liberalization of intra-Africa air transport services and which has as its object or effect the prevention, restriction or distortion of competition, is prohibited.

[23] Adopted by Ministers responsible for Transport, Infrastructure, Energy and Tourism meeting at the First Ordinary Session of the African Union Specialized Technical Committee on Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism in Lomé, Togo, 17th March 2017

Article 4.2 defines the prohibited Practices, Agreements and Decisions which are deemed to negate the objective of free and fair competition in air transport. Such services shall be prohibited including the addition of excessive capacity or frequency of services, dividing markets or sources of supply by allocating passengers, territories, or specific types of services.

Article 5 empowers the EA to regulate against an abuse of a dominant position which includes the following:

i. the introduction on a route or sector thereof of excessive capacity, which is likely to have an adverse impact upon any competing airline.
ii. the introduction by an airline on a route or sector thereof of an excessively low price, which is likely to have an adverse impact on any competing airline and is likely to be perceived as specifically designed, targeted and intended to keep out a new airline or to drive out another airline; or
iii. the introduction by an airline on route or sector thereof of an excessively high price because of lack of a price competition or collusion.
iv. charging excessively high prices to the detriment of consumers.

Article 6 gives powers to the EA to review national and regional legislation and recommend appropriate amendment of any provision that may directly or indirectly permit or promote anti-competitive behaviour and Article 7 gives the EA powers to propose rules on the conditions which subsidies may be granted to an Airline by any State Party or regional economic community.

Article 8.1 gives the EA powers to exempt any practices, agreements or decisions which may be deemed illegal or prohibited under Article 4 hereof.

Article 8.2 gives the Executing Agency, upon application by an eligible airline, powers to approve measures designed to remedy any adverse effects a State Party may experience by reason of the implementation of the provisions of Chapters 1 and 2 of these Regulations.

Under Article 8, a regional economic community is given authority to set up a regional competition authority (RCA) with a mandate to regulate and supervise the implementation of the competition regulations. The RCA shall have some similar powers of the EA in order to assist with supervising the implementation of the regulations. In Article 15, the EA is also expected to exercise its powers and apply its procedures in collaboration with the Regional Competition Authorities and competent authorities of the State Parties.

However, based on Article 9, the EA shall have the overall responsibility for supervising and implementing these regulations and shall be responsible for implementing various measures to support fair competition in the air transport sector.

Under Article 10, both the EA and RCA have power to hear complaints and forward such complaints to the competent authority of the State Parties. However, only the EA has power to initiate an investigation into a suspected breach of these Regulations by an air transport undertaking

Articles 11 – 13 details the investigatory powers of the EA and Article 14 gives the EA powers to counter any practice(s) contrary to these Regulations that have the object or effect of directly jeopardizing the existence of an air transport undertaking.

Article 16 grants powers to the EA to impose penalties on airlines.

Appendix 1 to Annex 5 to the Yamoussoukro Decision provides guidelines and procedures for the implementation of the regulations on Competition in air transport services within Africa. This includes:

1. Exceptions to what would be considered a violation of Article 4 of the Competition Regulations
2. Guidelines on the granting of State subsidies under the terms of Articles 7 of the Competition Regulations

Articles 3 – 6 deal with administrative procedures such as applications for exemptions, safeguard measures, etc. Articles 7, 8 and 10 details the rules of procedure for Complaints, Investigations, Hearings, granting of Decisions, Provisional Measures, Communications and Penalties.

7. ANNEX 6: REGULATIONS ON THE PROTECTION OF CONSUMER OF AIR TRANSPORT SERVICES[24]

Article 2 confirms the scope of application of the Regulations which prescribes rights of consumers of air transport services within Africa and lays down responsibilities of air transport undertakings. Most African States have their own Consumer Protection legislation that applies to aviation. It is important that this patchwork of regulation for Consumer protection rights (and other key issues) is harmonized into one piece of legislation applied uniformly throughout Africa. Even more important is for the legislation to be in line with international best practice and should be geared towards encouraging the development and sustainability of air transport services and not unduly punishing African airlines with heavy fines and burdensome operational requirements.

Article 3 states the primary objectives of the regulations namely:

i. Protect the consumer of air transport services against unfair treatment in the provision of services.
ii. Provides a basis for compensation for the consumer for breach of the rights of the consumer by air transport services providers; and
iii. Provide a mechanism for the consumer to seek redress.

Article 4.1 outlines what is considered Unfair Practices namely:

i. Misleading advertising
ii. Collecting additional fares not advertised
iii. Failure to disclose Ticket Conditions either verbally or in writing
iv. Persistent boarding denials
v. Persistent abuse of free-seating policy
vi. Discriminatory application of compensation under Warsaw/Montreal Convention
vii. Chronically delayed flights

Article 4.2 – 4.5 gives right to the Executing Agency, a Regional Yamoussoukro Decision Authority or a State Party to investigate, decide and give an order in respect of whether an airline or ticket agent has or is engaged in an unfair or deceptive practice in air transportation.

Article 5 provides for non-discrimination in accordance with the African Charter of Human and Peoples Rights and Article 6 requires an airline to maintain an insurance cover as required by the laws of the State Party in which it operates.

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[24] Adopted by Ministers responsible for Transport, Infrastructure, Energy and Tourism meeting at the First Ordinary Session of the African Union Specialized Technical Committee on Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism in Lomé, Togo, 17th March 2017

Article 7 mandates an airline, tour operators, consolidators or travel agents to collect the preferred details of a passenger in order to contact the passenger and to provide alternative means of communication for the passenger to contact them at the destinations they serve and in the event of anticipated cancellations, overbooking, or delays.

Article 8.1 - Information to the consumer

At the time of purchase of a ticket or at the check-in counter of the airline or the ground handling agent, the airline shall be obliged to inform the passenger in one official language of the African Union of certain obligations including the airline's obligations to provide alternative solutions and compensation in case of denied boarding, free seating, flight cancellation, delayed flight. Article 8.2 also mandates air transport service providers to visibly display information on their premises, on their websites and relevant marketing materials stating the rights of the consumer in relation to specific services provided.

Under Article 9, Complaints Procedures, Each air transport service provider shall, either establish a consumer relations desk or contact person at every airport it operates for the purpose of receiving, resolving and channeling complaints to their head offices, as well as liaising with the aeronautical authorities.

Under Article 10, Overbooking - In overbooking a flight, an airline shall take all necessary measures to limit negative effects on passengers including, but not limited to, offering passengers online boarding facilities and utilizing other measures stipulated by the regulations.

Article 11 also states the duties of an airline when it reasonably expects a flight to be delayed beyond its scheduled time of departure including regular communication, consumer right to reschedule free of penalties, provision of light refreshments, hotel accommodation and meals (delays above 4 hrs). For delays above six hours, in addition to the above, the consumer will be entitled to immediate reimbursement and re-routing.

Article 12, cancellation of a flight provides for the compensation and assistance to passengers in the event of a flight cancellation, including:

i. The right to cancel their booking
ii. The right to be re-routed or offered an alternative means of transport, where convenient to the passenger in question; and
iii. The right to compensation.

Article 13 prescribes penalties for downgrading a passenger and Article 14 states the duties of Travel Agents and Package Tour Operators in a contract that involves air travel provided by an airline as well as other services (e.g. accommodation and other tourist services). Other Articles stipulate a right to reimbursement (Art 16), a right to re-routing (Art 17) and compensation (Art 18).

Article 19 provides for administrative procedures of each State Aeronautical Authority, the Executing Agency and the Regional Yamoussoukro Decision Authority and the form of complaint by a Passenger.

Article 20 and 21 provide for the investigation and determination of complaints by the Executing Agency, the Regional Yamoussoukro Decision Authority or the State Aeronautical Authority shall carry out an investigation on the substance of the complaint and the response of the service provider. Article 22 provides for the provision of penalties by the Executing Agency, the Regional Yamoussoukro Decision Authority or the Aeronautical Authority for a violation of the provisions of the Regulations.

8. AFRICAN CIVIL AVIATION POLICY (AFCAP)[25]

The African Civil Aviation Policy (AFCAP) is the framework and the platform for the formulation, collaboration and integration of national and multinational initiatives or programmes in various aspects of civil aviation. The AFCAP advocates a liberalized, competitive and common air transport market through the full implementation of the YD.

The primary purpose of the AFCAP is to create a conducive environment for the development of intra-African and international air services. It is a robust policy framework that lays a solid foundation for the minimum policies each member State must put in place for the SAATM and air transport in Africa to succeed. Policy and other decision makers, at the National level, should use the AFCAP as a guide for the development of national and regional policies to foster harmonization.

Article 1.2.4 of the AFCAP summarized the urgency of the situation with African aviation –

> "*African airlines are generally under-capitalized; operate narrow route networks and small and ageing aircraft fleet. They are weak and unable to compete with the global mega carriers*."

Article 1.2.4 further underscores the primary objective of the AFCAP –

> "To *reverse this trend and facilitate the growth of its civil aviation, Africa's leadership must continue to create an enabling and conducive environment that attracts private sector capital investment in the industry. This underscores the urgent need for African States to forge a common approach to civil aviation*."

This urgency is perfectly aligned to the goals of the YD and the SAATM. Much of the concerns outlined in Article 1.2.4 persist in African aviation today and some of these elements are analyzed in the SAATM Enablers Index in Chapter 2[26].

The aim of the AFCAP is to coordinate all the key African aviation initiatives under one coherent policy framework and use this harmonized consolidation as the foundation to solicit the political will and commitment towards these projects. The AFCAP forms the basis upon which common Rules, Regulations, Regional Programmes, Action Plans and Guidelines are adopted across Africa.

The AFCAP is divided into three parts covering the following:

i. A common vision and strategic objectives for African civil aviation
ii. Specific targets to bring Africa up to par with the rest of the world, particularly in safety, air traffic and economic statistics
iii. Common objectives, policy statements and strategies for the management of the various aspects of civil aviation: - safety, security, airspace management, air transport, etc.
iv. Strategies to link aviation with other socio-economic sectors, e.g. tourism, trade, etc, in order to enhance demand for air transport

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[25] Second Session of the African Union Conference of Ministers Responsible for Transport 21 – 25 November, 2011 Luanda, Angola and endorsed by the AU Heads of State Assembly, held in January 2012

[26] See Page 40

v. Common approach to external relations and foreign operations
vi. Procedure for periodic review and monitoring of implementation of the policies and adoption of Regulations and Action Plans as may be required.
vii. Delegation of authority from Heads of Government to conference of Ministers, AU Commission, AFCAC as appropriate, etc.

Some of the relevant performance areas targeted within the AFCAP are the liberalization of the air transport industry, Safety, Security, Environment, Human Resources Development, Aviation Training, Aviation Financing (infrastructure, regulatory functions), integrating civil aviation with other modes of transportation, the economic regulation of airports and air navigation services, linkage of civil aviation with other socio-economic sectors (Trade, Tourism, Immigration, Customs, IT, Power, etc.) and Air Transport Liberalization.

The AFCAP also has wide range of recommendations in Article 14.3 to address key issues, some of which are still prevailing today and are still a challenge today when it comes to multi-stakeholder collaboration. From trade, tourism, ICT, immigration (visa policies), customs policies, training, power supply and much more, the AFCAP provides a solid base for States to create a national strategy to promote the SAATM and air transport.

Without addressing the strategies highlighted in the AFCAP, even if all the BASAs across Africa are YD compliant, air transport demand will continue to be low and very few routes will be profitable or with enough passenger demand to sustain multiple airlines, if all the enablers for the development and sustainability of African aviation are not addressed holistically. African aviation needs intentional coordination across several sectors. Sectoral policies should not be made in isolation. Immigration must understand the impact of their policies on aviation, aviation must understand its importance to Trade and Tourism, Finance must understand the peculiarities of aviation and put in place measures to resolve the funding problems (both at the airline and State level).

All these sectors must work closely together, and aviation should be at the heart of any national strategy because of its transformative characteristics and power. To this end, Member states are enjoined in Article 14.2 to "*to promulgate laws and policies that ensure that other socio-economic sectors facilitate the sustainable growth of air transport and enable play its role overall national and continental development*."

The AFCAP is important because whilst the YD presents a blueprint for the liberalization of intra-Africa air services in a harmonized manner, the AFCAP provides the blueprint for improving the entirety of African air transport i.e. the operating and regulatory environment in a harmonized manner. If the vision of the AFCAP can be widely adopted by African States, the SAATM will be greatly enhanced. The AFCAP is critical to YD implementation because it is geared towards improving the African Air Transport industry in a structured holistic manner. The AFCAP is consistent with the aspirations of the original Yamoussoukro Declaration of 1988[27] which was to *"to define a common African position, reach a compromise and find appropriate solutions*" to the challenges and opportunities in African Aviation.

The AFCAP is currently under a review (initiated by AFCAC in 2020) but even in its current form, it provides very robust guidance to the policy makers within the Member States.

[27] Supra

9. IMMEDIATE MEASURES TOWARDS ACTUALIZING THE DECLARATION OF SOLEMN COMMITMENT BY AFRICAN UNION MEMBER STATES TO THE IMPLEMENTATION OF THE 1999 YAMOUSSOUKRO DECISION AND THE ESTABLISHMENT OF A SINGLE AFRICAN AIR TRANSPORT MARKET BY 2017 (CONCRETE MEASURES)[28]

The Concrete Measures are a set of recommendations outlining the critical elements towards SAATM implementation. The first set of eight SAATM Concrete Measures were formulated following the Declaration on the Establishment of a Single African Air Transport Market (Assembly/AU/Decl.1(XXIV) in 2015. During the Fifth Ministerial Working Group (MWG) meeting held in in Cabo Verde in February 2019, it was noted that some SAATM States were reluctant to honor their commitments with respect to the implementation of the Concrete Measures. As a result, the above set of seven concrete measures were introduced and adopted.

The seven Concrete Measures are as follows:

1. States shall notify other signatory State Parties to the Declaration of Solemn Commitment that the State's skies are fully liberalized in accordance with the Yamoussoukro Decision (1999) and that all restrictions on traffic rights under the 3rd, 4th and 5th freedoms, frequencies, fares and capacity for signatory States to the Solemn Commitment have been removed.

2. States shall publish in accordance to their national laws that they are committed to the immediate implementation of the Yamoussoukro Decision under the terms of the Declaration of Solemn Commitment in line with the AU Agenda 2063 while the Executing Agency shall notify other signatory States.

3. States shall immediately constitute their National Implementation Committees for the Yamoussoukro Decision and the establishment of a Single African Air Transport Market, designate a dedicated focal point and notify the Executing Agency (AFCAC) who shall inform all other signatory States accordingly to facilitate contacts.

4. State Parties shall ensure that all national Laws, Regulations, Rules, Policies are in conformity with the express provisions of the Yamoussoukro Decision and notify the Executing Agency of the YD.

5. States shall propose to the Executing Agency (AFCAC) at least one airline established in their State for international air services for consideration under the eligibility criteria Article 6.9 of the Yamoussoukro Decision. The proposed airline can also be from another State Party or a multi-national African airline in accordance with Article 6 of the Yamoussoukro Decision.

6. State Parties shall promote air transport sustainability through safety and security, regulatory framework and strict adherence to ICAO Guidance and Policies on taxes, charges and fees.

7. States Parties shall submit relevant air transport data to the Executing Agency in a prescribed format.

The Concrete Measures are a national blueprint that outlines the minimum expectations of stakeholders desirous of implementing the SAATM in their home country. Implementing the Concrete Measures requires close collaboration from national stakeholders namely the Ministries of Aviation/Transport, Civil Aviation Authorities,

[28] The initial Concrete Measures were reviewed taking into consideration recent developments in the industry and the need to fast track and sustain the tempo of implementation of SAATM

Airlines, Ministry of Justice (or equivalent legislative body), to name a few. If these national stakeholders prioritize these seven concrete measures, SAATM implementation will be greatly optimized within that State. The requirement to formulate a National Implementation Committee (CM no. 3) underscores the fact that the SAATM cannot be implemented in a vacuum or by one Ministry. SAATM Implementation is a national effort and must be prioritized by all key agencies in a State.

At the time of this study, X States have fully implemented the Concrete measures.

10. MEMORANDUM OF IMPLEMENTATION OF THE YAMOUSSOUKRO DECISION BY SIGNATORY STATES OF THE DECISION ON THE ESTABLISHMENT OF THE SINGLE AFRICAN AIR TRANSPORT MARKET (SAATM MOI).

18 signatory States have signed the Memorandum of Implementation, these are *Benin, Burkina Faso, Cabo Verde, Central African Republic, Congo, Cote d'Ivoire, Ethiopia, Gambia, Ghana, Guinea, Liberia, Mali, Mozambique, Niger, Nigeria, Rwanda, Sierra Leone and Togo*.

The MOI was first signed by States on the 28th May, 2018. It is another affirmation by States of their willingness to implement the YD and fully establish the SAATM. What is significant about the MOI is that it further streamlines the minimum requirements towards the establishment of the SAATM, to wit:

i. BASAs

1. Amend, by December, 2018, the provisions of all existing Bilateral Air Services Agreements (BASAs) that are incompatible with the Yamoussoukro Decision.
2. Ensure that all future BASAs comply fully with the Yamoussoukro Decision.
3. The absence of BASAs between two or more State Parties to the Solemn Commitment of the SAATM shall at no material moment be used by any State Party as the sole reason to justify a refusal of the right of an eligible airline to initiate commercial operations in accordance with Articles 2 and 3 of the Decision.

ii. Airlines

1. Ensure that eligible airlines (YD 6.9) of State Parties to the SAATM, enjoy absolute freedom to exploit traffic rights, determine fares, set capacity and frequency, as well as engage in commercial operations in accordance with Articles 3, 4, 5 and 11 of the YD.

iii. YD Regulatory Texts

Undertake to ensure the publishing of all Annexes to the Yamoussoukro Decision already in force, namely:

1. The Regulations on the Powers, Functions and Operation of the Executing Agency of the Yamoussoukro Decision (Annex 4);
2. The Regulations on Competition in Air Transport Services within Africa (Annex 5);
3. The Regulations on the Protection of Consumers of Air Transport Services (Annex 6), are published.

One of the recitals of the MOI reads as follows:

> *Mindful of the aspiration of Member States and the industry to operate within the intra-African market without the need for bilateral air service agreements between Member States, and to go beyond the market access provisions of the Yamoussoukro Decision (Article 10.4 of YD) to accelerate the attainment of the objectives of the SAATM;*

This recital speaks to the spirit of the MOI, which is to remove all obstacles hindering YD implementation and create a common legal multilateral protocol that Stakeholders can utilize to further guide relations between States when operationalizing the SAATM. The emphasis on the three critical elements above highlights the key ingredients required to establish the SAATM.

Whilst all Member States are important for a successful SAATM, if SAATM operationalization continues to lull amongst the 35 SAATM Member States, the 18 signatory States to the MOI should be considered for a "Club of the Ready and Willing "(CREW) – a much deliberated pilot initiative that could accelerate SAATM implementation amongst States fully committed to immediate operationalization. Any State considered for the CREW initiative should at the minimum be compliant with Safety and Security standards and other international best practice.

11. METHODOLOGY FOR MONITORING THE IMPLEMENTATION OF THE YAMOUSSOUKRO DECISION DEVELOPING A CHECKLIST OF KEY PERFORMANCE INDICATORS (REPORT BY THE UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA).

The African Union Commission, African Civil Aviation Commission and the United Nations Economic Commission for Africa have commissioned a study to "enhance the capacity of the Yamoussoukro Decision (YD)/Single Africa Air Transport Market (SAATM) to enable the Executing Agency and Monitoring Body to monitor and evaluate the liberalization of Africa's air transport market via an objective and reliable tool for tracking implementation of the Yamoussoukro Decision".

The Study has derived the following Key Performance Indicators[29] (and expounds on them with a sub-set of indicators), namely:

- **KPI-1**: The State has promulgated essential national laws/regulations that give effect to the provisions of the Yamoussoukro Decision and its institutional and regulatory instruments, within their respective territory;

- ***KPI-2****: The State has a YD compliant BASA/MASA or an alternative instrument that enables the State to grant market access and the liberalization of intra-African air transport services within its territory to designated African eligible airlines;*

    - ***KPI-2.1****: The State has granted, as a minimum, the fifth freedom traffic right of the air for all routes and sectors linking its territory with other SAATM Member States to designated African eligible airlines;*

- **KPI-3**: The State has an appropriate organization to ensure a YD oversight and surveillance system for the liberalized intra-African air transport market within its territory;

- **KPI-4**: The State's aeronautical authority has a YD oversight/surveillance process and procedure to ensure air service operators comply with State Parties regulatory requirements;

[29] KPIs in italics are relevant to the assessment of YD implementation in this Study.

- **KPI-5**: The State has promulgated appropriate regulations, applicable to scheduled and non-scheduled intra-Africa air transport services, prohibiting any practice, agreement or conduct, which might have anti-competitive effect on the African aviation market;

- **KPI-6**: The State or the State's aeronautical authority has a process and procedure to ensure implementation of the State's competition regulations;

- **KPI-7**: The State has promulgated appropriate regulations to comply with Annex 6 of the YD that protects air transport consumers against unfair treatment in the provision of services as well as prescribes the right of consumers and the responsibilities of air transport undertakings in the protection of consumers, applicable to air transport services within Africa;

- ***KPI-8****: The State's aeronautical authority has an oversight/surveillance process and procedure to ensure that consumer rights are protected, applicable to fare paying passengers and passengers having tickets issued under a frequent flyer programme, other commercial arrangements or programmes by an airline or tour operator including consumers of air cargo transport services;*

- ***KPI-9****: The State's aeronautical authority has a process and procedure to ensure that the State complies with relevant safety provisions in the YD as well as with Effective Implementation of the eight (8) critical elements (CEs) of the State's safety oversight system greater or equal to the Global Average;*

- **KPI-10**: The State's aeronautical authority has a process and procedure to ensure that the State complies with the aviation security related provisions in the annexes to the Chicago Convention on International Civil Aviation. The State's aeronautical authority procedure also enables the State to consider any request from any other State Party for special security measures to meet a particular threat;

- **KPI-11**: The designated African eligible airline has an approved policy and procedure to comply with State regulations that encompass the Yamoussoukro Decision and its institutional and regulatory instruments as the basis for operating scheduled and nonscheduled intra-African air transport services;

- **KPI-12**: The designated African eligible airline has an approved policy and procedures to comply with State Parties' competition obligations in operating scheduled and nonscheduled intra-African air transport services;

- **KPI-13**: The designated African eligible airline has an approved policy and procedures to comply with State Parties' consumer protection obligations in operating scheduled and non-scheduled intra-African air transport services;

- ***KPI-14****: The designated African eligible airline is able to operate scheduled and/or unscheduled intra-African air transport services within a liberalized SAATM;*

    - ***KPI-14.1****: The designated African eligible airline is able to operate all fifth freedom rights of the air on routes/sectors within the liberalized SAATM, from the territories of States served within its route network;*

- **KPI-15**: The designated African eligible airline operating scheduled and/or unscheduled intra-African air transport services within a liberalized SAATM, has an approved policy and procedure to fully comply with the provisions of YD Annex 6 on regulations on the protection of the consumers;

- **KPI-16**: The State has a process and procedure to systematically monitor and evaluate the liberalization of air transport services and the benefits of SAATM; and

- **KPI-17**: The State is fully compliant with the provisions of the COVID-19 ICAO CART and African HLTF guidelines.

Within the context of this YD Implementation Methodology, YD implementation means compliance with the provisions of the YD and its institutional and regulatory Instruments. Tracking the full implementation of the YD from this perspective is useful via the above Key Performance Indicators as it measures implementation against the provisions of the YD regulations. The assessment of YD implementation in this Study will be based primarily on KPI's 2, 2.1, 8, 9, 14, 14.1

As at the time of this report, the YD Implementation Methodology was still in its draft form. Once adopted, these KPIs are expected to constitute the tool/methodology for assessing and tracking implementation of YD going forward.

Conclusion

i. The combination of the above legal instruments and policy guidance provides a firm foundation for the industry's ongoing efforts to operationalize the SAATM. What is important is for the documents to be tested.

ii. An examination of these documents shows that the policy underpinnings for the implementation of the YD through the SAATM have been clearly articulated. For the YD and its annexes (save for the draft DSM), stakeholders should test the veracity of the instruments through their application (and amend where necessary).

iii. The process will not be perfect and there will be issues not contemplated that will require amendments to the existing legislation and even additional legislation. Critical to the process is a robust and efficient regulatory review framework and the political will to adhere to the process.

iv. The Third Package of liberalization measures of the much-lauded European Union Singe Market of January 1993 is a good example of perfecting a process whilst ensuring progress. The Third Package represents the culmination of a gradual process of dismantling the bilateral restrictions which had begun in December 1978, with the First Package. A process of progressive liberalization swept away the pre-existing institutional barriers to entry and competition and created a genuinely single market within the EU aided by the EU's already existing institutional framework and strong commitment towards economic integration.

v. To this end, the mandate of AFCAC as the Executing Agency of the YD must be duly recognized and acceded to by all States. The power to make recommendations, investigations, enforcements and other Decisions given to AFCAC under the various legal instruments and regulations are sacrosanct and must be complied with.

Key Recommendations

i. SAATM Member States that are ready to immediately and fully implement the YD and establish the SAATM, based on a simple notification procedure, and without any further delay should be identified and coordinated by the Executing Agency.

ii. States who are yet to do so should fully implement the Concrete Measures of the YD

iii. States should harmonize their primary aviation legislation and provide for standardized operational procedures particularly in the following areas:

- Safety and Security
- Competition
- Consumer Protection
- Dispute Settlement Mechanisms
- 100 % completion of the Concrete Measures
- Execution of the Memorandum of Implementation

iv. All other Air Transport Policies should be consistent with the Yamoussoukro Decision. Such policies include the "External Policy and Guidelines for the Negotiation of Air Service Agreements Between African Union States and Non-African States and Regions" which is currently under review by Stakeholders[30].

v. Finally, a coordinated multi-stakeholder collaboration and the linkage of civil aviation with other socio-economic sectors is required. Member States shall remove and/or relax all barriers like Immigration, Customs etc., for free movement of people and goods within the continent. This will help improve passenger demand which will improve airline sustainability.

1.4. Analysis of Bilateral Air Service Agreements (BASAs) across the 55 AU States[31]

Introduction

As has been stated earlier, the Yamoussoukro Decision (YD) provides for the full liberalization of intra-African air transport services in terms of market access, allowing the free exercise of first, second, third, fourth and fifth freedom traffic rights for passenger and freight air services by eligible airlines. The SAATM is a continental effort to start the implementation of the YD, with 35 out of 55 African Union States being signatories.

This section provides an analysis of 607 BASAs signed between AU member States. BASAs were collected for all AU member States, except for Western Sahara, with complete BASA datasets for 30 States and partial datasets for the remaining 24. This analysis provides an overview of the current state of air traffic liberalization within the African Union and forms the basis of subsequent assessment of the benefits of further liberalization.

[30] Draft regulations provided by AUC and AFCAC to stakeholders for their review in March, 2020

[31] **No BASA information was available for Sarahawi Republic**

Methodology

We used a combination of primary and secondary research to collect information from BASAs. ICAO's World Air Services Agreements (WASA) database was used extensively during the secondary research phase. The WASA contains texts of bilateral air services agreements and amendments in PDF format. It also includes codified "Summaries of Provisions" of bilateral air services agreements and amendments which are filed with ICAO by its member States as well as non-registered agreements obtained from other sources such as official national websites. Relevant to this study, WASA holds over 300 intra-African BASAs, signed over the past 50 years. About half of these BASAs were deemed up to date and useful for extraction of data by our team of consultants.

Complementing the WASA database, our team engaged the Civil Aviation Authorities and Ministries of Transport of the African Union member States. A survey was distributed earlier in the project with the assistance of the AUC and AFCAC, asking States to provide, in a table format, key information from existing BASAs with other African countries.

Extraction of BASA information

The following table provides an example to show the various fields if information that were extracted from BASAs.

Table 1: BASA information extracted

Country	Bilateral Partner	Year of Agreement	BASA Provisions										
						Market Access				Capacity/Frequency			Fare
			Number of Designated Airlines	Number of Designated Home Airlines	Number of Designated Foreign Airlines	3rd and 4th Freedom Traffic Rights	Named Points/Airports?	5th Freedom Traffic Rights	Named Points/Airports?	Restrictions Apply?	Total Freqs per Week	Total Seats per Week	Regulation
1	2	3	5	6	6	7	8	9	10	11	12	13	14
Ethiopia	Rwanda	2016	2	1	1	Unrestricted	N/A	Yes	N/A	Unlimited	Unlimited	Unlimited	None

The information extracted from all the BASAs was codified using the following framework:

Column 1, 2: Country and its bilateral partners

Partner countries which maintain bilateral air service agreements with the country in question.

Column 3: Year of BASA

Year when the current version of the BASA came into effect.

Column 4, 5, 6: Number of designated airlines

Number of airlines allowed to operate based on the BASA for all parties. Includes total of home and foreign carriers, and separately the number of home and foreign carriers.

Column 7, 8: Market access (3rd/4th freedoms of the air)

Review of any restrictions on the exercise of 3rd/4th freedom traffic rights. The possible options for this parameter are: Unrestricted, or Restricted.

- Unrestricted. Means any points/airports are accessible for the designated carriers in the countries which are parties to the agreement.

- Restricted. Means operations by the designated carriers between the countries which are parties to the agreement are restricted to certain points/airports.
    - Where operations of international air service by the designated carriers are restricted to certain points, name all airports to which operations are permitted.

Column 9, 10: Market access (5th freedom of the air)
Whether the BASA allows free 5th traffic rights within Africa. i.e. the transportation of passengers to/from the partner country to a third country. The possible options for this parameter are: Yes, No or Limited.

- Yes. Means unrestricted 5th freedom traffic rights within Africa are permitted for the designated carriers under the agreement.
- No. Means 5th freedom traffic rights within Africa are not permitted for the designated carriers under the agreement.
- Limited. Means operations of 5th freedom routes by the designated carriers under the agreement are restricted to certain routes.

Column 11, 12, 13: Frequency of service and seat capacity
Any limitations on the frequency or capacity (seats) operated between the countries which are parties to the agreement. The possible options for this parameter are: Unlimited or Limited

- Unlimited. Means no limitation on the number of flights or seat capacity.
- Limited. Means there are restrictions on the number of flights or aircraft size permitted.

Column 14: Tariff (airfare) regulation
Any limitations on the ability of the designated carriers to determine airfares. The possible options for this parameter are: Double Approval, Double Disapproval, None or Other.

- DA-Double Approval. The case where a proposed fare is permitted when both nations approve it.
- DD- Double Disapproval. The case where a proposed fare is permitted unless both countries veto it (this is the most permissive form of pricing provision in BASAs).
- None. No restrictions on pricing.
- Other.

Interpretation of BASA information

We have classified BASAs as YD compliant or YD non-compliant, reviewing each BASA provisions in line with Articles 3-6 of the YD:

- **YD Compliant:** An agreement is categorised as YD compliant if it contains at least the following liberal elements:
    - unrestricted traffic rights, with no route limitations (minimum 3rd , 4th and 5th traffic rights), in line with Article 3 of the YD (“Granting of Rights”)
    - dual disapproval, or free pricing tariff regime, in line with Article 4 of the YD (“Tariffs”)
    - multiple designation of airlines, in line with Article 6 of the YD (“Designation and Authorization)

- free determination of capacity, in line with Article 5 of the YD ("Capacity and Frequency")

- **YD non-Compliant:** an agreement is categorized as non-Compliant if it does not meet all of the above elements and therefore deemed as not following the provisions of the YD

Definition of Country air transport liberalization

Following the extraction of information from individual BASAs, we created a framework to classify countries based on the degree of compliance of BASAs with YD provisions. We chose three stages of compliance to classify countries.

The three YD compliance stages were defined as follows:

High Compliance: These are countries that enjoy mostly YD compliant BASAs (70% or more, of BASAs signed with AU States)

Medium Compliance: These are countries that have a significant proportion of YD compliant BASAs (30-70% of BASAs signed with AU States)

Low Compliance: These are countries that have a relatively small proportion of YD compliant BASAs (less than 30% of BASAs signed with AU States)

Results of Country Analysis

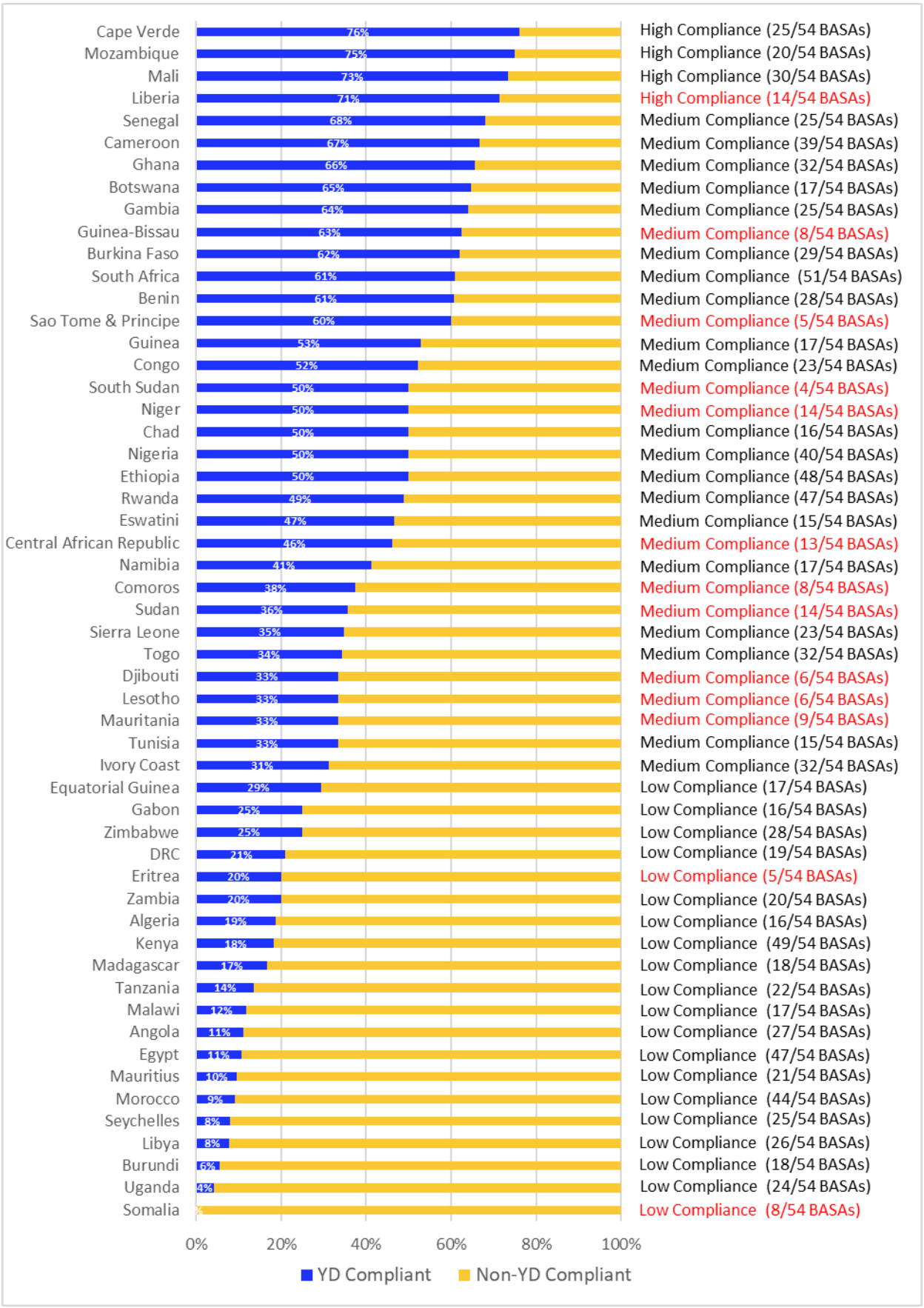
From a list of 607 BASAs reviewed, 235 (39%) were classified as YD compliant and 372 (61%) as YD non-compliant.

Of the 55 countries reviewed, excluding Sarahawi Republic, we had substantial (at least 15 BASAs) information on 41 countries. From these countries, the top 5 countries with the highest proportion of YD compliant BASAs were Cape Verde (76% YD compliant BASAs), Mozambique (75%), Mali (73%), Senegal (68%) and Cameroon (67%), while Uganda (4% YD compliant BASAs), Burundi (6%), Libya (8%), Seychelles (8%), and Morocco (9%) were the countries with the least proportion of YD compliant BASAs. States with less than 15 BASAs have been included in our analysis for reference purposes, and highlighted in red, although it should be noted that their compliance classification could differ with additional BASA information.

From the top 10 countries with the highest proportion of YD compliant BASAs, 6 are in Western Africa, indicating that this region is more advanced in terms of intra-African liberalization. The countries with the highest number of BASAs, showing openness to establishing bilateral relations irrespective of BASA restrictiveness, are South Africa (51 out of a possible 55 BASAs), Kenya (49), Ethiopia (48), Egypt (47), Rwanda (47), Morocco (44) and Nigeria (40). The countries with the highest number of YD compliant BASAs, are South Africa (31 out of a possible 55 BASAs), Cameroon (26), Ethiopia (24), Rwanda (23), Mali (22), Ghana (21) and Nigeria (20).

The following figure presents the overall compliance of countries, based on the number of BASAs falling within the categories of High Compliance, Medium Compliance and Low Compliance.

Figure 1: YD Compliance by country and African BASA coverage (Known/Total Possible BASAs)*



Source: Country Survey, ICAO WASA Database, secondary research, IATA Analysis; Countries with less than 15 known BASAs highlighted in red; No known BASAs for Western Sahara.

State by State comparison

The following table presents more detail for individual countries, showing the total number of signed BASAs and YD compliant BASAs, as well as BASAs signed with States that are Signatories to the YD and to the SAATM.

Table 2: Further detail on country BASA analysis*

States	Africa Region	SAATM Signatory (Yes=1, No=0)	YD Signatory (Yes=1, No=0)	BASAs	BASAs with SAATM Signatories	BASAs with YD Signatories	YD Compliant BASAs	YD Compliant BASAs with SAATM Signatories	YD Compliant BASAs as a % of Total BASAs
Cape Verde	Western Africa	1	1	25	22	24	19	18	76.0%
Mozambique	Eastern Africa	1	1	20	14	19	15	14	75.0%
Mali	Western Africa	1	1	30	25	29	22	19	73.3%
Liberia	Western Africa	1	1	14	14	14	10	10	71.4%
Senegal	Western Africa	1	1	25	21	23	17	14	68.0%
Cameroon	Central Africa	1	1	39	27	38	26	22	66.7%
Ghana	Western Africa	1	1	32	23	31	21	19	65.6%
Botswana	Southern Africa	1	1	17	12	16	11	7	64.7%
Gambia	Western Africa	1	1	25	23	24	16	14	64.0%
Guinea-Bissau	Western Africa	1	1	8	7	8	5	5	62.5%
Burkina Faso	Western Africa	1	1	29	24	29	18	17	62.1%
South Africa	Southern Africa	1	0	51	32	32	31	24	60.8%
Benin	Western Africa	1	1	28	25	28	17	14	60.7%
Sao Tome & Principe	Central Africa	0	1	5	0	4	3	0	60.0%
Guinea	Western Africa	1	1	17	17	17	9	9	52.9%
Congo	Central Africa	1	1	23	17	21	12	12	52.2%
South Sudan	Eastern Africa	0	1	4	0	3	2	0	50.0%
Nigeria	Western Africa	1	1	40	29	38	20	17	50.0%
Ethiopia	Eastern Africa	1	1	48	31	43	24	18	50.0%
Niger	Western Africa	1	1	14	13	14	7	7	50.0%
Chad	Central Africa	1	1	16	13	15	8	7	50.0%
Rwanda	Eastern Africa	1	1	47	32	44	23	19	48.9%
Eswatini	Southern Africa	1	0	15	9	9	7	5	46.7%
Central African Republic	Central Africa	1	1	13	11	13	6	6	46.2%
Namibia	Southern Africa	1	1	17	13	15	7	6	41.2%
Comoros	Eastern Africa	0	1	8	0	4	3	0	37.5%
Sudan	Northern Africa	0	1	14	0	11	5	0	35.7%
Sierra Leone	Western Africa	1	1	23	21	23	8	8	34.8%
Togo	Western Africa	1	1	32	27	31	11	11	34.4%
Djibouti	Eastern Africa	0	0	6	0	0	2	0	33.3%
Tunisia	Northern Africa	0	1	15	0	13	5	0	33.3%
Mauritania	Western Africa	0	0	9	0	0	3	0	33.3%
Lesotho	Southern Africa	1	1	6	4	6	2	2	33.3%

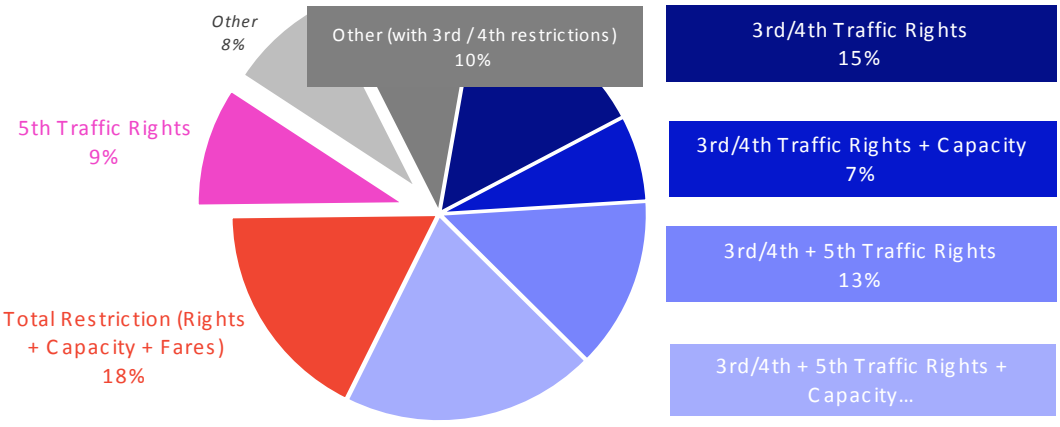
Ivory Coast	Western Africa	1	1	32	26	31	10	10	31.3%
Equatorial Guinea	Central Africa	1	0	17	15	15	5	5	29.4%
Gabon	Central Africa	1	0	16	13	13	4	4	25.0%
Zimbabwe	Eastern Africa	1	1	28	21	27	7	7	25.0%
DRC	Central Africa	1	1	19	15	19	4	4	21.1%
Zambia	Eastern Africa	0	1	20	0	17	4	0	20.0%
Eritrea	Eastern Africa	0	0	5	0	0	1	0	20.0%
Algeria	Northern Africa	0	1	16	0	13	3	0	18.8%
Kenya	Eastern Africa	1	1	49	31	44	9	8	18.4%
Madagascar	Eastern Africa	0	0	18	0	0	3	0	16.7%
Tanzania	Eastern Africa	0	1	22	0	17	3	0	13.6%
Malawi	Eastern Africa	0	1	17	0	15	2	0	11.8%
Angola	Central Africa	0	1	27	0	23	3	0	11.1%
Egypt	Northern Africa	1	1	47	31	42	5	5	10.6%
Mauritius	Eastern Africa	0	0	21	0	0	2	0	9.5%
Morocco	Northern Africa	1	0	44	30	30	4	3	9.1%
Seychelles	Eastern Africa	0	1	25	0	19	2	0	8.0%
Libya	Northern Africa	0	1	26	0	21	2	0	7.7%
Burundi	Eastern Africa	0	1	18	0	14	1	0	5.6%
Uganda	Eastern Africa	0	1	24	0	17	1	0	4.2%
Somalia	Eastern Africa	0	0	8	0	0	0	0	0.0%

Source: Country Survey, ICAO WASA Database, secondary research, IATA Analysis; Countries with less than 15 known BASAs highlighted in red; No known BASAs for Western Sahara.

Analysis of Restrictions

As discussed earlier, a BASA is categorized as non-Compliant if it does not follow the provisions of the YD. Following the classification of countries, based on their overall compliance to the YD, we analyzed the key reasons why 372 BASAs were deemed as non-Compliant. Of these BASAs, 105 (28%) failed to meet just one of the pre-requisites for YD Compliance, while the remaining 267 BASAs (72%) failed because of non-compliance on two or more pre-requisites. The following graph highlights the most common non-compliance issues.

Figure 2: Cause of YD non-compliance among non-compliant BASAs



Source: Country Survey, ICAO WASA Database, secondary research, IATA Analysis

According to this analysis, only 65 BASAs (18%) are fully restrictive across all the provisions of the YD. On the contrary, almost all of the non-compliant BASAs (327 BASAs, 88%) are restrictive in terms of 3rd, 4th or 5th traffic rights, with 306 BASAs being restrictive in terms of 3rd and 4th traffic rights. This is considered the main obstacle towards the full implementation of the YD in Africa. On a closer look, over half of the BASAs (187, or 50%) that restrict 3rd and 4th traffic rights, are restrictive because they limit the number of entry points (airports) for designated carriers.

A misconception is that non-compliant BASAs are restrictive solely in terms of 5th traffic rights. Our analysis shows that only 70 BASAs (9%) are deemed non-compliant solely because of restrictive 5th traffic rights, while a further 200 BASAs (54%) include limited 5th traffic rights as one of a multitude of restrictions.

Furthermore, capacity constraints are a common feature of non-compliant BASAs, with 180 BASAs (48%) stipulating limited capacity, defined as limiting flight frequencies or seat capacity.

Finally, 131 BASAs (35%) have a restrictive tariff regime, defined as requiring Double Approval on airline proposed fares by State Authorities.

The figure below provides details on the incidence of different types of BASA YD non-compliance for each State.

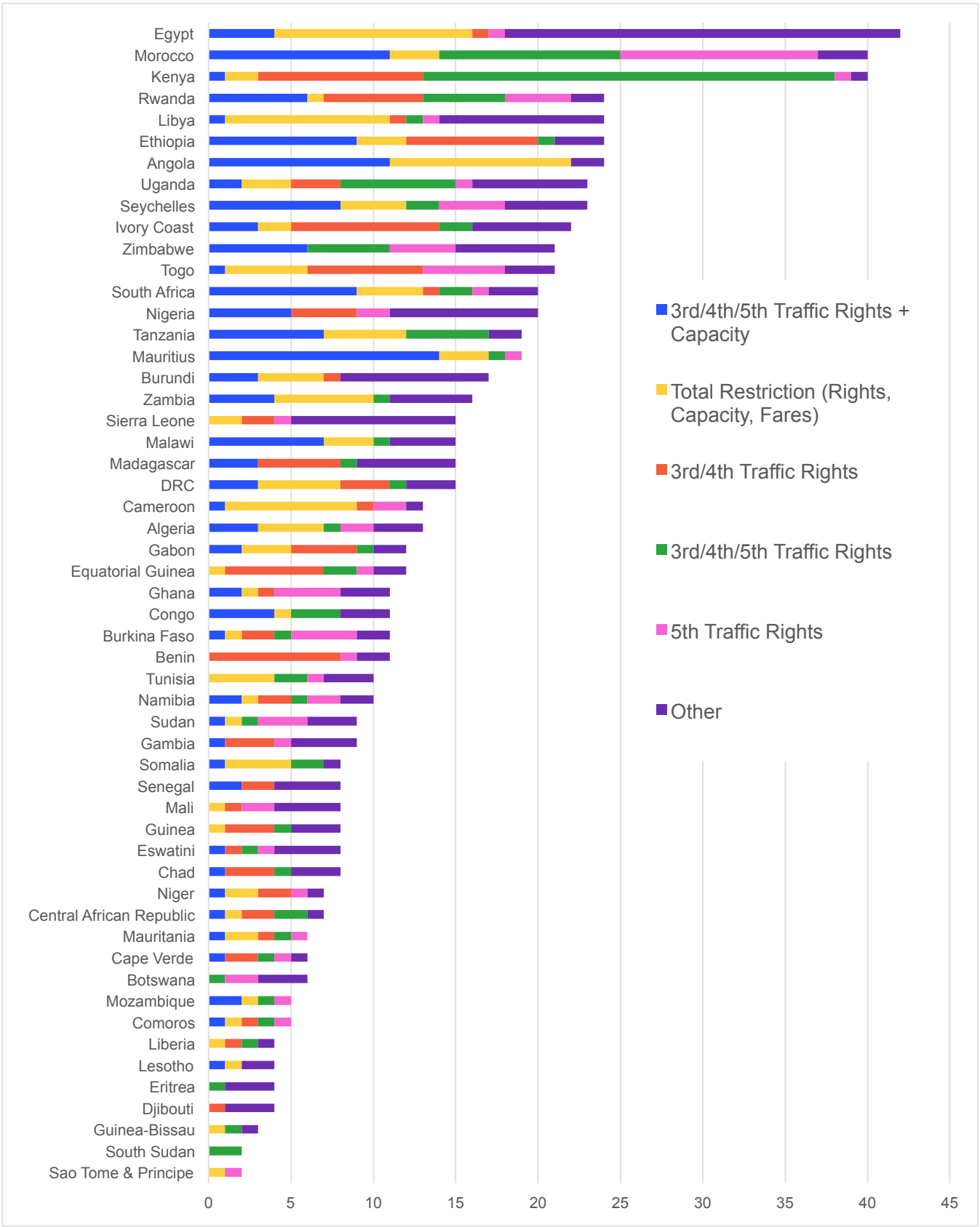


Figure 3: Count of different types of BASA YD non-compliance, by State

Source: Country Survey, ICAO WASA Database, secondary research, IATA Analysis; No known BASAs for Western Sahara.

Selected Country Summaries

For the top 15 countries with the highest proportion of YD compliant BASAs, the following acts as a summary of the country status:

CAPE VERDE

Background Information

Total BASAs: 25 out of 55 countries in Africa (46% coverage)

YD-compliant BASAs: 19
Overall YD Compliance: 76%
YD Compliance with SAATM Signatories: 55%
YD Compliance with YD Signatories: 40%

Overall Analysis

- Cape Verde is both a YD and SAATM signatory
- Classified as a High Compliance country, it has 19 YD compliant BASAs, 18 of which with other SAATM signatories

MOZAMBIQUE

Background Information

Total BASAs: 20 out of 55 countries in Africa (37% coverage)

YD-compliant BASAs: 15
Overall YD Compliance: 75%
YD Compliance with SAATM Signatories: 42%
YD Compliance with YD Signatories: 28%

Overall Analysis

- Mozambique is both a YD and SAATM signatory
- Classified as a High Compliance country, it has 15 YD compliant BASAs, 14 of which with other SAATM signatories
- Mozambique is the only country that has signed YD compliant BASAs with all BASA partners that are also SAATM signatories

MALI

Background Information

Total BASAs: 30 out of 55 countries in Africa (56% coverage)

YD-compliant BASAs: 22
Overall YD Compliance: 73%
YD Compliance with SAATM Signatories: 58%
YD Compliance with YD Signatories: 44%

Overall Analysis

- Mali is both a YD and SAATM signatory
- Classified as a High Compliance country, it has 22 YD compliant BASAs, 19 of which with other SAATM signatories

SENEGAL

Background Information

Total BASAs: 25 out of 55 countries in Africa (46% coverage)

YD-compliant BASAs: 17
Overall YD Compliance: 68%
YD Compliance with SAATM Signatories: 42%
YD Compliance with YD Signatories: 33%

Overall Analysis

- Senegal is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 17 YD compliant BASAs, 14 of which with other SAATM signatories

CAMEROON

Background Information

Total BASAs: 39 out of 55 countries in Africa (72% coverage)

YD-compliant BASAs: 26
Overall YD Compliance: 67%
YD Compliance with SAATM Signatories: 67%
YD Compliance with YD Signatories: 53%

Overall Analysis

- Cameroon is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 26 YD compliant BASAs, 22 of which with other SAATM signatories
- Cameroon has the second highest number of YD compliant BASAs among all African States

GHANA

Background Information

Total BASAs: 32 out of 55 countries in Africa (59% coverage)

YD-compliant BASAs: 21
Overall YD Compliance: 66%
YD Compliance with SAATM Signatories: 58%
YD Compliance with YD Signatories: 44%

Overall Analysis

- Ghana is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 21 YD compliant BASAs, 19 of which are with other SAATM signatories

BOTSWANA

Background Information

Total BASAs: 17 out of 55 countries in Africa (31% coverage)

YD-compliant BASAs: 11
Overall YD Compliance: 65%
YD Compliance with SAATM Signatories: 21%
YD Compliance with YD Signatories: 19%

Overall Analysis

- Botswana is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 11 YD compliant BASAs, 7 of which with other SAATM signatories
- Botswana has one of the lowest BASA coverage ratios among African peers, having signed agreements with just 17 other African States

GAMBIA

Background Information

Total BASAs: 25 out of 55 countries in Africa (46% coverage)

YD-compliant BASAs: 16
Overall YD Compliance: 64%
YD Compliance with SAATM Signatories: 42%
YD Compliance with YD Signatories: 33%

Overall Analysis

- Gambia is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 16 YD compliant BASAs, 14 of which with other SAATM signatories

BURKINA FASO

Background Information

Total BASAs: 29 out of 55 countries in Africa (54% coverage)

YD-compliant BASAs: 18
Overall YD Compliance: 62%
YD Compliance with SAATM Signatories: 52%
YD Compliance with YD Signatories: 37%

Overall Analysis

- Burkina Faso is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 18 YD compliant BASAs, 17 of which with other SAATM signatories
- As a landlocked country, air transport connectivity is deemed essential, driving adoption of YD articles

SOUTH AFRICA

Background Information

Total BASAs: 51 out of 55 countries in Africa (94% coverage)

YD-compliant BASAs: 31
Overall YD Compliance: 61%
YD Compliance with SAATM Signatories: 73%
YD Compliance with YD Signatories: n/a

Overall Analysis

- South Africa is a SAATM signatory
- Classified as a Medium Compliance country, it has 31 YD compliant BASAs, 24 of which with other SAATM signatories
- South Africa has the highest number of BASAs with other African States
- South Africa has the highest number of YD compliant BASAs among all African States

BENIN

Background Information

Total BASAs: 28 out of 55 countries in Africa (52% coverage)

YD-compliant BASAs: 17
Overall YD Compliance: 61%
YD Compliance with SAATM Signatories: 42%
YD Compliance with YD Signatories: 37%

Overall Analysis

- Benin is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 17 YD compliant BASAs, 14 of which with other SAATM signatories

GUINEA

Background Information

Total BASAs: 17 out of 55 countries in Africa (31% coverage)

YD-compliant BASAs: 9
Overall YD Compliance: 53%
YD Compliance with SAATM Signatories: 27%
YD Compliance with YD Signatories: 19%

Overall Analysis

- Guinea is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 9 YD compliant BASAs, all of which are with other SAATM signatories

REP. OF THE CONGO

Background Information

Total BASAs: 23 out of 55 countries in Africa (43% coverage)

YD-compliant BASAs: 12
Overall YD Compliance: 52%
YD Compliance with SAATM Signatories: 36%
YD Compliance with YD Signatories: 26%

Overall Analysis

- The Rep. of the Congo is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 12 YD compliant BASAs, all of which are with other SAATM signatories

NIGERIA

Background Information

Total BASAs: 40 out of 55 countries in Africa (74% coverage)

YD-compliant BASAs: 20
Overall YD Compliance: 50%
YD Compliance with SAATM Signatories: 52%
YD Compliance with YD Signatories: 42%

Overall Analysis

- Nigeria is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 20 YD compliant BASAs, 17 of which are with other SAATM signatories

ETHIOPIA

Background Information

Total BASAs: 48 out of 55 countries in Africa (89% coverage)

YD-compliant BASAs: 24
Overall YD Compliance: 50%
YD Compliance with SAATM Signatories: 55%
YD Compliance with YD Signatories: 49%

Overall Analysis

- Ethiopia is both a YD and SAATM signatory
- Classified as a Medium Compliance country, it has 24 YD compliant BASAs, 18 of which are with other SAATM signatories

Conclusion

YD is still only partially implemented between States, with varying degrees of compliance among them.

With information from over 600 BASAs, Cape Verde (76% YD compliant BASAs), Mozambique (75%), Mali (73%), Senegal (68%) and Cameroon (67%) were the top 5 countries with the highest proportion of YD compliant BASAs, while Uganda (4% YD compliant BASAs), Burundi (6%), Libya (8%), Seychelles (8%), and Morocco (9%) were the countries with the least proportion of YD compliant BASAs. Based on our analysis, no State is complying 100% with YD implementation as far as their BASAs are concerned.

Furthermore, we analyzed the key reasons why 372 BASAs were deemed as non-Compliant. Almost all the non-compliant BASAs (327 BASAs, 88%) are restrictive in terms of 3rd, 4th or 5th traffic rights, with 306 BASAs being restrictive in terms of 3rd and 4th traffic rights. The provision of full 3rd and 4th traffic rights is, therefore, considered a key obstacle towards the full implementation of the YD in Africa.

Capacity constraints are a common feature of non-compliant BASAs, with 180 BASAs (48%) stipulating limited capacity, defined as limiting flight frequencies or seat capacity.

Finally, 131 BASAs (35%) have a restrictive tariff regime, defined as requiring Double Approval on airline proposed fares by State Authorities.

1.5. The Joint Prioritized Action Plan on the Single Africa Air Transport Market (JPAP)

At the core of successful YD implementation (through the SAATM) is multi-stakeholder buy-in, collaboration and cooperation. Airlines must work together with airlines, States must work with States, Ministries of Aviation must work with Ministries of Tourism and Foreign Affairs and so on.

In March of 2018, the African Development Bank and its partners convened a Stakeholder's Workshop in Abidjan to secure the buy-in of a wide range of industry stakeholders on key issues pertaining to aviation safety, infrastructure and the availability of finance on the African continent. The aim of the workshop was to bring together key aviation industry stakeholders to discuss and obtain feedback for policy articulations to be integrated into an African Aviation Roadmap. Stakeholders present at the Workshop include key representatives from the African Union Commission, AFCAC, AFRAA, ICAO, IATA, ACI – Africa, RECs, AUDA – NEPAD, OEMs, Airline CEOs, Ministries, CAA's and the World Bank to name a few.

Discussions at the Stakeholder Forum centered on the low levels of Aviation Safety, Security and Regulatory Oversight, Airport & ATM/CNS infrastructure limitations and unaffordable Air Transport across most of Africa. Some of the identified targets for the African Aviation Roadmap included:

a) Safety/Security oversight improvements
b) Increased implementation of the Yamoussoukro Decision
c) Air traffic growth rates increase to double-digit levels
d) Achieving significant reductions in the following areas:
    - Intra-Africa Airfares
    - Passenger services charges/taxes
    - Air navigation charges
    - Regulatory oversight costs

These issues have been longstanding in African aviation and remain a challenge today. The Stakeholder Forum considered how to turn these challenges into concrete actionable policies to improve the air transport landscape across Africa. The discussions and conclusions from this workshop resulted in the 1st Joint Prioritized Action Plan for the Single Africa Air Transport Market (popularly called "JPAP").

In subsequent years (2019, 2020 and 2021), the Stakeholder Forum has been convened every January by AFCAC at its Headquarters (and virtually) and the JPAP was updated based on the targets achieved and renewed objectives. The 2020 version of the JPAP was based on six key pillars that will enhance the operationalization of the SAATM.

- Pillar 1: Advocacy for Enrolling More States to Join the SAATM
- Pillar 2: SAATM Regulatory Framework
- Pillar 3: Operationalization of SAATM
- Pillar 4: Aviation Infrastructure
- Pillar 5: Enhancing Safety and Security
- Pillar 6: Aviation Financing

Some of the key initiatives in the 2020 JPAP include[32]:

a) Capacity Building: - activities under this initiative include capacity building on a wide range of issues including the SAATM Regulatory Instruments of the YD to States and RECs, Economic oversight of the SAATM for Member States and RECs, Environmental Experts at States and regional level to facilitate the implementation ICAO SARPs - *Pillar 1: Advocacy for Enrolling More States to Join the SAATM*,

b) Ensure availability of appropriate policy documents for the regulation of the SAATM. Member states and RECs are sensitized on the YD texts - *Pillar 2: SAATM Regulatory Framework.*

c) Harmonization of Taxes and Charges: - activities under this initiative include capacity building workshops and joint stakeholder advocacy of ICAO Policies on taxes, charges and fees - *Pillar 3: Operationalization of SAATM*.

d) Establishment of a Single African Sky Architecture & Optimizing Airport Infrastructure: - activities under this initiative include the establishment of a continental platform for ANSPs to consider ongoing initiatives in the development of a Seamless Airspace architecture - *Pillar 4: Aviation Infrastructure*.

e) Enhancing Safety and Security: - activities earmarked under this initiative include technical assistance to States under the ICAO 60% effective implementation level to meet the Abuja Safety Targets, technical assistance and support to airlines in SAATM and non - SAATM states to achieve and maintain IOSA/ISSA certification, technical assistance to States to meet the Windhoek aviation security targets, to name a few - *Pillar 5: Enhancing Safety and Security*.

f) Feasibility for the creation of a leasing platform for African airlines - *Pillar 6: Aviation Financing*.

The SAATM JPAP is a practical, comprehensive, multi-Stakeholder operationalization program tailored to the realities of African Aviation. It is essential to the success of the SAATM and the YD as it has the buy-in of all key stakeholders across the aviation value chain. The SAATM JPAP helps stakeholders identify the priority actions to be taken towards the operationalization of the SAATM. SAATM Member States should rely on the reports of their representatives to the Ministerial Working Group (MWG) and adopt the relevant initiatives in the SAATM JPAP at the national level to ensure continent wide implementation of the SAATM JPAP.

Conclusion

i. The SAATM JPAP is a practical, comprehensive, multi-Stakeholder operationalization program tailored to define and address the top joint priorities in African Aviation.

ii. It is essential to the success of the SAATM and the YD that it has the continued buy-in of all key stakeholders across the aviation value chain.

iii. The SAATM JPAP is a common framework that is currently helping stakeholders identify the joint priority actions to be taken towards the operationalization of the SAATM.

iv. Where practical, National Stakeholders in the SAATM Member States should adopt the relevant initiatives in the SAATM JPAP at the national level to ensure continent wide implementation of the key activities listed in the SAATM JPAP.

v. SAATM Member States should continue to prioritize sending their representatives to the Ministerial Working Group (MWG) and strongly consider and adopt the reports and recommendations.

[32] Please note: these are a selection of key activities under the JPAP, not all activities under the JPAP are referenced.

1.6. Review of the key institutions and stakeholders involved in or responsible for the implementation of the YD

Articulating the key players responsible for the implementation of the YD and operationalization of the SAATM is important because these stakeholders share a common purpose. This common purpose necessitates a clear alignment of activities geared towards common objectives. The full implementation of the YD through the SAATM will result in increased tourism, trade, employment, continental integration and easy movement of people and goods. This will require concerted coordination amongst all African Air Transport Stakeholders.

Air Transport has several diverse stakeholders; for the purpose of the Study, we will narrow our focus to the SAATM stakeholders (States, institutions and organizations) involved or responsible for the successful implementation of the YD.

SAATM Stakeholders can be broadly classified under four major categories. The first two categories are the "Supranational and National Stakeholders". These two categories of Stakeholders are the "Policy Makers" at different levels of jurisdiction. The Supranational stakeholders set the policy for the entire African continent whilst the national stakeholders set policy in their home country and ensure implementation. They are directly responsible for the policy framework that governs the implementation of the SAATM. They are the custodians of the vision of the SAATM and YD implementation. It is their actions (or inactions) that will largely determine the success of the SAATM and YD implementation.

The third category of SAATM Stakeholders are the "Development Partners". The overall objective of these development partners, within the context of the YD, is to support the sustainable growth of African aviation through the financing of identified common aviation interests (e.g. safety, security, infrastructure, etc). The Development Partners have indirect sway on policy as their financing activities tend to influence the decision-making process of the policy makers.

The last category of SAATM Stakeholders – "Regional Industry Stakeholders" are responsible for the practical application of the agreed plan of action developed by the Policy Makers. They comprise of airlines, specialist industry associations and international organizations responsible for developing the industry best practices (standards and solutions) to enhance SAATM implementation. In addition, they advocate for improvements to the key issues affecting the smooth implementation of the SAATM and African aviation as a whole.

A. SUPRANATIONAL STAKEHOLDERS

1. The African Union Commission (AUC)[33]

The African Union Commission, or AUC, is a pan-African organization with the overall objective of a united, peaceful and prosperous African continent. It supports political and economic integration among its member States. The AU has overall responsibility for formulating policies for the aviation industry in Africa and the AU Assembly, made up of all the Heads-of-State or Government (HOSG) of Member States, is the highest

[33] Website - http://www.au.int/en/commission

decision-making organ of the AU. A summary of their importance of the HOSG to YD implementation is captured below:

i. Following the 1999 adoption of the Yamoussoukro Decision, on the liberalization of access to air transport markets in Africa, by African Ministers of Transport (the "YD"), the Assembly of the HOSG endorsed the 1999 Decision relating to the Implementation of the Yamoussoukro Declaration on the Liberalization of Access to Air Transport Markets in Africa in Lomé, Togo on 12 July 2000.

ii. The Declaration on the Establishment of a Single African Air Transport Market Assembly/AU/Decl.1(XXIV) was adopted at the Twenty-Fourth Ordinary Session of the Assembly of HOSG of the AU, in Addis Ababa, Ethiopia on 31 January 2015.

iii. The Single African Air Transport Market was established and launched during the 30th Ordinary Summit of the African Union Assembly of HOSG held in Addis Ababa, Ethiopia from 28th to 29th of January, 2018.

The HOSG establishment of the SAATM created a fresh impetus for YD implementation. By establishing the SAATM as the AU's first flagship project of the "Agenda 2063", it placed implementation of the 1999 Yamoussoukro Decision on the Liberalization of Air Transport Market in Africa within the context of the AU's Agenda 2063.

Beyond the AU Assembly of the HOSG, the AUC is the depositary agency of the YD and via the **Department of Infrastructure and Energy** of the AUC, it oversees the high-level policy administration of the SAATM and stakeholder coordination through its officers. The AU Assembly also established a **Ministerial Working Group (MWG)** to oversee and guide implementation of agreed initiatives. The MWG was initially composed of Ministers responsible for Air Transport of the Eleven (11) Member States that declared their Solemn Commitment to the implementation of the YD and establish the SAATM during the 24th Ordinary Session of the AU Assembly in January, 2015 in Addis Ababa but has grown to include Ministers from Member States that have since joined. The AUC is based in Addis Ababa, Ethiopia.

2. The African Civil Aviation Commission (AFCAC)[34]

Amongst other important functions, AFCAC is expressly tasked with facilitating, coordinating and ensuring the successful implementation of the Yamoussoukro Decision by supervising and managing Africa's liberalized air transport industry. Pursuant to **article 9** of the YD, AFCAC overseas a variety of institutions and committees established for the implementation of the decision. AFCAC is based in Dakar, Senegal.

i. The Executing Agency of the YD[35]

An African Air Transport Executing Agency (AATEA) was provided for under **article 9.4 of the YD**; with responsibilities to supervise and manage the African liberalized air transport industry. This entity, also known as the Executing Agency (EA) of the YD, was finally established in 2007 during the 3rd AU Conference of Ministers responsible for Air Transport, held in Addis Ababa, Ethiopia, in May 2007. AFCAC was entrusted with the attribution of the Executing Agency as it was strongly argued that establishing a totally new entity was not

[34] Website - www.afcac.org/en
[35] Website - http://197.243.22.137/afcac.ea/index.php?id=2

required as it would increase the financial burden on States and create a duplication of efforts as most of the work of the Executing Agency and AFCAC overlaps in several areas.

Significantly, **Article 9.5 of the YD** gives the EA enough powers to formulate and enforce rules and regulations that give fair and equal opportunities to all stakeholders and promote healthy competition and consumer rights protection. The office of the Executing Agency is based in Dakar, Senegal (AFCAC HQ).

3. The Monitoring Body of the YD

Article 9.2 of the YD establishes the Monitoring Body of the YD to assist the Sub-Committee on Air Transport composed of African Ministers responsible for Civil Aviation. It is composed of the representatives from the following organizations:

- African Union Commission (AUC) - Chair
- United Nation Economic Commission for Africa (UNECA) - Secretariat
- The African Civil Aviation Commission (AFCAC)
- African Airlines Association (AFRAA)
- Regional Economic Communities (RECs)

The Monitoring Body has oversight and advisory responsibilities over the functioning of the SAATM and the role of facilitating the smooth operation of the market at a strategic level, in support of the Executing Agency. The office of the Monitoring Body is in Addis Ababa, Ethiopia (UNECA HQ).

4. The Specialized Technical Committee for Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism (STC TTIIET)

In **article 9.1 of the YD**, a Sub-Committee on Air Transport of the Committee on Transport, Communications and Tourism was established with responsibility for the overall supervision, follow-up and implementation of this Decision. The Sub-Committee on Air Transport (CMAT) was reconstituted as the sub-committee of the Sectoral Technical Committee for Transport, Transcontinental and Interregional Infrastructure, Energy and Tourism (STC TTIIET). The STC TTIIET is made up of three sub committees - Transport, Tourism and Energy. The Sub-Committees are comprised of AU Ministers responsible for Transport, Tourism and Energy. The AUC acts as the secretariat to the STC-TTIIET.

5. The Regional Economic Communities (RECs)[36]

The RECs are regional groupings of African states. Generally, the purpose of the RECs is to facilitate regional economic integration between members of the individual regions and through the wider African Economic Community (AEC). The Regional Economic Communities facilitate and coordinate the implementation of the YD within their Member States. The RECs also provide the experts that sit on the various sub committees mentioned above (MWG, STC-TTIIET) and provide support to the Monitoring Body. The RECs are also essential to harmonizing rules and regulations that deal with the implementation of the YD as their framework for continental economic integration can be utilized to raise awareness to the member states within each of the RECs.

There are eight RECs recognized by the AU, each established under a separate regional treaty, namely:

i. Arab Maghreb Union (UMA)
ii. Common Market for Eastern and Southern Africa (COMESA)

[36] for more info - https://au.int/en/organs/recs

iii. Community of Sahel–Saharan States (CEN–SAD)
iv. East African Community (EAC)
v. Economic Community of Central African States (ECCAS)
vi. Economic Community of West African States (ECOWAS)
vii. Intergovernmental Authority on Development (IGAD)
viii. Southern African Development Community (SADC)

6. The United Nation Economic Commission for Africa (UNECA)[37]

Made up of 54 member States and playing a dual role as a regional arm of the UN and as a key component of the African institutional landscape, ECA's strength derives from its role as the only UN agency mandated to operate at the regional and sub regional levels to harness resources and bring them to bear on Africa's priorities. UNECA played an active and major role in the inception period of YD including carrying out specific studies and providing clarifications on the implementation of the Yamoussoukro Decision. In addition to its role as member and secretariat of the Monitoring Body of YD, it is also considered as the Think Tank' organization of the African Union. UNECA is based in Addis Ababa, Ethiopia with regional offices in Rabat - Morocco, Kigali - Rwanda, Lusaka - Zambia, Niamey - Niger and Central Africa.

7. International Civil Aviation Organization (ICAO)[38]

ICAO is a UN specialized agency, established by States in 1944 to manage the administration and governance of the Convention on International Civil Aviation (Chicago Convention). Amongst other key functions, ICAO provides policy direction through ICAO Standards and Recommended Practices (SARPs) as well as support to States across Africa through its Global Plans for Aviation Safety, Air Navigation Capacity and Efficiency and Aviation Security, amongst others. Compliance with ICAO policies by SAATM Member States is mandatory as a means of minimum compliance with safety and security standards. ICAO have dedicated regional offices in Nairobi - Kenya, Dakar - Senegal and Cairo - Egypt.

B. NATIONAL STAKEHOLDERS

8. SAATM Member States and their national agencies

As at January, 2021, 35 countries had subscribed to the SAATM solemn commitment[39] namely: *Benin, Botswana, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Congo Brazzaville, Cote d'Ivoire, Egypt, Ethiopia, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea (Bissau), Guinée, Kenya, Lesotho, Liberia, Mali, Morocco, Mozambique, Namibia, Niger, Nigeria, Democratic Republic of Congo, Rwanda, Sénégal, Sierra Leone, South Africa, Swaziland, Tchad, Togo, Zimbabwe and Zambia.*

Ministry of Transport/Aviation

Member States have a similar set of critical stakeholders essential to the successful implementation of the YD and the application of the YD regulations. The Policy Making arm of each SAATM Member States is the Ministry of Aviation, Transport or any designated agency responsible for civil air transport. Thereafter, aviation agencies and institutions are charged with implementing these policies. These typically include the following[40]:

i. State Civil Aviation Authority

[37] Website - https://www.uneca.org/
[38] Website - https://www.icao.int
[39] The Solemn Commitment Letter from States is a formal State commitment, via a letter to the African Union Commission, agreeing to be "part and parcel of the Yamoussoukro Decisions/Declarations immediately and without any reservations whatsoever". The letter is signed by the State Ministry of Foreign Affairs or equivalent ministry.
[40] This is indicative, Structures may differ from State to State.

ii. State Airport Authority
iii. Other State Aeronautical Authorities
iv. Private Airports
v. Airlines

Under the SAATM, the key responsibilities of these national stakeholders are the Implementation of the SAATM Concrete Measures and execution of the SAATM Memorandum of Implementation. The stakeholders within a State must immediately recognize the significance of their Head of State and their proxies acceding to any of the instruments of the YD or the SAATM (e.g. YD, SAATM Solemn Commitment or Memorandum of Implementation - MOI) - which is to grant all eligible airlines of SAATM Member States total freedom in terms of traffic rights and fare, pricing, capacity and frequency determination.

One of the functions of the Monitoring Body of the YD is to "*bring to the attention of the Ministers Responsible for air transport, any provisions of the Decision that hinders the development of air transport in Africa and/or impose difficulties in the application of the decision, with recommendation for mitigation*". It is important that the Ministers of Transport/Aviation, etc prioritize the recommendations of the Monitoring Body in their national aviation plans.

Also essential to the successful implementation of the YD through the SAATM are related ministries like the Ministries of Tourism, Finance, Foreign/Internal Affairs, Budget and National Planning, Justice, etc. Based on the internal workings of each Member State, these ministries can enact policies to support the growth of aviation and the success of the SAATM. For example:

- An improved Visa regime across Africa for African citizens will improve tourism and increase demand for air travel by its citizenry (Ministry of Foreign/Internal Affairs);
- A reduction in the Taxes and Charges on the aviation sector will improve demand and airline sustainability (Ministry of Finance, Budget and National Planning);
- Increased coordination between aviation, Tourism and other industries will increase demand for air travel (Ministry of Tourism);
- An improved regulatory framework (e.g. ratification of the Cape Town Convention) will reduce the airline financing burdens for domestic airlines (Ministry of Justice);
- The increase of intra-Africa Trade in line with AfCTA implementation will either strengthen air traffic demand on existing city-pairs or generate new air traffic demand along new city-pairs (Ministry of Trade and Industry).

Each of the member States must sensitize their key ministries and agencies to actively prioritize aviation in its decision-making framework. Not only will this accelerate the SAATM on the African continent, it will also serve as a pillar for strategic growth for the State's economy and will fuel Africa's economic renaissance.

C. DEVELOPMENT PARTNERS

9. The Africa Development Bank (AfDB)[41]

The overarching objective of the African Development Bank Group is to spur sustainable economic development and social progress in its regional member countries, thus contributing to poverty reduction. The Bank Group achieves this objective by:

[41] Website - https://www.afdb.org/en

i. mobilizing and allocating resources for investment in RMCs; and
ii. providing policy advice and technical assistance to support development efforts.

Under the auspices of the Air Transport division of the Infrastructure, Cities and Urban Development Department, the AfDB have been very active in the implementation of the SAATM. Their activities include convening stakeholder forums (where the first joint stakeholder prioritized action plan for the SAATM was created) to financing high priority initiatives that facilitate the successful operationalization of the SAATM. The AfDB Headquarters is in Abidjan, Côte d'Ivoire with country offices in over 40 countries in Africa.

10. The African Union Development Agency (AUDA-NEPAD)[42]

The NEPAD Agency was established in 2010 as an outcome of the integration of NEPAD into AU structures and processes. One of their key projects is the Programme for Infrastructure Development in Africa (PIDA). It was developed by the African Union Commission (AUC), NEPAD Agency, African Development Bank (AfDB), United Nations Economic United Nations Commission for Africa (UNECA) and the Regional Economic Communities.

PIDA's aim is to promote regional economic integration through building mutually beneficial infrastructure, strengthening the abilities of countries to trade and establishing regional value chains for increased competitiveness. Accelerated infrastructure development on the continent is crucial to achieving the objectives of the SAATM. They are based in Johannesburg, South Africa with a regional office in Nairobi, Kenya.

11. The World Bank Group[43]

The World Bank Group "WBG" provides extensive support to emerging and developing countries for the development of air transportation. It has extensively financed several projects across Africa – from airlines to airports, to access roads to meteorological services. Most notably, the AUC received financing from the WBG towards the cost of the "Support for Capacity Development of the African Union Commission and Other African Union Organs Projects" which has financed several critical projects. The World Bank has offices in over 49 African countries.

D. REGIONAL INDUSTRY STAKEHOLDERS

12. Eligible Airlines

The YD defines an eligible airline as any African air transport company fulfilling the requirements set forth in Article 6 and more specifically in Article 6.9 of the YD.

13. The African Airlines Association (AFRAA)[44]

AFRAA is a Trade Organization open to membership of airlines of African States. It is a member of the Monitoring Body of the YD. There are currently forty-six airline members from African Union member States. AFRAA has been at the forefront of major initiatives in the air transport field in Africa in sensitizing African airlines to take concrete actions for co-operation in operational, commercial, technical and training fields and has been a catalyst for all the major policy decisions in the Continent. AFRAA is based in Nairobi, Kenya.

14. The International Air Transport Association (IATA)[45]

[42] Website - http://www.nepad.org/
[43] Website - http://www.worldbank.org/
[44] Website - http://www.afraa.org/

For over 70 years, IATA has developed global standards upon which the air transport industry is built. IATA helps airlines operate safely, securely, efficiently, and economically under clearly defined rules. IATA now represents 290 airlines in 120 countries. Safety is the number one priority of the industry and under the SAATM, the IATA Operational Safety Audit (IOSA) Program, an internationally recognized and accepted evaluation system, remains the benchmark for airline safety. The IOSA was designed to assess the operational management and control systems of an airline. All major airlines in Africa are on the IOSA Registry. Alongside other industry stakeholders, IATA has been at the forefront of SAATM advocacy. IATA has dedicated offices in Nigeria, Senegal, Egypt, Morocco, South Africa and Kenya,

15. The Airlines Association of South Africa (AASA)[46]

AASA is the leading representative airline organization within southern Africa, working together with leaders of the aviation industry and senior public and government officials on policy, regulatory, planning, operational, safety, security and financial matters affecting the overall profitability of the airlines and their continued sustainability. There are currently 20 Airline Members. AASA is based in Johannesburg, South Africa.

16. Airports Council Africa[47]

ACI Africa is the international association of African airports. As at December 2020, ACI Africa is composed of 67 members from 53 African countries, managing more than 260 airports. An important prerequisite to the success of the SAATM is a unified and standardized air travel experience across the African continent. All airports across Africa must guarantee safe, secure and reliable airport operations as well as efficient and passenger friendly services. The primary objective of ACI Africa is to advance the interests of African airports and to promote professional excellence in airport management and operations on the African continent. ACI Africa is based in Casablanca, Morocco.

17. Civil Air Navigation Services Organization (CANSO Africa)[48]

The CANSO Africa Region was established in 2012. Its vision is to achieve safe, seamless and harmonised airspace across Africa. CANSO's goal in Africa is to help air navigation service providers (ANSPs) provide services that are: universally safe; technically interoperable; procedurally harmonised; efficient; and affordable. CANSO works jointly with ICAO, States and the air transport industry to improve aviation in Africa. CANSO Africa is based in Johannesburg, South Africa.

18. Agency for the Safety of Air Navigation in Africa and Madagascar (ASECNA)[49]

ASECNA, the Agency for Air Navigation Safety in Africa and Madagascar, is an international public organization composed of 18 Member States[50]. It provides air navigation services, aeronautical information services and aeronautical meteorology services within a single airspace. ASECNA is based in Dakar, Senegal.

A key element towards the success of the SAATM is a Seamless Sky for Africa and the achievement of a uniform continuum airspace.

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[45] Website - https://www.iata.org/
[46] Website - https://www.aasa.za.net/home.html
[47] Website - https://www.aci-africa.aero/
[48] Website - https://canso.org/our-regions/africa/
[49] Website - https://asecnaonline.asecna.aero/index.php/fr/
[50] 17 African States and France (Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo, Ivory Coast, Equatorial Guinea, France, Gabon, Guinea-Bissau, Madagascar, Mali, Mauritania, Niger, Senegal, and Togo).

There remains a plethora of other stakeholders that deserve a special mention (e.g. World Tourism Organization (UNWTO), AFREXIM Bank, Original Equipment Manufacturers – Boeing, Embraer, Airbus), EGNOS - Africa and many more. We must continue to break down any silos that exist within the industry value chain and extend the collaboration to all aviation related sectors.

Conclusion

i. Under the leadership of the African Union Commission and the African Civil Aviation Commission, African industry stakeholders have been working closely together which has resulted in the progress seen so far. Continued collaboration and further alignment of activities to accelerate ongoing efforts and avoid a duplication of efforts is required.

ii. The African Civil Aviation Commission, as the specialised Agency of the African Union, is responsible for coordinating civil aviation matters on the continent. In its dual role as the Executing Agency, its powers to formulate and enforce appropriate rules and regulations must be recognized by all Stakeholders.

iii. YD Implementation, via the SAATM, at the State level is the heart of implementation and this requires the active participation and concerted focus by all relevant national stakeholders coupled with a conducive environment for air transport. To this end, the appointment of duly empowered and dedicated focal points and the formulation of a National Implementation Committee would be required.

iv. In order to create a conducive environment for air transport, the recommendations to Ministers of Aviation/Transport, etc from key industry stakeholders such as the Monitoring Body and the “regional industry stakeholders” must be considered and actioned.

v. The RECs have a key role to play in the critical efforts of regional implementation of the Decision. In order to achieve real harmonization, RECs should align with the new Consumer Protection and, Competition Regulations and DSM. There should be an annual all-inclusive air transport forum for all SAATM Stakeholders to discuss the key issues regarding the implementation of the YD in order to find solutions and compromises as appropriate.

Chapter 2: Identification of obstacles and constraints that impede the implementation of the YD

Background

Despite the clear vision of cooperation, integration and competition as far back as 1988, and despite the endorsement by Heads of State in 2000; despite a reinvigoration of YD implementation, in the form of the SAATM in 2018, it is fair to say that in 2021, liberalization has not been fully adopted across Africa. Why is air transport liberalization across Africa, a process which started over 32 years ago, taking so long, despite tangible success in other continents?

The analysis in Chapter 2 assesses key operational requirements under the YD and selected air transport parameters that are considered essential for any aviation industry to thrive, and thereby identifies the obstacles and constraints that impede the implementation of the YD.

YD Operational Requirements

Following the BASA analysis, that considered Articles 2, 3, 4, 5 and 6 of the YD Text (KPIs 2, 2.1, 14, 14.1 of the YD Implementation methodology report), in Part A, Section 1.6, Chapter 2 of this Study will evaluate the following:

i. Safety and security compliance of States and Airlines (as required under Articles 6.9, 6.12 of YD Text and KPI 9 of YD Implementation methodology report). The information provided will be based on compliance with IOSA (for airlines) and ICAO audits (for States).

ii. International Treaty Ratification which supports airlines in fulfilling their obligations under Article 6.9, 612 of the YD (eligibility criteria).

Air Transport Parameters

It is also important to go beyond the market access provisions of the Yamoussoukro Decision, as stated in the “Decision on the Establishment of a Single African Air Transport Market Doc. EX.CL/1067(XXXII)”, repeated in the “Memorandum of Implementation of the Yamoussoukro Decision” and also contained in the African Civil Aviation Policy. To this end, when identifying obstacles and constraints that impede the implementation of the YD, it is important to evaluate the entire air transport industry of a State and select the key enablers that support or constrain YD/SAATM implementation.

2.1. The SAATM Enablers Index[51]

The 2018 launch of the SAATM (just like the Yamoussoukro Decision in 1999) was not the silver bullet or final solution to air transport liberalization in Africa. To understand what has constrained African aviation from implementing the YD, it is equally useful to understand what fundamental policies will enable it to succeed. To this end, the SAATM Enablers Index is comprised of parameters loosely termed "SAATM enablers". A SAATM enabler is a standalone air transport feature or policy that contributes to the holistic aviation framework. We see the SAATM enablers as essential ingredients that lead to a successful aviation sector.

The reality is that these SAATM enablers are well known; they are a combination of critical operational requirements under the YD Regulatory Texts and are also key features of a holistic aviation sector in any State – particularly within the African context. It is well known that issues related to these enablers have held back African aviation for decades. More importantly, after 32 years of cautious planning and comprehensive consultations by African stakeholders, the question must also be asked, should Africa wait for all 55 States to be 100% ready before the SAATM will be fully actualized in practical terms or should the ready, able and willing States proceed immediately with full SAATM operationalization? This is a by-product of the SAATM Enablers Index - in addition to identifying the obstacles and constraints that impede the effective implementation of the YD, the SAATM Enablers Index identifies the States that have the best optimized air transport environment to immediately proceed with full SAATM operationalization.

The SAATM Enablers Index is split into four broad classifications namely: **Country Performance Indicators**, **Safety & Security, Infrastructure** and **Aviation Policies and Regulations**. Each classification contains several aviation specific features and policies to measure or indicate how a State is tracking with respect to each SAATM enabler. The list is by no means exhaustive and there are other key SAATM enablers not captured in this Index. Likewise, there are other combinations of parameters that could be chosen. However, the chosen parameters that we know are essential to supporting the development of a successful aviation market. If the enablers captured in the Index are positive, then YD implementation and the operationalization of the SAATM will be more effective. However, if the criteria or ranking of these enablers are negative, then YD implementation/SAATM operationalization will continue to be constrained within that State. The absence or poor application of these YD/SAATM enablers act as impediments to YD/SAATM implementation if they have a negative attribute for a State. In the analysis below, we use an overall assessment of the parameters to show the impediments to YD implementation for a given State.

It is important to state that the SAATM plane is already airborne; nothing should deter a SAATM member State from full SAATM implementation; rather, these rankings give an indication of the work required for a much more effective air transport market under the SAATM. In the ensuing analysis, we show how a lack or limited implementation of these enablers within a State can act as impediments to YD implementation.

2.2. The SAATM Enablers Index Parameters

A. COUNTRY PERFORMANCE INDICATORS

These country indicators are the parameters that will not be attributed a score or ranking. However, they are important to track because they give an indication of the State's operating context (GDP per capita) as well as a

[51] Full details of the SAATM Enablers Index will be available on www.saatmbenefits.org

sense of the aviation market's performance and future prospects – collectively, these provide an indication of the potential appetite a State has for aviation and indeed to implement the SAATM.

1. Economic performance

When aviation can play its role, it becomes an important strategic pillar for economic growth. Pre the COVID 19 pandemic, the aviation industry supported $3.5 trillion (4.1%) of the world's gross domestic product (GDP). It is a key driver of global economic development. By 2038, global air transport was forecast to support 143 million jobs and contribute $6.3 trillion to the global economy. Furthermore, over a third of all trade by value is sent by air, which makes aviation a key component of business worldwide.

Gross National Income (GNI), which is a nation's gross domestic product plus the income it receives from overseas sources, is an indicator of society's standard of living. "Standard of living" speaks to elements that affect people's happiness and well being. The fact that most of the migration in the world involves people who are moving from countries with relatively low GNI per capita to countries with relatively high GNI per capita signifies the importance of capturing it. States with a high GNI per Capita also have an incentive to prioritize SAATM implementation for continued improvement of economic performance. By contrast, States with lower GDP per capita can be supported on their development journey by paying attention to fundament (i.e. policy) improvements that can eventually support the development of the aviation sector – with all the economic and social benefits this brings.

2. 2019 Passengers carried

One of the main benefits of the SAATM will be the increase of Africa's global market share of international air traffic which has fluctuated between 2 – 4% for several years. The Passenger traffic growth of African carriers has been volatile and consistently lower than the world average growth. Currently, 12 States in Africa account for most of the international passenger traffic carried by African carriers. The SAATM will be a game changer as more States have more market options. The recently developed IATA Connectivity Index will provide information on passengers carried for each State, which can ultimately be tracked over time as the Index gets updated each year.

3. 2019 World Travel and Tourism Council contribution of tourism and travel

Effective SAATM implementation will require multi-sector collaboration. States with low tourism contribution need to strategize in order to boost tourism in their State. This means governments and policy makers need to understand the critical importance of Travel & Tourism to their economic growth. Using the output from the 2019 report of the WTTC, the contribution of Travel & Tourism to each State is captured. The promotion of the SAATM will undoubtedly boost tourism across Africa and within the State. Low tourism contribution to a State further indicates the importance of SAATM implementation.

4. 2019 Air Cargo Market Share

The smooth implementation of a key African Union Agenda 2063 project – the African Continental Free Trade Area (AfCFTA) depends on effective SAATM implementation. Air cargo is a trade facilitator that contributes to global and regional economic development and creates millions of jobs. The United Nations Economic Commission for Africa (UNECA) estimates that the agreement will boost intra-African trade by 52% by 2022. The Index tracks States' market share of cargo tonnage across Africa. It shows that four States are in double digits with majority of States hovering below 2%. For States interested in boosting their trade, the implementation of the SAATM as a facilitator and accelerator for the AfCFTA remain critical.

B. SAFETY & SECURITY

Safety is the industry's number one priority and one of the key themes of the Yamoussoukro Decision is Safety and Security. Articles 5 and 6 have provisions that speak to safety and security. Under the SAATM, airline cooperation is critical, however, if an airline does not have high safety standards or its home country has security risks, then cooperation between airlines and States will be a challenge. One of the industry's priorities is to continuously improve safety and security performance through effective risk management. The parameters chosen under this section represent years of industry commitment, close industry collaboration, standard setting and mutual recognition. As mentioned earlier, safety and security are key requirements under the YD Text as well as a Key Performance Indicator under the YD Implementation methodology (KPIs 6, 9 and 10).

5. IOSA Airline (Further to Articles 5.1, 6.9 (f) and 6.12 (c) of the Yamoussoukro Decision)

Being a member of the IOSA registry gives potential airline partners and passengers confidence in an airline's safety standards which promotes cooperation amongst airlines. The IATA Operational Safety Audit (IOSA) Programme is an internationally recognized and accepted evaluation system to assess the operational management and control systems of an airline. The audit standards include ICAO safety and security provisions and industry best practices from ICAO Annexes 1, 2, 6, 8, 17, 18 and 19. **Article 6.9 (f)** of the YD states that an eligible should "be capable of demonstrating its ability to maintain standards at least equal to those set by ICAO and to respond to any query from any State to which it provides air services". An IOSA certified airline has an objective way of demonstrating compliance with ICAO standards.

IOSA is important because data shows that airlines who maintain IOSA standards have a better safety performance over time. In 2019, the all accident rate for airlines on the IOSA registry was nearly two times better than that of non-IOSA airlines (0.92 vs. 1.63) and it was more than two-and-a-half times better over the 2014-18 period (1.03 vs. 2.71). Specifically, in Africa, the accident rate is 1.18 for IOSA registered carriers compared to a rate of 9.79 for non-IOSA carriers.

Additional criteria – Airline ownership

This parameter also captures two additional items alongside the IOSA certification of an airline. It captures how many IOSA airlines are in that particular country and whether the airline is State owned or private. Identifying whether a country has a state-owned airline is important because States with their own national airlines often inadvertently have a policy of protectionism in support of their national airlines. The SAATM Enablers Index shows that most major African markets have a State interest in an airline, and this accounts majorly for the lack of SAATM implementation across Africa.

In order to improve the chances of success of the SAATM, Africa's history of protectionism needs to be openly addressed in a way which a broad consensus on the solution can be established. The prevalent "winner takes all" scenario has resulted in thin and undeveloped routes incapable of supporting so many African Airlines.

Article 2 of the YD provides for the "gradual liberalization of scheduled and non-scheduled **intra-Africa** air transport services". To this end, market liberalization was envisaged in stages. Today, gradual implementation should be considered, provided States are willing to commit to a clear, competitive and actionable timeline for integration of their markets. Similarly, airlines must urgently start to cooperate as a matter of survival. Being an IOSA airline makes cooperation amongst airlines safer.

6. Effective Implementation of ICAO SARPS (Further to Articles 6.11, 6.12 (c) of the Yamoussoukro Decision and KPI 9 of the YD Implementation Methodology)

Article 6.12 of the YD provides for Compliance with the ICAO SARPs as a measure of adhering to minimum standards of Safety and Security. A mature safety oversight system by a State yields benefits that include safety management principles that achieve further reductions in their accident rates. The Universal Safety Oversight Audit Programme (USOAP) is one of ICAO's priority programmes. The program audits every CAA in the world and provides a breakdown of how each scored in different categories of the audit. USOAP assesses eight critical elements related to the establishment and implementation of a State's safety oversight system. The lack of effective implementation is a measure of the State's safety oversight capability.

Output: Each State is expected to score higher than the ICAO recommended 60% to be deemed SAATM ready. The Safety Audit Results are taken from the ICAO website.

7. Airport Security

Are States aware of their potential vulnerabilities and how prepared are they to address them before they are exploited? When preparing for the success of SAATM implementation, it is important to understand that the industry will expand and add new routes across Africa. This means new destinations, airports and the threats and vulnerabilities that may be exploited to carry out attacks will also expand. A residual risk score is given to guide policymaking as well as help determine whether additional security measures are necessary to mitigate the risks to civil aviation. Existing security measures are assessed to determine if they reduce the likelihood of the attack being successful or reduce the consequences if it were to occur.

Output: The ratings are from Low – Medium – High - Critical. A low rating is optimal whilst a high/critical rating indicates that the State has a lot of work to be done, there may be risks to Aviation Security and flight crews and/or there are gaps with implementing AVSEC compliance and more work needed on capacity building.

C. INFRASTRUCTURE

African continental air transport can only thrive on modern, cost efficient and fit for purpose infrastructure. This includes not only airports and the navigation and air traffic control systems but extends to the infrastructure required to facilitate passengers and cargo through and within air terminals.

8. Status of Optimized Air Infrastructure

For SAATM to thrive, a structured and globally harmonized Airspace and Air Traffic Management (ATM) framework, supported by a cost-effective and sustainable Communications, Navigation and Surveillance (CNS) infrastructure is required. According to the current forecast (October 2020), passenger numbers will nearly double to between 7.3 Billion to 8.4 Billion by 2039 (depending on Corona virus recovery). Therefore, an infrastructural crisis is looming everywhere in the world. This can be averted across Africa with strong coordinated efforts to address current deficiencies. With escalating traffic growth and widespread capacity constraints anticipated, modern air traffic services face considerable challenges. An efficient Air Traffic Flow Management (ATFM) coupled with flexible use of airspace (FUA) will have positive effects on the overall efficiency of ATM system.

Output: The ratings are from Poor – Needs Improvement - Average – Good. A good rating is optimal whilst a poor/needs improvement rating indicates that the State has a lot of work to be done.

9. Airport & Ground Infrastructure

The success of the SAATM will test the airport design across Africa in terms of ground operations, airport terminals adequacy and optimisation and infrastructure capacity. Are airports able to plan effectively for the medium-term growth occasioned by the full implementation of SAATM as safely and efficiently as possible? Also, what are the current bottlenecks in ground operations and infrastructure that need to be addressed now?

Output: This assesses availability, capacity and whether an airport or infrastructure is well suited to manage the current and medium-long term growth. The ratings are from Low – Medium – High - Critical. A low rating is optimal whilst a high/critical rating indicates that the State has a lot of work to be done and capacity may not be able to cope with demand.

D. AVIATION POLICIES AND REGULATIONS

Other key parameters of the Index speak to other practical and operational considerations that should be addressed as a matter of policy by State governments if the SAATM is to be a success.

10. Visa Openness Ranking

The free movement of Africans across Africa is essential to the success of the SAATM. Visa Openness is a measure of how open African countries are when it comes to visas by looking at what they ask of citizens from other countries in Africa when they travel. The African Union Agenda 2063 project - the Free Movement of Persons aims to remove restrictions on Africans ability to travel, work and live within their own continent.

"Free movement by people is the hallmark of regional economic integration, facilitating trade and economic growth across the continent. Free movement of people impacts considerable economic benefits of both temporary and long term to the economies in the region."

Output: The data is from the 2020 Africa Visa Openness Index produced jointly by the African Development Bank (AfDB) and the African Union Commission (AUC). It ranks the 54 African States[52] with 1 being the best.

11. International Treaty Ratification

The uniformity and harmonization brought about by international treaties greatly reduces the administrative burden and financial impact to airlines. International aviation is the fastest and most multi-jurisdictional form of mass transport. As a result, air operators face a multitude of cross border regulations of unprecedented variety. International Treaty Ratification substantially reduces the degree of unpredictability in world air transport to a tolerable level. This means that Air carriers, aircraft users, and potential aircraft victims will be able to predict and to calculate their risks with a higher level of certainty. This will reduce costs and contribute to the long-term viability of an airline.

For the purpose of the Index, 3 key Treaties were strategically selected:

- **The Montreal Convention 1999 (MC99)**: Passengers will benefit from fairer compensation and greater protection as MC99 establishes airline liability in the case of death or injury to passengers, as well as in cases of delay, damage or loss of baggage and cargo. It unifies all the different international treaty regimes covering airline liability that had developed haphazardly since 1929. MC99 is designed to be a single, universal treaty to govern airline liability around the world. KPI 7 of the YD Implementation

[52] *All African Union member countries except Sarahawi Republic, which was not ranked due to a lack of available information

methodology requires a State to "promulgate appropriate regulations to comply with Annex 6 of the YD that protects air transport consumers against unfair treatment in the provision of services as well as prescribes the right of consumers and the responsibilities of air transport undertakings in the protection of consumers, applicable to air transport services within Africa" Article 6.9 of the YD (eligibility criteria) states that and eligible airline should be "adequately insured with regard to passengers, cargo, mail, baggage and third parties in an amount at least equal to the provisions of the International Conventions in force" which is in line with Article 50 of MC99.

- **Montreal Protocol 2014 (MP14)**: Each incident of unruly disruptive behaviour onboard flights is a potential threat to safety and security and often comes with costs to the airlines and other passengers. MP14 ensures that there is a stronger international deterrent and greater uniformity when dealing with unruly and disruptive passengers. Article 6.12 (a) of the Yamoussoukro Decision states that "State Parties re-affirm their obligations to each other to protect the security of civil aviation against acts of unlawful interference. The State Parties will conform to the provisions of the various conventions on air safety in accordance with ICAO provisions and especially with Annex 17 of the Chicago Convention on International Civil Aviation". Ratification of MP14 is a good measure of implementation of the YD text and is also in line with KPI 10 of the YD Implementation methodology.

- **Cape Town Convention on Mobile Equipment (2001):** The CTC is a treaty designed to facilitate asset-based financing and leasing of aviation equipment, expand financing opportunities, and reduce costs – thereby providing substantial economic benefits. The Treaty creates international standards for registration of contracts of sale (including dedicated registration agencies), security interests (liens), leases and conditional sales contracts, and various legal remedies for default in financing agreements, including repossession and the effect of states' bankruptcy laws.

Output: for an optimal regulatory environment and the benefits listed above, it is highly recommended for all 3 Treaties to be ratified by a State.

2.3. The SAATM Enablers Index Results[53]

There should be no obstacles to YD implementation that cannot be surmounted. If a State can fly over another State's airspace or land in its territory, then that State can implement YD and be part of the SAATM. YD implementation (covering first to fifth freedom rights) provides a unique opportunity for States to enhance the promise of African aviation by being intentional about positioning aviation as a strategic pillar of economic growth. SAATM implementation requires States to make concentrated efforts to address the issues peculiar to their market, especially where safety is concerned.

When assessing the level of YD implementation and the efficacy of SAATM operationalization for each State and arriving at a 'preparedness' rating, our analysis produced the following results:

1. The SAATM Enablers_Index reveals 13 SAATM States with a favourable environment for successful SAATM implementation. They are Cabo Verde, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Morocco, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Togo and Zambia. All these States (Zambia

[53] Full details of the SAATM Enablers Index results are available on www.saatmbenefits.org

excluded) have domestic carriers eligible to participate in the SAATM. Eight of these States have also signed the Memorandum of Implementation namely - Cabo Verde, Cote d'Ivoire, Ethiopia, Ghana, Mozambique, Nigeria, Rwanda and Togo.

2. The SAATM Enablers Index also reveals another set of 12 States that need improvements to optimize successful SAATM implementation as they have some constraints that might hinder implementation. These are Benin, Botswana, Burkina Faso, Cameroon, Congo, Egypt, Equatorial Guinea, Gabon, The Gambia, Mali, Niger and Senegal. The issues range from Visa openness to Security concerns to their regulatory environment.

3. The SAATM Enablers Index further reveals 10 SAATM States that need significant improvements to optimize SAATM Implementation as they had not achieved the minimum 60% Effective Implementation of ICAO SARPS. These are Central African Republic, Democratic Republic of Congo, Eswatini, Guinea, Guinea Bissau, Lesotho, Liberia, Sierra Leone, Tchad and Zimbabwe. 7 of these States represent major safety concerns because their scores are very low – between 7% and 35%. These States will need to significantly improve their safety levels for SAATM implementation to be feasible in a practical sense.

Some of the non-physical impediments to YD implementation observed through the preliminary analysis include the long-standing issue of protectionist policies by some States, non – prioritization of aviation (as a strategic pillar of economic growth) and lack of visa openness. The criticality of these issues will be elaborated upon in the next section.

Tables 3, 4 and 5 below present a rating for the aviation environment for each of the SAATM Member States. In the column beside the rating are a set of recommendations for each of the SAATM Member States to aid YD Implementation based on the SAATM Enablers Index. These recommendations go beyond the market access impediments to YD implementation and they address strategic elements of a States' air transport industry.

Table 3: Findings and Recommendations for States with a favourable aviation environment for YD Implementation

Category 1 – States with a favourable environment for successful YD implementation.			
S/N	State	Rating	Recommended Actions to Member States to aid YD implementation
1	Cabo Verde	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Maintain current level of high visa openness amongst African States
2	Côte d'Ivoire	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure

			Improve current level of low visa openness amongst African States
3	Ethiopia	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of high safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Maintain current level of high visa openness amongst African States
4	Ghana	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of high safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Maintain good airport infrastructure Maintain current level of excellent visa openness amongst African States
5	Kenya	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of high safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Maintain good airport infrastructure Maintain current level of excellent visa openness amongst African States
6	Morocco	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Maintain good airport infrastructure Improve current level of low visa openness amongst African States
7	Mozambique	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Maintain current level of excellent visa openness amongst African States
8	Namibia	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures

			Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
9	Nigeria	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve good airport infrastructure Maintain current level of excellent visa openness amongst African States
10	Rwanda	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of high safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve good airport infrastructure Maintain current level of excellent visa openness amongst African States
11	South Africa	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve good airport infrastructure Improve current level of low visa openness amongst African States
12	Togo	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of high safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve good airport infrastructure Maintain current level of excellent visa openness amongst African States
13	Zambia	Favourable environment for successful SAATM Implementation exists	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States

Table 4: Findings and Recommendations for States to aid YD implementation

Category 2 –States with suggestions to optimize YD implementation.			
S/N	State	Rating	Recommended Actions to Member States to aid YD implementation
1	**Benin**	**Needs improvements to optimize SAATM Implementation**	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of good safety oversight capability Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Maintain current level of high visa openness amongst African States
2	**Botswana**	**Needs improvements to optimize SAATM Implementation**	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
3	**Burkina Faso**	**Needs improvements to optimize SAATM Implementation**	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Improve current level of slightly low visa openness amongst African States
4	**Cameroon**	**Needs improvements to optimize SAATM Implementation**	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
5	**Congo**	**Needs improvements to optimize SAATM Implementation**	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of good safety oversight capability Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States

6	Egypt	Needs improvements to optimize SAATM Implementation	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Maintain good airport infrastructure Improve current level of very low visa openness amongst African States
7	Equatorial Guinea	Needs improvements to optimize SAATM Implementation	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of very low visa openness amongst African States
8	Gabon	Needs improvements to optimize SAATM Implementation	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Engage with ICAO to improve safety oversight capability Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of very low visa openness amongst African States
9	The Gambia	Needs improvements to optimize SAATM Implementation	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of high safety oversight capability Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Maintain current level of excellent visa openness amongst African States
10	Mali	Needs improvements to optimize SAATM Implementation	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
11	Niger	Needs improvements to optimize SAATM Implementation	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Maintain current level of good safety oversight capability

			Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
12	**Senegal**	**Needs improvements to optimize SAATM Implementation**	Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Maintain current level of good safety oversight capability Support domestic airlines to attain and/or maintain IOSA registration Maintain good airport infrastructure Maintain current level of excellent visa openness amongst African States

Table 5: Findings and Recommendations of States requiring significant improvement for YD implementation

Category 3 – States requiring significant improvements to optimize YD implementation.			
S/N	State	Rating	Recommended Actions to Member States to aid YD implementation
1	**Tchad**	**Need improvements to optimize SAATM Implementation**	EI score <60%. Safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
2	**Central African Republic**	**Need improvements to optimize SAATM Implementation**	Very low EI score. Major safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
3	**Democratic Republic of Congo**	**Need improvements to optimize SAATM Implementation**	EI score <60%. Safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6)

			Fully implement the SAATM concrete measures Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
4	Eswatini	Need improvements to optimize SAATM Implementation	EI score <60%. Safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
5	Guinee	Need improvements to optimize SAATM Implementation	Very low EI score. Major safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
6	Guinea Bissau	Need improvements to optimize SAATM Implementation	Very low EI score. Major safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Maintain current level of excellent visa openness amongst African States
7	Lesotho	Need improvements to optimize SAATM Implementation	Very low EI score. Major safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration

			Improve airport infrastructure Improve current level of low visa openness amongst African States
8	Liberia	Need improvements to optimize SAATM Implementation	Very low EI score. Major safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
9	Sierra Leone	Need improvements to optimize SAATM Implementation	Very low EI score. Major safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Encourage existing or future domestic airlines to attain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States
10	Zimbabwe	Need improvements to optimize SAATM Implementation	EI score <60%. Safety concerns based on ICAO Standards. Engage with ICAO to improve safety oversight capability Ensure all existing (and future) BASAs comply fully with the provisions of the YD (especially Articles 2, 3, 4, 5 and 6) Fully implement the SAATM concrete measures Support domestic airlines to attain and/or maintain IOSA registration Improve airport infrastructure Improve current level of low visa openness amongst African States

The SAATM Enablers Index also analyses the 21 non-SAATM States, our findings reveal the following:

1. The SAATM Enablers Index reveals 7 non-SAATM States with a favourable environment for successful SAATM implementation once they sign on to become a SAATM member State. They are Madagascar, Mauritania, Mauritius, Sudan, Tanzania, Tunisia, and Uganda.

2. The SAATM Enablers Index also reveals 2 non-SAATM States that need improvements to optimize successful SAATM Implementation. They need to improve their EI score, very low visa openness, air

infrastructure and treaty ratification in order to be able to participate more effectively in the SAATM. They are Algeria and Angola.

3. The SAATM Enablers Index further reveals 11 non-SAATM States that need significant improvements to optimize SAATM Implementation as they had not achieved the minimum 60% Effective Implementation of ICAO SARPS. They are Burundi, Comoros, Djibouti, Eritrea, Libya, Malawi, Sao Tome and Principe, Seychelles, Somalia, South Sudan and Western Sahara.

2.4. Overarching impediments to YD implementation

Two overarching themes come to the forefront primarily based on our analysis from the literature review, the BASA analysis, the survey of airlines, and the SAATM Enablers Index:

1. A culture of non-prioritization of aviation; and
2. A policy of survival hinged on protectionism.

The following sections explore these themes in more detail and explain the significance of addressing these challenges.

1. A culture of non-prioritization of aviation

A good indicator of a country's aviation appetite can be gleaned from its enabling policies. For a State to truly benefit from the transformative power of aviation, a clear understanding of the aviation industry's competitive dynamics is required. Strategic planning and aviation policy development backed by the adoption of international best practices becomes essential.

The lack of compliance with ICAO's international standards by a few States witnessed in the Index will need to be addressed. Compliance with ICAO standards is the key to safe aviation activities in States and as is widely agreed – "Safety is aviation's number one priority". Analysis from the SAATM Enablers Index shows that 10 of the 35 SAATM States have not met the 60% "Effective Implementation" (EI) mark. The EI score is a measure of a State's safety oversight capability and an indication of a State's degree of compliance with ICAO provisions.

These States are Central African Republic, Eswatini, Equatorial Guinea, Guinee, Guinea Bissau, Lesotho, Liberia, Sierra Leone, Tchad and Zimbabwe. These States also share common indicators in the Index, namely:

- The States have no major airline, or their airline doesn't meet the industry's minimum safety requirements (IOSA).
- The States are ranked low for their airport and air infrastructure.
- The States rank very low on the AU/AfDB visa openness ranking.
- The States do not prioritize ratification of air law treaties.
- The States have a small aviation market (based on 2019 passenger figures and 2039 forecasts).

The consequences of the above do not only negatively affect YD implementation but critically they also constrain the State's aviation sector and its economic growth. For example, poor infrastructure leads to high operating costs for airlines which results in higher fares and lower demand. Similarly, poor visa openness means reduced tourist

arrivals matched by reduced connectivity as Airlines will prioritize more visa open (and profitable) countries. The above analysis shows that if a SAATM State does not prioritize policies that support the everyday development of its aviation market, it may not have the strategic impetus to implement the YD.

2. A policy of survival hinged on protectionism

The airline and international travel world have been transformed by decisions of the United States and Europe in promoting deregulation and Open Skies agreements. Fostering openness to various airline business models and other African nations, and reviewing ownership structure, are all developments that can lead to increased services and competition which are favourable for consumers and encourage demand. Policies that support the domestic aviation market are fully encouraged. However, a protectionist stance acts as a barrier to these developments. Both airlines, and the governments that support them financially, must understand that encouraging air service development in a fully liberalized market will ultimately lead to sustainable growth in the short and long term.

Unfortunately, African aviation's legacy of protectionist policies continues to prevail today. Four compelling sources of information confirm this.

1. Aggregated feedback from African airlines survey
2. Research from the literature review
3. Analytical data from the SAATM Enabler's Index and
4. BASA Analysis

Whilst gathering data for this Study, an airline survey was sent to a wide section of African airlines[54]. One of the questions asked was "***what are the biggest challenges you have experienced and/or envisage in the implementation of the SAATM?***" Over 60% of the responses received cited protectionism as a challenge experienced across the region. Similarly, research from the literature review showed unanimity in citing the protectionist attitude of governments, as one of the main barriers preventing the successful development of air connectivity across the African continent. This issue has already been addressed in the literature review section of this report.

Our analysis from the SAATM Enabler's Index reveals the following:

- 17 of the 35 SAATM States have interests in the main carriers in those States, namely: Botswana, Burkina Faso, Cabo Verde, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Liberia, Morocco, Mozambique, Namibia, Rwanda, South Africa, Zambia and Zimbabwe.
- 4 more States – Benin, Guinee, Ghana and Nigeria, are planning on launching National carriers soon and other States plan on resuscitating their national carriers – Congo Brazzavile etc)[55].
- 3 SAATM States have further interests in a low-cost subsidiary version of the main State Airlines – Kenya, Morocco and South Africa.
- Based on publicly available information, it appears 14 of the State airlines are fighting to survive. In Southern Africa, it has been widely reported that South African Airways is undergoing business rescue and proposed privatization, Air Namibia has been liquidated following a lengthy court battle and Air Botswana has undergone restructurings and requires a State bailout. In East Africa, Kenya Airways has undergone a restructuring, including staff layoffs and is proposing nationalization in order to survive. In North Africa, major carriers like EgyptAir and Royal Air Maroc have either revised their growth plans

[54] Airlines responses were aggregated as they were promised that any information provided would be treated in the strictest confidence.
[55] Based on online news reports

and/or reduced their capacity. News reports from other countries will reveal a similar situation to what is described above for their State Carriers.

- Of the 17 State Airlines, only one is truly profitable – Ethiopian Airlines. Ethiopian Airlines also has a portfolio of investments and management agreements in Togo, Malawi, Tchad and Mozambique (domestic operations).
- The ambitions of the non-SAATM States are of equal importance – 11 of the 21 non - SAATM States also have interests in their main carriers. The position, of some States, in not joining the SAATM has been publicly stated i.e. “SAATM implementation in their State should be delayed until their national/State owned carrier can favourably compete in an open market”. It is also widely believed that the lack of competition will result in a better performance of their State carrier. These positions are debateable.
- As has been described in the previous sections, the SAATM enablers are essential for successful aviation sector development. It is difficult to see notable improvements in national carrier performance if the supporting environment for aviation – be it airport and air space infrastructure efficiency or supportive policy and regulation – is not efficient or optimized.

The small scale of Africa’s internal market is a function of many factors, not least infrastructure and aeropolitical restrictions. Based on the 2019 passenger numbers for African States, we can see that the African market flew over 161 million passengers in 2019. In 2019, air passenger transport in the European Union (EU-28) amounted to over 1.1 billion passengers. This is despite Europe being three times smaller than Africa. This shows the significantly smaller base, African airlines have, to build intercontinental operations in competition with other airlines. The policy actions required to grow this internal market have already been stated and the importance of airline cooperation has been highlighted.

Based on the GNI per capita classifications of the World Bank, we can see that 15 of the 35 SAATM States rank in the low-income category. These are: Burkina Faso, Chad, Central African Republic, Democratic Republic of Congo, Ethiopia, The Gambia, Guinee, Guinea Bissau, Liberia, Mali, Mozambique, Niger, Rwanda, Sierra Leone and Togo. On average, African States rank between the Low Income to Lower-Middle Income with only two States falling into the High-Income category (Mauritius and Seychelles).

However, as economies develop and incomes rise, the potential for aviation to facilitate further development and economic growth is considerable. And indeed, Africa is set to become one of the fastest growing aviation regions in the next 20 years, second only to Asia Pacific. The fastest growing states include Burkina Faso, Sierra Leone, Lesotho, Ethiopia, Guinea, Benin, and Madagascar. The estimated annual average growth rate over the next 20 years for these states is expected to be a strong at 6%. Therefore, while challenges exist, so do the opportunities according to these forecasts.

While working to address infrastructure deficiencies and policy constraints, African aviation also needs increased multi-sector collaboration and air transport policy integration with other national policies (trade, tourism, etc). This will create an environment that both supports and encourages a strong air transport sector which in turn will lead to growth.

2.5. Conclusions and Recommendations

Conclusion

From the analysis presented thus far, it is evident that YD implementation has many elements and facets. However, if YD Implementation could be summarized in one sentence or action, it would be "the ability of an eligible African airline to freely access and utilize first to fifth freedom air traffic rights, between Yamoussoukro Decision Party States, using a simple notification procedure". All other elements of YD implementation are to bring this scenario to life.

Is Africa Implementing the Yamoussoukro Decision?

Our analysis shows that YD is still only partially implemented between African States and there is need to move to full implementation to fully realise the SAATM and the significant benefits of aviation to African economies. The free exercise of the rights of the first, second, third, fourth and fifth freedoms of the air, as contained in Article 3 of the YD text is a critical and fundamental aspect of the operational aspects of YD implementation. From the Chapter 1 analysis of air traffic liberalization within the African Union, there is no State that is complying 100% with YD implementation. As stated earlier, States are cherry picking who they want to be YD compliant (open) with and who they want to be restrictive with. This patchwork of YD implementation has created a knock-on effect that continues to constrain YD implementation decades after it came into effect. The States with a high percentage of YD compliant BASAs are not many (Botswana, Mozambique, Senegal and Cameroun); however, if all their BASAs are not YD compliant then they cannot be adjudged to have YD compliant BASAs overall and are therefore not implementing the YD fully.

After two decades of the YD coming into force, there should no longer be a case for partial YD implementation when it comes to traffic rights. The transition period of 2 years in Article 3 has long lapsed and interested States have had more than enough time to prepare. A situation where a State has YD compliant BASAs with certain States should no longer be considered as YD implementation but as a bilateral agreement between States. If a State has a YD compliant BASA with one State, then it should have YD compliant BASAs with all States. To reverse this current trend two options are available:

1. States continue to bilaterally amend BASAs that are not YD compliant until full BASA compliance is achieved. Based on current progress, the projected timeline to achieve full BASA compliance cannot be defined.
2. States sign a multilateral agreement (MASA) granting the free exercise of first to fifth freedom air traffic rights amongst the signatories and clearly abolish the need for future BASAs between them. The MASA will be based on existing YD text, will be legally binding and will be immediately enforceable amongst States upon signature. This will avoid the need for lengthy bilateral amendments between States to cure the current partial YD implementation. Thereafter, eligible airlines can immediately operate on a simple notification or "file n fly" procedure that will be clearly specified in the multilateral agreement.

There must be a reset by way of BASA harmonization. The SAATM is a multilateral approach to YD implementation and this is a big step in the right direction. However, the SAATM is based on YD implementation which takes us back to the current cycle of partial to non-YD implementation.

Using the current YD Regulatory Text as the foundation, there must be a new path that avoids doing the same thing and expecting a different result. The new option must not result in lengthy new processes and consultations but should consolidate on current gains. The Memorandum of Implementation (MOI) of the YD signed by 18 SAATM signatory States gives a good indication of how States can agree to a multilateral agreement for the implementation of the YD without lengthy procedures. The MOI is an affirmation by States of their willingness to implement the YD and fully establish the SAATM.

There is a clear appetite amongst these States to see the YD fully implemented and establish a single air transport market. These 18 States can sign a multilateral agreement, that is immediately legally binding, based on

the YD provisions. The central steering of the African Union Commission, the African Civil Aviation Commission and the African Airlines Association would be key to this option.

Other elements of YD Implementation

After the exchange of traffic rights, the next critical area is adequate levels of safety and security. The Safety and Security of a State and its eligible airline must be at acceptable levels if YD implementation is to succeed. Via the SAATM Enablers Index, we were able to identify States that have adequate levels of safety and security. Beyond the safety and security requirements, Chapter 2 assesses States that have a favourable environment for YD implementation overall. Based on their last ICAO audit results, 21 of the 55 African Union Member States were found to be below par for Safety. 10 were SAATM members - Tchad, Central African Republic, Democratic Republic of Congo, Eswatini, Guinee, Guinea Bissau, Lesotho, Liberia, Sierra Leone, Zimbabwe whilst 11 were non SAATM members - Burundi, Comoros, Djibouti, Eritrea, Libya, Malawi, Sao Tome and Principe, Seychelles, Somalia, South Sudan and Western Sahara[56]. This presents a major challenge to YD implementation in any form and must be quickly addressed. Other challenges identified by the Index (visa openness, infrastructure, etc) also need to be holistically addressed at a national level.

Overall, the assessment is that YD implementation as originally envisaged has stalled, primarily due to protectionism or a lack of prioritization of aviation by States. Nevertheless, there is an appetite for full YD implementation by States and there are States with favourable environments where YD/SAATM implementation can be successful.

In order to consolidate on decades of progress, sometimes fast (as seen in the last few years) but often slow, there must be a definitive, fast, multilateral solution steered at a central level by the AUC and AFCAC. Otherwise, if States are left to slowly amend BASAs that do not comply with the YD on a bilateral basis, YD implementation will continue to lull.

Recommendations

The SAATM Enablers Index provides insights into some of the key underpinnings of successful aviation markets – and as a result it highlights the constraints and impediments to YD implementation. Based on objective parameters, it reports on aviation safety and security, visa openness, airport infrastructure (ground and air) and the regulatory environment, based on key international treaty ratification. These are measured against the backdrop of a macroanalysis that includes GNI per capita, passengers carried and forecast, cargo market share and travel and tourism contribution.

It is notable that apart from Zimbabwe, the 10 States listed in category 1 (States that need to better prioritize aviation) are different from the 17 Sates listed in category 2 (States that have interests in their national carrier). These two categories of States combined represent 27 of the 35 SAATM States.

The following recommendations based on the analysis from the SAATM Enablers Index are made:

Safety

1. Considering the fundamental importance of Safety in aviation, the inability of 21 States, 10 of which are SAATM member States, to achieve the minimum score of >60 in the Effective Implementation of ICAO

[56] No data available for Western Sahara

SARPS is a cause for concern. Without uniformity of safety measures across Africa, YD implementation will certainly be more difficult. All outstanding States are to achieve the minimum 60% Effective Implementation score. This will foster the harmonized implementation of SARPs so that all States can have access to a safe and reliable aviation system.

2. Encouragingly, all the major markets in Africa have airlines on the IOSA registry, This bodes well for airline cooperation under the SAATM as envisaged under the YD. All airlines with IOSA certification should be encouraged to maintain their good standing on the registry as evidence of minimum compliance with industry best practise.

Infrastructure

3. The prospects for further growth in African aviation are also documented in the index with the 20 year passenger forecast. The challenges to achieving the projected growth become even greater when a State has poor infrastructure on the ground and/or air. Speaking at the 2019 Aviation Infrastructure for Africa Gap Analysis Workshop, former ICAO Council President - Dr. Olumuyiwa Benard Aliu remarked that "*It is especially urgent for Africa to address its aviation infrastructure gaps, given current and high levels of awareness of how air connectivity has become such a unique and indispensable catalyst for socio-economic growth on this continent"*

Prioritizing Aviation

4. Governments across Africa need to prioritize aviation if their economies are to realize their full potential. The SAATM is key to this promise. The lack of a state-owned airline is not an impediment to YD or SAATM implementation. States can still position their markets to benefit from air service development and connectivity. Connectivity can boost the productivity and growth of economies by providing better access to markets, enhancing links within and between businesses and providing greater access to resources and to foreign direct investments.

5. The trend today has moved away from countries owning a full or majority stake in their State airlines. Successful liberalized markets have moved toward privatizing what were once their national carriers. The risks inherent in State ownership in aviation have been stated and are best summarized with the term "distressed state airline syndrome" which is suffered by most State-owned airlines with a few notable exceptions.

Addressing the legacy of protectionism

6. The legacy of protectionism must be reconsidered. Protectionism by preventing other airlines from operating into a country to protect a State's interest in an airline provides little benefits. Rather it promotes inefficiency, restricts trade and stifles a State's economic growth. The short and/or financially turbulent life span of most African carriers is testament to this.

In the African context, the need for survival of State airlines must be strongly considered and addressed if YD implementation is to truly progress and support socio-economic growth. The underlying concerns for the future of a State's domestic carrier(s), if SAATM is fully implemented, should be addressed. Such measures include:

7. Following the identification of States ready, willing and able to proceed with full and immediate SAATM implementation, there should be a framework for a phased approach for States. States that opt for a phased approach should commit to a clear and actionable timeline for the gradual implementation of the YD. The YD provided for 2 years; considering the YD came into force in 2000, the 2 year period has long lapsed. To move forward sincerely, States with reservations should state when they hope to be able to fully open their markets and agree a compromise that works for the success of the SAATM.

8. There should be a balance between a competitive environment and a level playing field so that stronger African carriers will not exert market dominance to the detriment of a State's domestic carrier. Innovative models such as promoting codeshares and other forms of airline partnership between SAATM members can be explored.

AFCAC Leadership Role

9. The ongoing support of the efforts led by the Africa Civil Aviation Commission (AFCAC) should be maintained. The Institutional and Regulatory Texts essential for the successful operation of the SAATM must be recognized by all States. The Powers and Functions of the AFCAC (as the Executing Agency of the YD) clearly defines the jurisdiction and regulations that would enable AFCAC effectively manage and supervise the SAATM.

10. The continued support of the functions of the Executing Agency will enable the application of the Competition regulations which address issues such as abuse of dominant position, prohibition of discrimination in national regulations and regulations on other anti-competitive behaviours. There should also be a scheduled period for review of the Institutional and Regulatory Texts to address issues not originally envisaged.

The SAATM Enablers Index analysis highlights policies that unintentionally stifle both the African aviation industry and YD implementation. To support YD implementation, African aviation needs deliberate aviation centric policies and increased multi-sector collaboration. This will promote regional/continental integration of air transport markets and strong airline cooperation to maximize the new markets that will arise.

Other Critical Policy Recommendations

11. High taxes and charges and shortages in skilled Staff have also been commonly referred to but were not addressed in the index due to a lack of sufficient data for all 55 States. High taxes and charges stall aviation growth. Domestic airlines cannot thrive in a multiple taxation environment. In a newspaper interview, the President of the AfDB, Dr. Akinwunmi Adesina, warned that *"Aircraft departure fees alone in Africa are 30 per cent above the global average, while taxes, fees and charges are eight per cent higher. Given lower per capita incomes in Africa, high fares essentially tax the poor out of the air. We may have an open sky policy, but then end up with empty skies."*

    High taxes and charges remain an existential threat to the growth of African aviation and YD implementation. There must be concerted efforts to bring down the high taxes and charges environment across Africa. Over the years and during SAATM advocacy, these issues have been cited as key impediments to YD implementation and they remain true to this day.

12. Also not mentioned in the SAATM Enablers Index but equally important to address is the practice of States promulgating laws and regulations that require foreign operators to submit applications for operational approval (Foreign operations specifications-OpSpecs application) in contradiction of ICAO provisions for foreign operations requirements. Fundamentally, for airlines to conduct operations, the operator needs to obtain Air Operator's Certificate (AOC) from the State of registry. ICAO member States are required to recognize the AOC approved by the State of registry of member States. SAATM States, therefore, need to remove the requirement for approval for Foreign Operations Specification (Foreign OpSpecs) as this is an unnecessary (operational) impediment to the establishment of the SAATM.

    In order to support SAATM, a harmonized, standardized, and simplified approach is required for the operationalization of Article 6 of the Chicago convention. Under the SAATM, overflight (OVFC) permissions, for scheduled operators wishing to overfly a territory of another State or make a non-commercia (technical) stop, need not require prior permission. 'File n Fly' should be a fundamental aspect of the SAATM.

2.6. Selected Country Commentaries

The below selected country commentaries are used to highlight the very complex and layered nature of the impediments to YD, most especially when it comes to the issue of protectionism. 3 common African State profiles were selected and are represented by Nigeria, The Gambia and South Africa. A brief analysis was then conducted from the point of view of the impediments to YD implementation to show how some States are positively adapting to their individual circumstances and how some States continue to react negatively. There is no "one-size-fits-all" solution to YD implementation but there are some solutions that can be commonly applied.

Constructive and open dialogue would be required by all States to address their individual challenges. The reader is reminded to reference the tables in section 2.3 for common country-specific recommendations that address the challenges and impediments to YD implementation, as identified through the lens of the SAATM Enablers Index.

Nigeria

Nigeria Country Profile (based on selected SAATM Enablers Index components)

i. Population Size: **206,139,589**
ii. Passenger projections (2019 & 2039): **9,476,000 - 19,397,000 (over 100% increase)**
iii. GNI Classification: **Lower – Middle Income**
iv. Travel & Tourism Contribution to GDP (2019): **4.50%**
v. Number of IOSA Airlines: **5**
vi. Effective Implementation of ICAO SARPS: **67.72%**
vii. Visa Openness Ranking: **8 out of 54**

The air transport industry, including airlines and its supply chain, are estimated to support US $600 million of GDP in Nigeria. Spending by foreign tourists supports a further US $1.1 billion of the country's GDP, totalling to US $1.7 billion. Aviation is very important to Nigeria as Nigeria is the second largest aviation market on the continent. Nigeria has also been at the forefront of international best practise and has recorded many significant achievements in Safety and Security including Category One Safety status from the US Federal Aviation Administration (FAA).

The long-term sustainability of Nigeria's aviation industry and its operators are hinged on a strong domestic market. Point-to-point domestic routes tend to sustain higher yield, reinforcing potential profits and the financial viability of domestic operators.

Unfortunately, Nigeria has witnessed a steady turnover of domestic carriers with most of them surviving for a few years before ceasing operations. In recent times, the Federal Government was forced to take over the management of 2 domestic carriers and appoint administrators in order to preserve the integrity of the domestic market and avoid a near collapse of the domestic air transport market.
Nigeria accounts for about half of West Africa's population with approximately 200 million people and one of the largest populations of youth in the world. Despite such a huge population, domestic air transport is seen as a luxury as most citizens travel by road due to the lower costs. Domestic travel is dominated by politicians, corporate travellers and private individuals in the middle and high-income categories. Given Nigeria's low income GNI classification, the cost of air fares naturally excludes a large portion of Nigeria's travelling public as the lower middle class do not find air travel affordable. The implication of the above is low traffic densities, often mirrored in

regional routes that are not profitable. In order to reverse this trend, the further improving SAATM enablers should be prioritized as a matter of urgency.

Some of the factors to consider include:

i. **High cost of foreign exchange:** airlines maintenance and other key costs are mostly borne in foreign currency which are either scarce or unsustainably high due to macroeconomic factors beyond the control of operators.

ii. **Structure and management expertise of domestic carriers:** Most Nigerian airlines are started as a one-man business or family enterprise. This means they start off small and remain small with a fleet size as low as 3 for some airlines. Lack of adequate management expertise within Nigerian airlines (and across Africa) is also a contributing factor. Poor management expertise means airlines are unable to break even and be competitive, explore new opportunities and offer efficiencies to bring down costs.

iii. **Lack of airline cooperation:** due to the structure of Nigerian airlines (one-man business), there is an apparent unwillingness to cooperate with other airlines. As a result, cooperation at the national and regional level, and the economies of scale that come with it, are non-existent.

iv. **Infrastructure challenges:** stakeholders across the aviation value chain (airlines, fuel, catering, airports, etc) must provide alternative sources of power, additional security, additional operational layers to improve their service efficiencies. All these costs are passed to the airline who has no choice but to pass to the consumer which in turn contributes to the high fares.

v. **High Taxes and Charges**: the additional airport costs are passed on to the airline by airports in the form of high airport charges. Similarly, taxes are levies to raise government revenues which are applied to non-aviation purposes.

Although Nigeria is the country in focus, it shares the above similarities with other West African countries. Addressing the above challenges will support a robust aviation sector and ensure the benefits of SAATM implementation are realised for the country and the region.

The Gambia

The Gambia Country Profile (selected SAATM Enablers Index components)

i. Population Size: **2,416,668**
ii. Passenger projections (2019 & 2039): **515,000 - 934,000 (about55% increase)**
iii. GNI Classification: **Low Income**
iv. Travel & Tourism Contribution to GDP (2019): **17.60%**
v. Number of IOSA Airlines: **0**
vi. Effective Implementation of ICAO SARPS: **73.87%**
vii. Visa Openness Ranking: **1 out of 54**

The Gambia has a land area of about 11,300 km² and is one of the smallest countries in Africa. The Gambia's national development strategy recognizes the role of transport as critical for the efficient functioning of the national economy. Because of the small size of the country, domestic air transport has not been part of the internal transport system.

The Gambian economy is highly dependent on tourism and international trade. This requires an optimal air transport system. The tourist peak is typically between November and April. This means that The Gambia must develop new markets and adopt strategies to attract new business for the rest of the year. A deeper look into The Gambia offers some interesting insights:

i. The lack of a viable domestic airline is not a reason to delay SAATM implementation. Despite the absence of a "strong" national airline, and indeed the absence of a national carrier altogether, the Gambia can further position itself optimally to enjoy the benefits of SAATM implementation.

ii. The Gambia have fully embraced the spirit of the SAATM evidenced by ASKY Airlines fifth freedoms operations from Lome to Sierra Leone.

iii. In addition to the very positive indicators seen in the SAATM Enablers Index, it has taken positive steps to improve the operational environment. With the announcement of the Saudi Fund of US$12 Million to Upgrade Gambia's Airport, it is providing an enabling environment by improving its airport infrastructure.

iv. From the above, The Gambia is gradually positioning itself to be a hub in West Africa. It currently ranks 1st out of 54 States in the AU/AfDB visa openness Index and scores highly on the Effective Implementation of ICAO SARPS (73.87).

v. The Gambian government has gone to great lengths to support aviation in the State. In addition to all the improvements mentioned above, it has also signed the SAATM MOI and has implemented all the concrete measures. It clearly recognizes the value of aviation and the strategic importance of the SAATM. Overall, it has very positive indicators on the SAATM Enablers Index which shows a strong appetite for Aviation and SAATM implementation.

Gambia is the country in focus, but it shares similarities with countries such as Benin, Togo, Ghana and Rwanda, to name a few. These are States that prioritize Aviation and have created a favourable operating and regulatory environment for it to thrive. In addition, it continues to make strategic policy decision to optimize the benefits of aviation to their national economies.

South Africa

South Africa Country Profile (selected SAATM Enablers Index components)

i. Population Size: **59,672,395**
ii. Passenger projections (2019 & 2039): **25,905,000 - 52,904,000 (about100% increase)**
iii. GNI Classification: **Lower – Middle Income**
iv. Travel & Tourism Contribution to GDP (2019): **7%**
v. Number of IOSA Airlines: **5**
vi. Effective Implementation of ICAO SARPS: **88.68%**
vii. Visa Openness Ranking: **32 out of 54**

South Africa and Nigeria share similar characteristics when it comes to their aviation markets with South Africa being more significant in terms of its contribution to its economy. The air transport industry in South Africa, including airlines and its supply chain, are estimated to support US$5.2 billion of GDP in South Africa (compared to Nigeria's US $600 million). Spending by foreign tourists supports a further US$4.3 billion of the country's GDP, totalling to US$9.4 billion (Nigeria is $1.7 billion).

South Africa also has a large domestic market and the proximity of some of the States in the Southern African Development Community (SADC) further extends the domestic market. Like Nigeria, South African Airways and other airlines in the Southern region (South Africa Express, Air Namibia) have experienced its share of challenges and ceased operations, while those still in existence continue to struggle (Air Botswana, Air Zimbabwe, etc).

Some features of the Southern African aviation market and findings from the SAATM Enablers Index include:

- South Africa and the Southern African region are characterized by State owned airlines. Ownership by the State often come with political complications that often impact the appointment of management staff and Board members. Expertise within the airline is crucial for the launching of new routes, adding new frequencies, fleet management and other key airline cost items.
- The all-consuming political considerations in State owned airlines have resulted in airline instability, particularly when there is a change of government, making it hard for an airline to plan long term and execute the plan. Similarly, destabilizing change of management, overstaffing, high labour costs/low labour efficiency are common features of a State-owned airline. These impact profitability and the long-term viability of the airline.
- Paradoxically, the region is also home to some of the most profitable privately owned airlines on the continent such as South Africa, Namibia and Zambia, amongst others. This shows the possibilities if governments stopped running airlines and created a conducive environment for the private sector to participate and thrive.
- Another common feature of the Southern African market is low visa openness. South Africa ranks 32 out of the 55 African States and apart from Mozambique and Zimbabwe that rank 13 and 23 respectively, the other 5 SAATM members in the SADC region rank in the bottom 30 of the AU/AfDB visa openness index (Botswana, Congo (DR), Lesotho, Namibia, Swaziland).
- YD implementation is hampered by regional isolation. Indeed, the goal of the YD and the SAATM is to promote regional integration by increasing accessibility to intra-regional travel, tourism and trade. Increased visa openness by the SADC SAATM member States (and other low-ranking States) is key to unlocking SAATM implementation.

Chapter 3: Assessment of the status of airlines operating on intra-African routes

3.1. Airline utilization of freedoms

Freedoms facilitating international connectivity

In 2019 about one third of passenger journeys within Africa were on intra-Africa international routes. It is the so called 3rd, 4th and 5th 'freedoms' established in the bilateral air service agreements concluded between countries that give airlines the rights to carry these international passengers on a commercial basis.

As can be seen from Table 6 below, approximately 85% of these 16.7 million international journeys were direct point-to-point flights with the remaining 15% requiring one or more connecting stops along the way. The strategic utilization of 3rd, 4th and 5th freedoms to provide direct or connecting services between countries is a key element of the network planning airlines undertake as they seek to efficiently match supply to the connectivity demands of consumers.

Table 6: International passenger flows intra-Africa, 2019

Type of International Passenger Flows	International Passenger Flows 2019 (millions)	Share of Total International Passenger Flows (2019)
Direct	14.1	84.5%
Indirect and connecting in Africa	2.4	14.4%
Indirect and connecting outside of Africa	0.2	1.1%
Total	16.7	100%

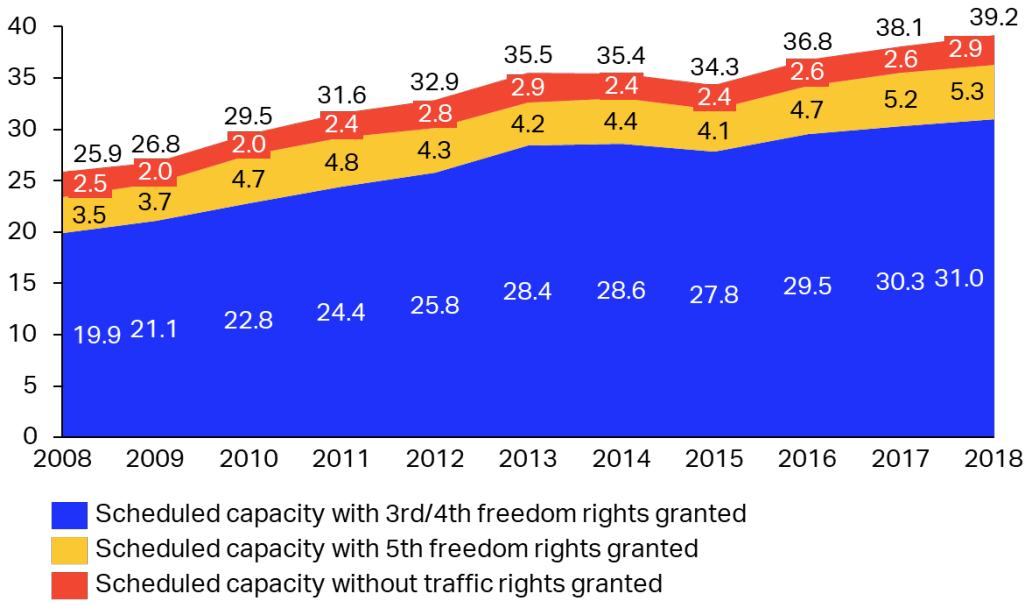
Source: IATA Economics using data from IATA DDS

The sections below present an overview of the utilization of these international freedoms of the air by African carriers drawing on analysis published by the African Development Bank in 2019.

Majority of international capacity flown under 3rd and 4th freedoms

Figure 4 shows 79% of intra-African capacity was flown under 3rd 4th freedom traffic rights during 2018, a proportion that has remained fairly consistent over time. The primary application of these rights is in direct services between an airline's home country of registration and a second country. However it is also possible to utilize these rights in combination to facilitate connectivity between two countries via a hub operation in the carrier's home country (e.g. from KRT in Sudan via Ethiopian ADD hub to EBB in Uganda).

Figure 4: Scheduled capacity by freedom utilized (million seats)



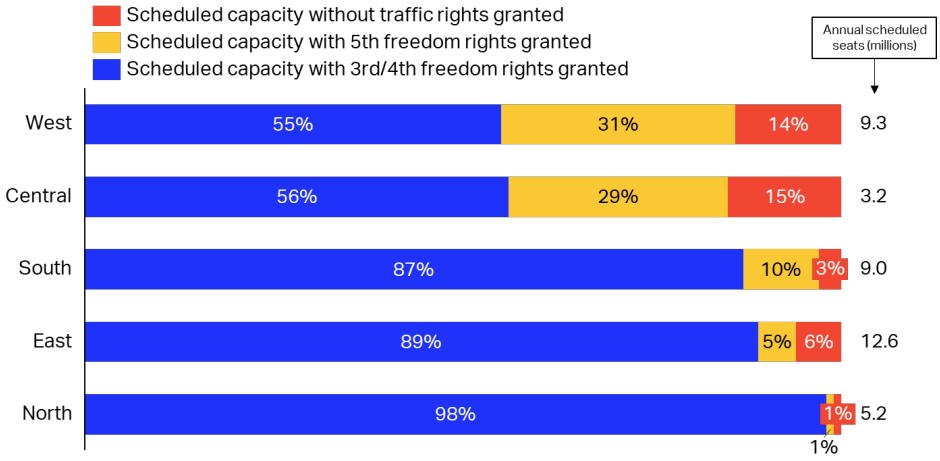
Source: AfDB

Prominent 5th freedom utilization in Central and West Africa

The 5th freedom traffic right allows an airline to carry passengers between two foreign countries if the operations are an extension of services connected to the airline's home country. The yellow section in Figure 3 from the previous section shows that 5th freedom operations make up about 7% of total international capacity within Africa as a whole. However as can be seen in Figure 5 below, the proportion of 5th freedom traffic varies markedly by sub-region. In 2018, 59 intra-African routes were operated using 5th freedom rights (routes with more than two frequencies per week).

In West and Central Africa about a third of capacity is provided by utilization of 5th freedom rights. Part of the reason for the comparatively high level of 5th freedom operations in West Africa is the ECOWAS treaty from 1975 which granted 5th freedom rights to airlines from treaty states and stimulated development of networks utilizing that freedom. The absence of national carriers in Central Africa as well as the comparatively thin routes means that 5th freedom operations are more prominent.

Figure 5: Scheduled capacity by freedom utilization and sub-region (2018)

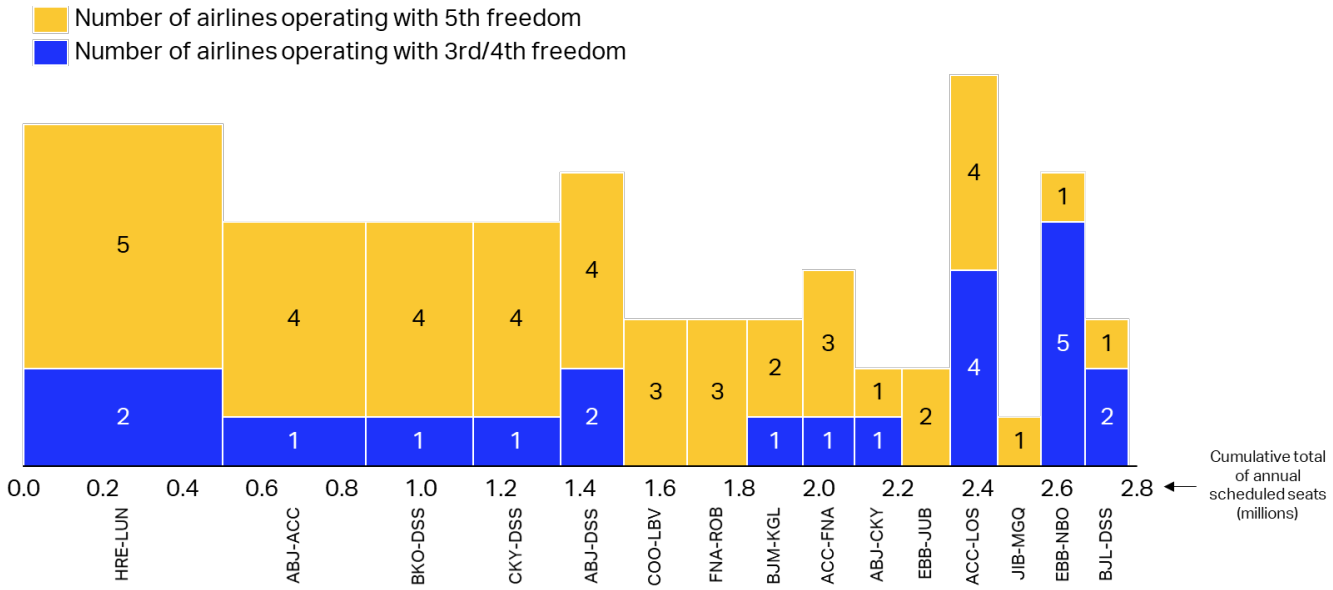


Source: AfDB

Competition and connectivity benefits from 5th freedoms

Several important intra-African routes would not be served, or would be monopoly routes, if not for 5th freedom operations. Figure 6 below shows how many airlines provide capacity on the 15 largest routes involving 5th freedom activity and which freedoms are utilized. The width of each column indicates the relative scale of total capacity and the blue and yellow segments show the number of airlines utilizing 3rd/4th or 5th freedoms, respectively. Six of these routes would only be served by one airline if not for the 5th freedom operations that provide more options for consumers. A further four routes would not be served at all in the absence of the 5th freedom operations that provide direct connectivity between those locations.

Figure 6: Freedoms utilized by airlines operating on key intra-African routes (2018)



Source: IATA visualisation based on AfDB data

Conclusion – future freedoms

The utilization of existing 3rd, 4th and 5th freedom rights plays an important part in facilitating connectivity for consumers across the continent. However as can be seen from the red sections of Figures 2 and 3 earlier in this section, at the continental level 7% of intra-African international capacity is still 'restricted' and that proportion doubles when looking at Central and West Africa. Practically this means that airlines operating that capacity lack the 5th freedom rights to generate revenue on those segments. Further liberalization of air service agreement provisions will help airlines realize that revenue stream and also facilitate opening additional 5th freedom connections where market demand exists.

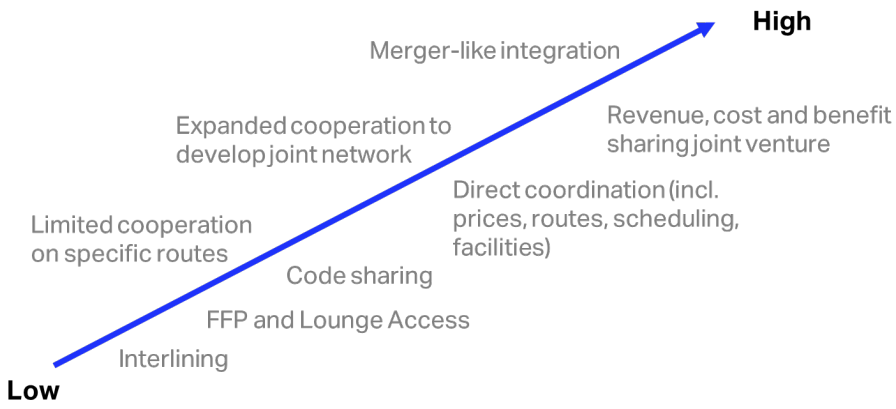
3.2. Coordination amongst African airlines

Forms of coordination and cooperation

African airlines' cooperation, or lack thereof, is a vital component of the SAATM and YD implementation. Consumers seek aviation connectivity that can take them from 'anywhere to anywhere' in a convenient and cost-efficient manner. While some high-volume city pair connections can be served in this way by an airline operating independently, expanding this connectivity across a large number of lower-volume destinations quickly becomes economically unviable for a single airline. Even though they remain competitors, African airlines need to embrace cooperation as a means of lowering their financial risk on a route and leverage economies of scale for commercial and operational efficiency.

To overcome this issue airlines enter into commercial cooperation agreements of various forms along a spectrum from limited coordination on specific routes to merger-like integration, as can be seen in Figure 7 below.

Figure 7: The spectrum of airline cooperation



Source: US DOT and European Commission
'Transatlantic Airline Alliances: Competitive Issues and Regulatory Approaches'. (2010)

Coordination between airlines generally allows greater choice and convenience for consumers in terms of service offerings. It also helps drive cost efficiencies for airlines through economies of scale and density which in turn can translate into lower fares for the end user. It is not necessarily the case that closer coordination is always better for every airline and market circumstance. Attention needs to be given to possible dis-benefits associated with market concentration (i.e. reduced competition) that could offset the many positive consumer benefits from closer coordination. Most aviation markets around the world today contain a mixture of forms of cooperation from along the spectrum.

The sub-sections below assess the extent of coordination amongst African airlines focusing in particular on the following arrangements along the spectrum of airline cooperation:

- **Interlining:** basic commercial agreement between two airlines allowing a passenger to travel on an itinerary involving multiple airlines using one travel document (i.e. ticket)

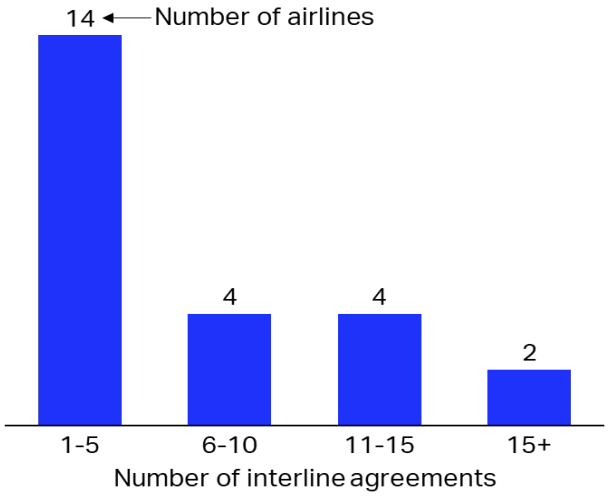
- **Code share:** collaboration agreement allowing one airline to market under their own airline code the seats flown on aircraft operated by a partner airline, thereby increasing the number of potential destinations in their network as well as added convenience of a more seamless service from the consumer perspective
- **Alliance membership:** an arrangement involving substantial cooperation between member airlines which may include extensive code share agreements, coordinating schedules to minimize transfer times, shared usage of airport facilities and staff, group investment or purchasing arrangements to negotiate volume discounts
- **Franchise, subsidiary or joint-ventures:** partnerships involving shared ownership and or substantial integration of operations facilitating closer coordination and further consumer benefits

Interline collaboration

The longest standing and most fundamental form of airline coordination is the interline agreement which facilitates travel on an itinerary involving several airlines using one ticket. Airlines may choose to utilize a multilateral interline agreement framework such as that coordinated by IATA or conclude their own bilateral agreements with partners.

Figure 8 below shows the extent of participation by African registered airlines in passenger interline arrangements governed by the IATA Multilateral Interline Traffic Agreement (MITA) framework as at early 2021. Two larger airlines with more extensive networks and international connections are each party to more than 15 of these interline cooperation arrangements. Confirming the lack of extensive cooperation amongst African airlines, the majority of African airlines using the MITA framework are party to 5 or fewer agreements.. Even medium size and smaller airlines in the region should give consideration as to how interline partnerships can establish a basic foundation for cooperation that can offer convenience benefits to their customers.

Figure 8: Distribution of Multilateral Interline Traffic Agreements (MITA) - February 2021



Source: IATA MITA database

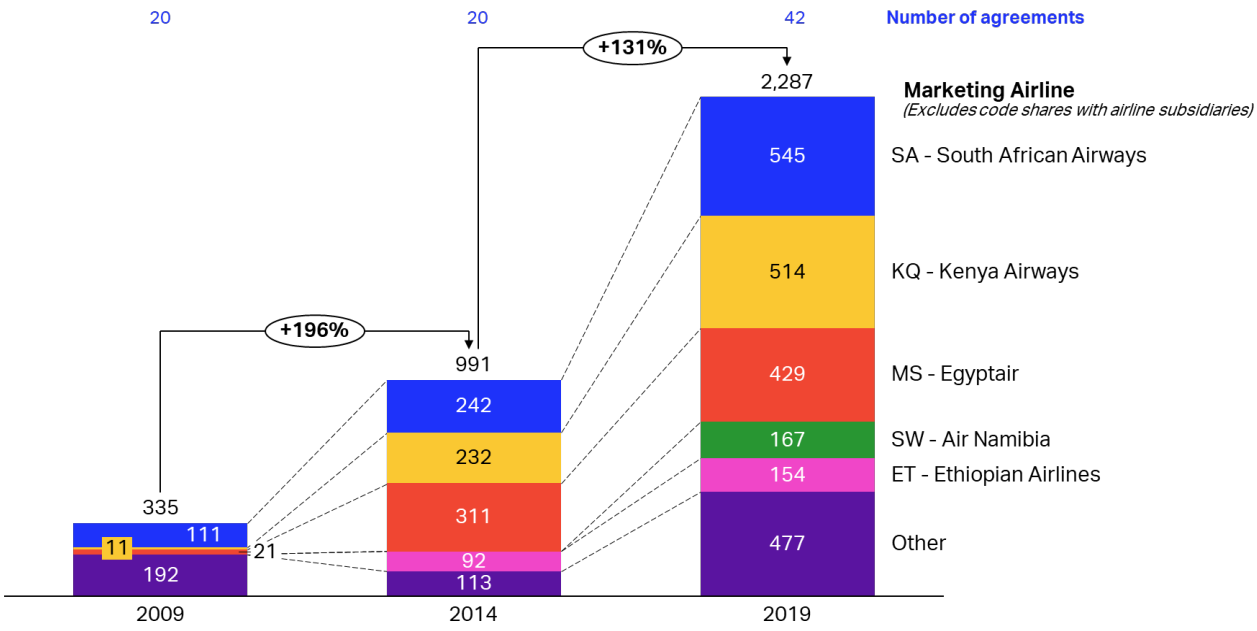
Code share activity

Moving beyond basic interline cooperation, a higher quality of service can be offered to consumers via code share arrangements. The level of code share cooperation amongst African airlines has increased over the past five years as illustrated in Figure 9 below. Both the number of agreements and the overall amount of capacity offered

via code share arrangements has increased substantially to nearly 2.3 million seats in 2019. It should be noted for context however that only around one in five African registered airlines with scheduled passenger operations in 2019 are party to code share agreements.

South African Airways was the African carrier marketing the most seats via code share in 2019 at 545,000. These seats are marketed and sold by South African Airways under their SA airline code for travel within Africa but are flown by another African airline partner. Kenya Airways and Egyptair marketed the second and third largest number of seats via code share partnerships. This analysis excludes code share seats flown on partners that are subsidiaries or where the marketing airline holds a significant ownership stake in the operating airline.

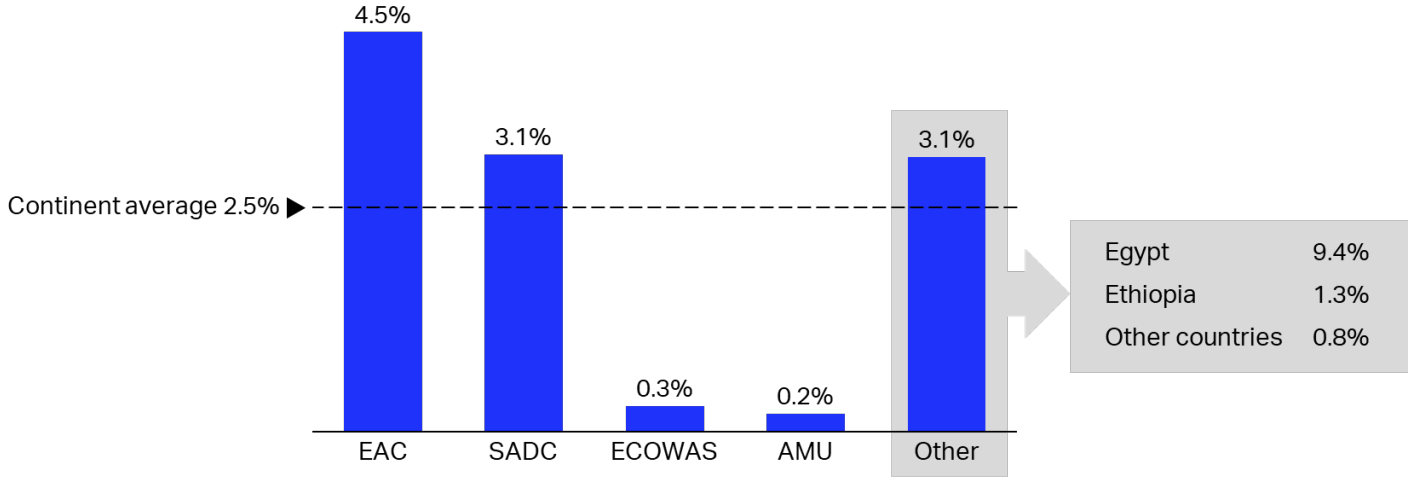
Figure 9: Progression of code share capacity within Africa via African airline collaboration (seats in thousands)



Source: IATA analysis based on SRSAnalyser data

On average across the continent, approximately 2.5 seats per hundred operated by African airlines were marketed via code share agreements. However, there is significant variation in that rate across different sub-regions as shown in Figure 10 below.

Figure 10: Proportion of capacity offered via code share by sub-region grouping (2019)



Source: IATA analysis based on SRSAnalyser data

Airlines registered in the East African Community (EAC) countries marketed 4.5 seats per hundred via code shares, primarily driven by Kenya Airways code share partnerships. The rate is 3.1 seats per hundred for airlines registered in the Southern African Development Community (SADC). South African Airways code share activity is a key driver in SADC, but so are partnerships concluded by Air Namibia, LAM and Air Seychelles.

Code share activity by airlines registered in member countries of the Economic Community of West African States (ECOWAS) the Arab Maghreb Union (AMU) are much lower. The same can be said for airlines in other African states where, after splitting out Egypt and Ethiopia, less than 1 seat per hundred is offered via code share partnerships. Airlines based in North and West Africa should consider the place of code share collaboration in their future network strategy.

Table 7: Seat capacity flown for code share partners (excluding capacity flown for parent companies)

Operating airline	Number of Marketing code share partners	Thousand seats, 2019
ET - Ethiopian Airlines	6	582
SA - South African Airways	5	416
MN - Comair	1	353
KQ - Kenya Airways	5	208
MS – Egyptair	4	147
SW - Air Namibia	2	125
DT - TAAG - Linhas Aereas de Angola	3	113
MK - Air Mauritius Ltd	3	91
WB - RwandAir Limited	1	68
TM - LAM	2	49
HF - Air Cote D'Ivoire	2	35
HM - Air Seychelles	1	30
AT - Royal Air Maroc	2	28
HC - Air Senegal S.A.	2	17
ZD - EWA Air	1	15
AW - Africa World Airlines	1	7
P2 - AirKenya Express	1	3
Total	42	2,287

Source: IATA analysis based on SRSAnalyser data

Table 7 above looks at code share arrangements from the perspective of the airlines flying code share passengers on behalf of marketing airline partners. In 2019 Ethiopian airlines operated nearly 600,000 seats on their aircraft on behalf of six code share partners for flights within Africa. Such an arrangement provides benefits to partner airlines in terms of increased network reach for their customers. The operating airline itself also benefits through increased aircraft utilization and lower unit costs associated with greater traffic volumes than would be achieved independently.

Airline alliance membership

Closer airline cooperation, particularly with international partners, can be constrained by ownership and control restrictions included in bilateral air service agreements that prohibit the cross-border mergers common in other industries. Airline alliances have emerged as a close substitute for mergers to facilitate closer network cooperation.

Four African airlines are members of the Star Alliance and Sky Team global airline alliances as can be seen in Table 8 below. In 2015 the Vanilla Alliance was established at a regional level facilitating coordination between airlines with operations in the Indian Ocean.

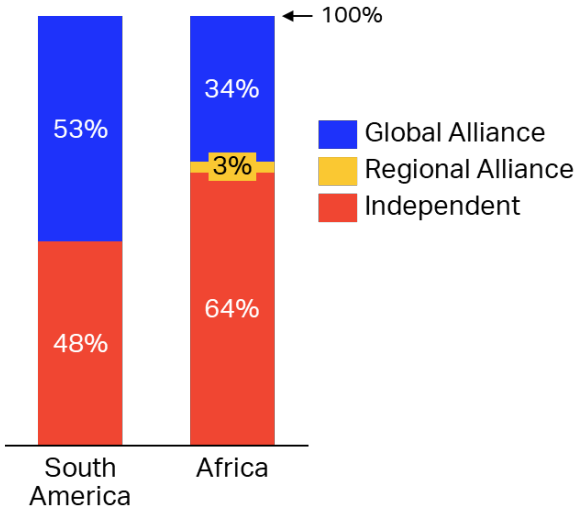
Table 8: African airline alliance membership 2019

Star Alliance	Sky Team	Vanilla Alliance
ET - Ethiopian Airlines	KQ - Kenya Airways	MK - Air Mauritius Ltd
SA - South African Airways		HM - Air Seychelles Limited
MS - Egyptair		MD - Air Madagascar
		IIA - Inter Iles Air

Source: IATA research.
Note Air Austral is member of Vanilla Alliance but classified a European registered airline.

Approximately 37% of intra-African seat capacity is offered by African airline members participating in alliances with the remaining 64% offered by African airlines operating independently as illustrated in Figure 11 below. On a similar basis, there is a higher level of alliance coordination in South America where 53% of capacity is associated with members of alliances.

Figure 11: Proportion of intra-regional seat capacity by airline membership



Source: IATA analysis based on SRSAnalyser data and published alliance membership.
Excludes operations by airlines registered outside of region.

The participation in alliance structures by African airlines may be inhibited by the financial investment associated with alliance membership as well as challenges meeting service standards or other operational requirements stipulated by the alliance body. However, participation in alliances can help significantly extend the global reach of an airline's network of destinations, and contribute to higher traffic volume on their own aircraft associated with feeds to and from the broader alliance network.

Airline franchising, subsidiaries & joint ventures

Table 9 below highlights examples of additional forms of airline cooperation in Africa including subsidiary operations, franchising, joint ventures and minority ownership holdings / equity partnerships in other airlines. These arrangements facilitate even closer coordination between partners, or indeed direct control in the case of subsidiary operations. Ethiopian Airlines has been active in broadening its reach and supporting aviation connectivity through partnerships involving minority ownership stakes. Joint Venture (JV) agreements involving African airlines have been very limited to date. These JV arrangements most closely mimic a full merger through revenue and cost sharing by the venture partners and can facilitate efficiency gains that create benefits for airlines and consumers. It also be noted that airline mergers take place for financial survival. If done successfully, the merged airlines lower costs and enhance demand for their services by creating a wider network, achieving greater cost efficiencies and offering a greater range of seamless connections.

Table 9: Examples of African airline cooperation via ownership stake or other mechanism

Initiative	Type	Details	Country
SA Airlink	Franchise	South African Airways (SA) franchise operation representing a third of SA capacity in 2019; franchise agreement discontinued in 2020	South Africa
SA Express	Common ownership	Collaboration with SA via common government ownership	South Africa
Mango Airlines	Subsidiary / code share	SA low-cost subsidiary, also significant code share collaboration with parent	South Africa
ASKY	Strategic partnership / minority ownership	Ethiopian Airlines (ET) has 40% ownership stake and is technical/strategic partner	Togo
Tchadia Airlines	Minority ownerships	ET has 49% holding in Tchadia and provides fleet	Chad
Ethiopian Mozambique	Subsidiary	ET subsidiary with operations in Mozambique	Mozambique
Malawi Airlines	Minority ownership	ET operates airline under management contract and holds 49% ownership stake	Malawi
Zambia Airways	Minority ownership	According to 2019 announcements, ET	Zambia

relaunch		is to have 45% holding in a relaunched Zambia Airways	
Jambojet	Subsidiary / code share	Kenya Airways (KQ) low-cost subsidiary; also significant code share collaboration with parent	Kenya
Precision air	Minority ownership / code share	KQ held approx. 40% stake (as at 2016)	Tanzania
AF-KLM / KQ Joint Venture	Joint Venture	Air France - KLM and KQ have operated a revenue and cost-sharing Joint Venture on intercontinental routes between Africa and Europe for several years; this agreement was suspended in 2020	Kenya
Royal Air Maroc Express	Subsidiary	Royal Air Maroc (AT) subsidiary operation representing approx. 10% of AT capacity in 2019	Morocco
Tsaradia	Subsidiary / code share	Air Madagascar subsidiary; also significant code share collaboration with parent	Madagascar

Source: IATA analysis based on press search, company websites

Conclusion - Coordination for the future

i. Airlines are competitors but must also cooperate in order to efficiently provide air transport connectivity at scale.

ii. The analysis above shows that while cooperation does exist between African airlines, there is scope for further coordination especially by smaller or medium-sized operators.

iii. This will be particularly important during the recovery from the COVID pandemic where demand will be weaker for some time and airline finances will be further stressed. In most industries that would mean downsizing and consolidation.

iv. Ownership and control restrictions as well as national interests may limit the extent of consolidation in Africa in the near term.

v. However strategic implementation of the forms of airline cooperation examined above will play an important part in ensuring the ongoing sustainable development of air transport connectivity across the continent.

3.3. Mapping out intra-African city-pairs and the degree of connectivity on intra-African routes

The IATA Air Connectivity Index

IATA has developed a connectivity indicator to measure the degree of integration of a country into the global and regional air transport network. It is a composite measure reflecting the number and economic importance of the destinations served from a country's major airports and the number of onward connections available from each destination. The IATA Air Connectivity Index captures important aspects of air connectivity, while at the same time providing a simple and intuitive way to measure and report air connectivity.

The connectivity indicator is based on the number of available annual seats to each destination between 2014 and 2019. The number of available seats to each destination are then weighted by the size of the destination airport (in terms of number of passengers handled at that airport in each year). The weighting for each destination gives an indication of the economic importance of the destination airport and the number of onward connections it can provide (see Appendix A for the detailed methodology).

For example, Beijing airport, as the world's largest airport, is given a weighting of 1 while Johannesburg airport, which handles 23% of the number of passengers handled by Beijing, is given a weighting of 0.23. Therefore, if an airport has 1,000 seats available to Beijing it is given a weighted total of 1,000. But if it also has 1,000 seats available to Johannesburg, these are given a weighted total of 230. The weighted totals are then summed for all destinations served out of a given airport to determine the connectivity indicator (see Appendix x for the detailed methodology).

Another way to illustrate the impact of destination airport weights is to think of a single flight from Addis Ababa to Beijing or Johannesburg. Other things being equal, a flight from Addis Ababa airport to Beijing would receive a higher connectivity score compared to a flight from Addis Ababa to Johannesburg airport (Figure 12). The difference in destination weights reflects the extent to which destination airports are connected to the rest of the global air transport network.

Figure 12: Destination airport weights for flights out of Geneva

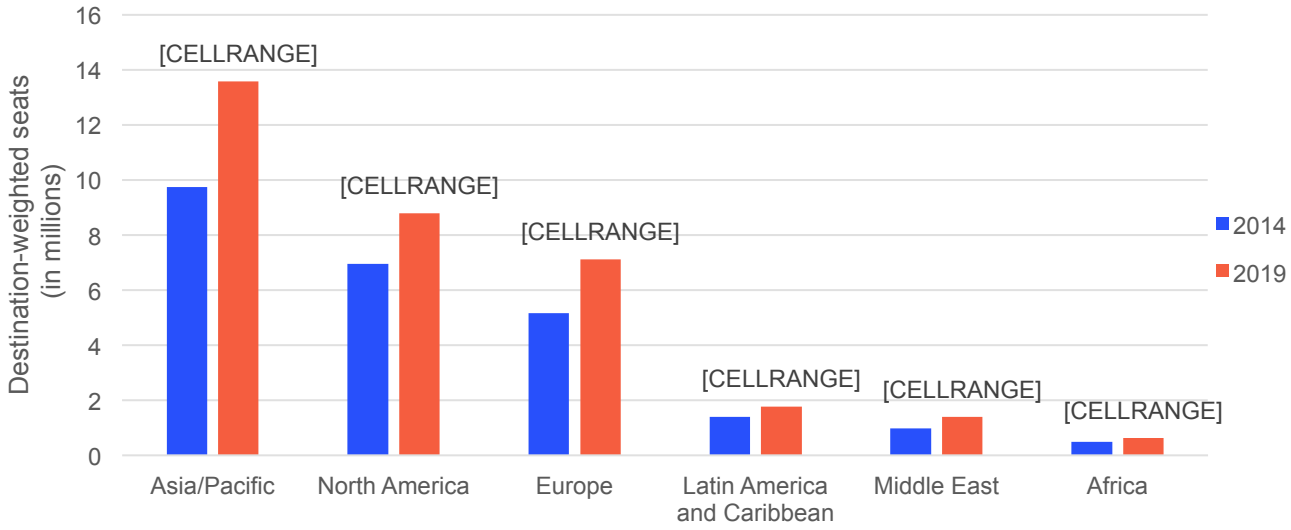
Source: IATA Economics using data from SRS Analyser

Absolute air connectivity

Figure 13 shows the air connectivity indicator by region in 2014 and 2019, as well as the indicator's growth in percentage over the five-year period from 2014 to 2019. The most connected region in the world is Asia. Asia is characterized by a growing domestic regional market, most notably in China, India and Indonesia. The second most connected region is North America, with the United States being the most connected country in the world. In terms of connectivity growth, both Middle East and Asia Pacific have had the highest growth rates over the five-year period from 2014 to 2019, with a growth rate of 40% and 39% respectively.

Africa's cities are the least connected to the regional and global air transport network and economically important cities in the world. Africa's air connectivity grew by 30% over the period 2014-2019 - one of the slowest growths in air connectivity in the world. Yet, Africa is geographically vast, the world's second most populous in the world and home to world's fastest growing economies[57]. In fact, approximately 60 percent of the continent's population lacks access to modern infrastructure, which isolates communities, prevents access to health care, education and jobs, and impedes economic growth, according to the Office of Special Advisor on Africa[58]. Air transport 's unique benefit is to connect cities that cannot be otherwise timely connected, enabling flows of key economic activities and people. The need for improved air connectivity in Africa is pressing.

Figure 13: Air connectivity and growth rates by region (2019 vs. 2014)



Source: IATA Economics using data from SRS Analyzer

Relative air connectivity

The level of connectivity will depend to some extent on the size of a country's economy and the size of its population. Larger economies with sizable populations will naturally be connected to a greater number of destinations and offer more available seats compared to smaller countries. An absolute air connectivity score is not necessarily a measure of quality. Therefore, various alternative measures of air connectivity, which adjust for

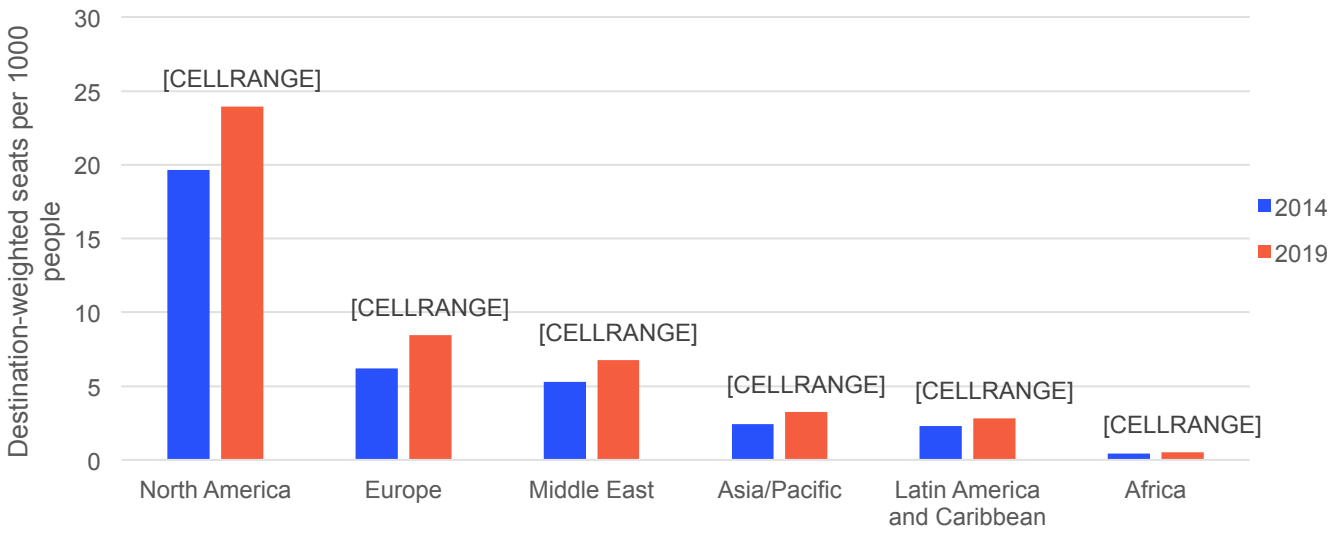
[57] International Monetary Fund, World Economic Outlook, 2019
[58] Office of Special Advisor on Africa (OSSA), "Financing Africa's infrastructure development", 2015

the size of a country's economy or population, can be used to measure and analyze the level of air connectivity. The following section will examine air connectivity adjusting for the population size of a country in addition to reporting absolute air connectivity.

To analyze whether the difference in air connectivity levels in absolute terms is due to the population size, Figure 14 examines air connectivity adjusting for the population size of a country. After adjusting for the population size, North America, which has the second highest absolute connectivity indicator, ranks first. This is not surprising given that Asia Pacific is the most populous region in the world.[59]

Even after adjusting for the population size, Africa is still the least connected region by air in the world. Africa is behind all other regions also in terms of growth in air connectivity relative to the size of the population. The fact that Africa is the fastest growing continent in the world in terms of population[60], highlights the urgent need to improve air connectivity in the continent. Africa's population is believed to be set to double by 2050, and combined with its large geographical size, and underdeveloped overland infrastructure, it makes air transport all the more vital.

Figure 14: Air connectivity relative to population size and growth rates by region (2019 vs. 2014)



Source: IATA Economics using data from SRS Analyzer

Intra-regional air connectivity

A deriving measure from air connectivity is an indicator measuring air connectivity within a region. This measure can be relevant for tracking progress of policy or industry initiatives aimed at promoting connectivity within a given region. The IATA intra-regional air connectivity index can be applied to measure the dynamics of air connectivity post-implementation with the view to assess the effectiveness of a regional initiative.

The destination weights used to calculate the intra-regional connectivity score are different from the destination weights used for the general air connectivity score (shown in section x above). To differentiate between the two,

[59] United Nations, World Population Prospects 2017
[60] United Nations, World Population Dashboard

the air connectivity indicator using destination weights (world to world flights) is labelled as “global connectivity”. The global connectivity weights (i.e. the destination airport weights used for the calculation of the air connectivity indicator) are based on the size of the destination airports in terms of number of total passengers handled in each year globally, while the intra-regional connectivity weights are based on the size of the destination airports in the region in terms of number of passengers originating from the region handled in each year.

The airport destination weights for the intra-regional connectivity analysis of Africa are based on the size of Africa’s airports. Table 10 shows that the airport of Johannesburg (JNB) was the airport where the highest number of passengers were handled in intra-Africa flights in 2019. That is why this airport has the destination weight of 1 in 2019. Cape Town airport (CPT) handled around 52% of the intra-Africa passengers that Johannesburg airport handled, giving this airport the weight of 0.52 (see table 10).

Another way to illustrate the impact of intra-regional destination airport weights is to think of a single flight from Zanzibar to Johannesburg or Cape Town. Other things being equal, a flight from Zanzibar airport to Johannesburg would receive a higher connectivity score compared to a flight from Zanzibar to Cape Town airport. The difference in destination weights reflects the extent to which destination airports are connected to the rest of the intra-Africa air transport network.

Table 10: Intra-regional connectivity: Top 10 destination weighted airports relative to the most connected airport intra-Africa, JNB=1

Rank	Destination Code	Destination City	2019
1	JNB	Johannesburg	1
2	CPT	Cape Town	0.520
3	ADD	Addis Ababa	0.481
4	NBO	Nairobi	0.329
5	DUR	Durban	0.324
6	LOS	Lagos	0.256
7	CMN	Casablanca	0.221
8	CAI	Cairo	0.218
9	ABV	Abuja	0.188
10	ALG	Algiers	0.185

Source: IATA Economics using data from SRS Analyser

Table 11 shows the intra-regional Africa air connectivity rankings in 2009 and 2019 and growth 2019 vs 2019.

South Africa was the most intra-regionally connected country in the Africa region in 2019, closely followed by Nigeria in second position. Ethiopia, Tanzania, and Ghana were three of the markets whose intra-regional air connectivity has improved the most among the biggest aviation markets in the region with growth rates of 484%, 130% and 96% respectively in 2019 compared with 2009. Egypt underperformed among the top aviation markets within Africa and has contracted in terms of intra-regional air connectivity 2019 vs 2009 by 28%. Cairo is one of the continent’s most connected cities, particularly internationally. However, the country has experienced political instability which could be one of the drivers of this contraction.

Nigeria, while managing to retain the position of being the second most intra-regionally connected country in the Africa region in 2019, has experienced a negative growth in its intra-regional air connectivity score in the ten-year period 2009 to 2019 – meaning Nigeria's level of air connectivity decreased over the period. Considering Nigeria is Africa's first and the world's seventh most populous country, Nigeria is a significantly underserved country in terms of air connectivity to the world and within the region. One of the drivers of such negative air connectivity growth in Nigeria can be explained by the low capacity growth in the country. The airline sector in Nigeria has been marred by financial woes and lack of sustainability. However, Nigeria has a favorable demographic profile, combined with continued growth in living standards which underpins strong average annual growth in air passenger demand.

To reach Nigeria's aviation potential and improve air transport connectivity, it is important to create an environment where carriers can flourish, and new business opportunities are created. Parts of the regulatory backdrop are broadly favorable – our analysis on BASAs shows a relatively open regime with very good coverage in the continent. As stated in Chapter 2, Section 1.4, reviewing aspects like costs, including those related to infrastructure and also of air travel itself, will be important to grow capacity and to serve the demand potential.

Amongst the biggest markets, Ethiopia has had the most significant growth intra-Africa, with a connectivity growth rate of 484%, jumping twelve positions in ranking over the ten-year period (from 2009 to 2019). This significant connectivity growth was driven by several factors such as supporting demographics, a successful airline, and a favorable business environment. Ethiopia is Africa's second most-populous country and the continent's fastest growing economy. Political and regulatory reforms, including stabilization within the region (e.g. historic peace agreement with Eritrea), created a favourable environment for profitability, growth and successful expansion. There is nonetheless scope to review the strategies implemented so far, banking on the successes to date and considering how the nation can become more liberalized in its air transport services.

Our preliminary assessment of Ethiopia's BASAs in Part A indicates a nation that is 'Partially-Closed' with a majority of agreements classified as semi-restrictive and restrictive. While the common understanding is that liberalization leads to increased competition, there are also benefits that can be enjoyed – these will be explored in greater detail for each country in the coming chapters. And indeed, in countries that have sound and sustainable aviation sectors such as that of Ethiopia, relaxation of BASAs can offer access to new markets, including those that would otherwise be deemed uneconomical.

Table 11: Intra-regional air connectivity for Africa and growth rates, 2019 vs 2009, 55 selected countries[61]

Country	Intra-regional air connectivity score 2019 compared with 2009 (percentage change)	Ranking 2009	Ranking 2019
South Africa	30%	1	1
Nigeria	-8%	2	2
Ethiopia	484%	15	3

[61] The IATA Air connectivity index' source of available seat capacity is SRS Analyser, a comprehensive database containing passenger and cargo schedules for more than 900 airlines worldwide. SRS Analyser defines regions and countries based on geographical location- for Africa it includes 57 countries including Reunion and Mayotte. The intra-regional air connectivity rankings reflect this.

Kenya	78%	4	4
Zimbabwe	79%	5	5
Egypt	-28%	3	6
Tanzania	130%	14	7
Zambia	23%	6	8
Namibia	17%	7	9
Botswana	40%	9	10
Mozambique	44%	10	11
Algeria	39%	11	12
Ghana	96%	18	13
Morocco	36%	12	14
Mauritius	67%	19	15
Angola	30%	16	16
Uganda	15%	13	17
Democratic Republic of the Congo	85%	22	18
Malawi	39%	21	19
Rwanda	219%	28	20
Sudan	30%	20	21
Ivory Coast (Cote d'Ivoire)	187%	27	22
Madagascar	72%	24	23
Tunisia	25%	23	24
Cameroon	79%	26	25
Senegal	-40%	17	26
Seychelles	247%	36	27
Mali	171%	34	28
Somalia	1017%	49	29
Togo	475%	41	30
Eritrea	633%	45	31
Gabon	94%	33	32
Libya	-77%	8	33
South Sudan	60%	30	34
Congo	-16%	25	35
Niger	402%	44	36
Benin	36%	35	37
Guinea	222%	40	38
Swaziland	-13%	29	39
Lesotho	10%	31	40
Equatorial Guinea	227%	43	41

Burundi	2%	32	42
Chad	291%	47	43
Burkina Faso	62%	37	44
Djibouti	101%	38	45
Mauritania	133%	42	46
Comoros	239%	50	47
Sierra Leone	46%	39	48
Liberia	145%	48	49
Cape Verde	171%	51	50
Gambia	83%	46	51
Central African Republic	470%	52	52
Guinea Bissau	502%	53	53
Sao Tome and Principe	1317%	54	54
Western Sahara	NA	NA	NA

Source: IATA Economics using data from SRS Analyzer

Countries like Angola (ranking 16) and Tanzania (ranking 7) also have comparatively higher inter-Africa connectivity, which our analysis in Part A shows could be enhanced further. Our assessment of these nations BASAs found that they each have predominately semi-restrictive and restrictive air service agreements with other nations. Clearly for both nations, whether it be related to tourism or important trade related businesses, air connectivity is important to economic growth. Considering their stance on some bilateral agreements could help further enhance their air services to the nation and boost sectors of their economy dependent on international business and travel.

Indeed as is the case with Rwanda, ranking a solid 20 among 55 nations in terms in intra-Africa air connectivity, we can see that the significant improvement in 2019 compared to 2009 in connectivity scores (up over 200%) is consistent with a country with a majority share of liberalized BASAs. Larger African carriers serve the nation alongside Rwanda Air. Air Transport in Rwanda is seen as a key to enhancing economic integration in regional and global markets, and in doing so also promoting tourism. To that end, liberalized air services have been complemented with reforms to visa regimes to help the market become more accessible.

The Impact of Liberalization on Air Connectivity in Africa

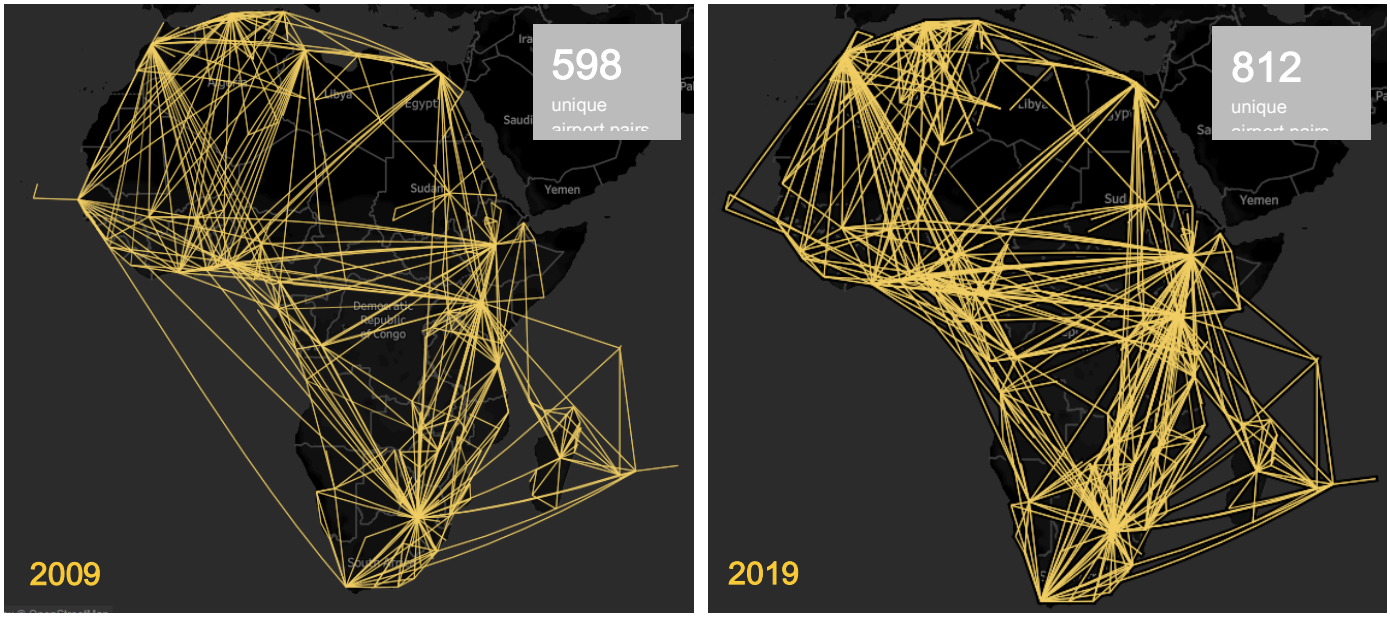
The following section's objective is to map out intra-African airport-pairs and the degree of connectivity for the existing intra-African air services. This section looks at the outcomes – at a more granular level – of the country-level air connectivity within Africa we have studied in the previous section. To provide an overview of the degree of air connectivity and the extent to which African cities are connected to the regional air transport network, this section will examine airport services (airport routes), airline designations (competition and number of carriers per route), airfares charged on intra-African routes and affordability of air travel within Africa.

Analysis of air services within Africa

Figure 15 shows the unique airport pairs in the intra-Africa air transport route network comparing 2019 with 2009. A threshold of one flight per week was used to capture the significant routes. The 10-year growth in number of

airport pairs is not as significant as expected intra-Africa. In 2009 there were 598 unique airport pairs (with more than weekly flight); a decade later this was just 36% higher reaching 812 unique airport pairs (Figure 13).

Figure 15: Unique airport pairs within Africa, 2019 vs 2009



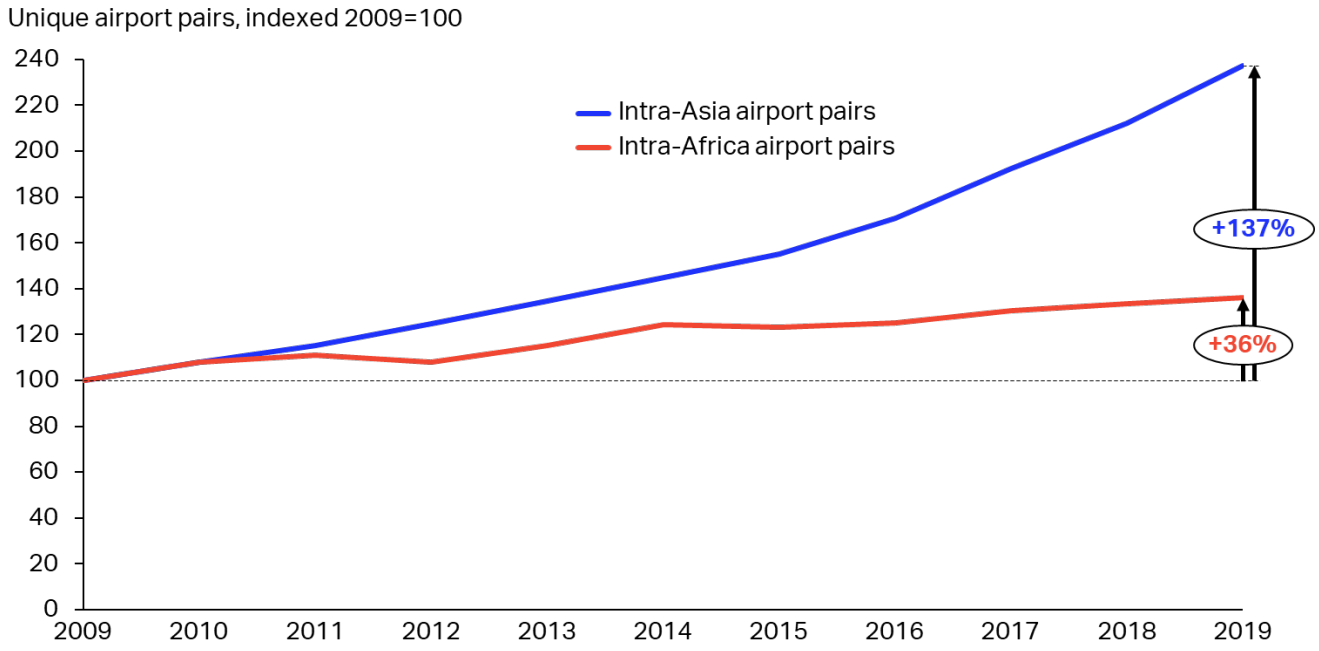
Source: IATA Economics using data from SRS Analyzer[62]

Figure 16 analyses the trend of airport routes in the intra-Africa network in the period from 2009 to 2019 and shows the intra-Asia airport pairs, to provide a comparison. A threshold of one flight per week was used to capture the significant routes. These two emerging markets were compared as Asia and Africa are the most populous regions of the world. These two regions are expected to be top two contributors to population growth worldwide by 2050[63].

Comparing this growth in airport pairs to other intra-regional aviation markets we notice that the growth is significantly larger in Asia. In the same period, Asia's number of airport pairs grew by 137% (Figure 14). Considering that half of the world's potential growth by 2050 is expected to come from Africa[64], significant steps should be taken towards opening the way for improvement in air connectivity within Africa.

[62] This includes both international and domestic intra-Africa routes.
[63] United Nations, World Population Prospects 2017
[64] United Nations, World Population Prospects 2017

Figure 16: Evolution of number of airport pairs in intra-Africa compared to intra-Asia showing percentage change, 2019 vs 2009



Source: IATA Economics using data from SRS Analyzer

Table 12 shows the top five airport pairs within Africa by numbers of flights in 2019. It is not surprising to notice that all airport pairs are domestic. In fact, around 67% of all passengers flows within Africa are domestic.

It is the domestic South Africa aviation market that has the top two airport pairs in terms of flights Tambo International (JNB)- Cape Town (CPT) airports and Tambo International (JNB)- Durban (DUR) airports. Tambo International (JNB), near Johannesburg, is Africa's busiest airport with a capacity to handle around 12% of all intra-Africa capacity (in terms of seats) annually.

Nigeria, even though boasting almost four times the population size of both South Africa and Tanzania, hosts only the fifth largest airport pairs in terms of flights in 2019. As discussed in Chapter 2, the aviation sector of Nigeria and other similar markets is being constrained by a lack of sustainable airlines and high costs of operations and unaffordable air travel itself, making it difficult to take advantage of the largely liberalized air services environment which could afford it great potential for the future.

Table 12 shows the rank in terms of frequency (flights), not capacity. Indeed, if we were to rank the airport-pairs by capacity in terms of seats, the list would be made up of only airport pairs within the South African and Nigerian domestic markets. The number of flights is an important metric to analyze the air services of a region- a higher frequency of flights is an important facilitator of business opportunities, investment, education, and know-how exchange.

Table 12: Top 5 airport-pairs within Africa by number of flights (frequency), 2019

Rank	Origin City, Code, and Country	Destination City, Code and Country
1	Johannesburg, ZA (JNB), South Africa	Cape Town, ZA (CPT), South Africa
2	Johannesburg, ZA (JNB), South Africa	Durban, ZA (DUR), South Africa
3	Zanzibar, TZ (ZNZ), Tanzania	Dar es Salaam, TZ (DAR), Tanzania
4	Praslin Is., SC (PRI), Seychelles	Seychelles, SC (SEZ), Seychelles
5	Abuja, NG (ABV), Nigeria	Lagos, NG (LOS), Nigeria

Source: IATA Economics using data from SRS Analyzer

Table 13 shows the top five international airport-pairs in terms of flights within Africa in 2019. South Africa leads also in terms of international airport pairs in intra-Africa routes with connections from Tambo International (JNB) to Gabarone (GBE) in Botswana and Harare (HRE) in Zimbabwe.

All top five international airport pairs are between countries that share borders except for flights between Ghana and Nigeria. Indeed, the fourth airport-pair with the most flights flown in 2019 within Africa is between Accra (ACC) in Ghana and Lagos (LOS) in Nigeria.

Table 13: Top 5 international airport-pairs in Africa by number of flights, 2019

Rank	Origin City, Code, and Country	Destination City, Code and Country
1	Johannesburg, ZA (JNB), South Africa	Gaborone, BW (GBE), Botswana
2	Johannesburg, ZA (JNB), South Africa	Harare, ZW (HRE), Zimbabwe
3	Nairobi, KE (NBO), Kenya	Entebbe/Kampala, UG (EBB), Uganda
4	Accra, GH (ACC), Ghana	Lagos, NG (LOS), Nigeria
5	Mauritius, MU (MRU), Mauritius	St-Denis, RE (RUN), Reunion

Source: IATA Economics using data from SRS Analyzer

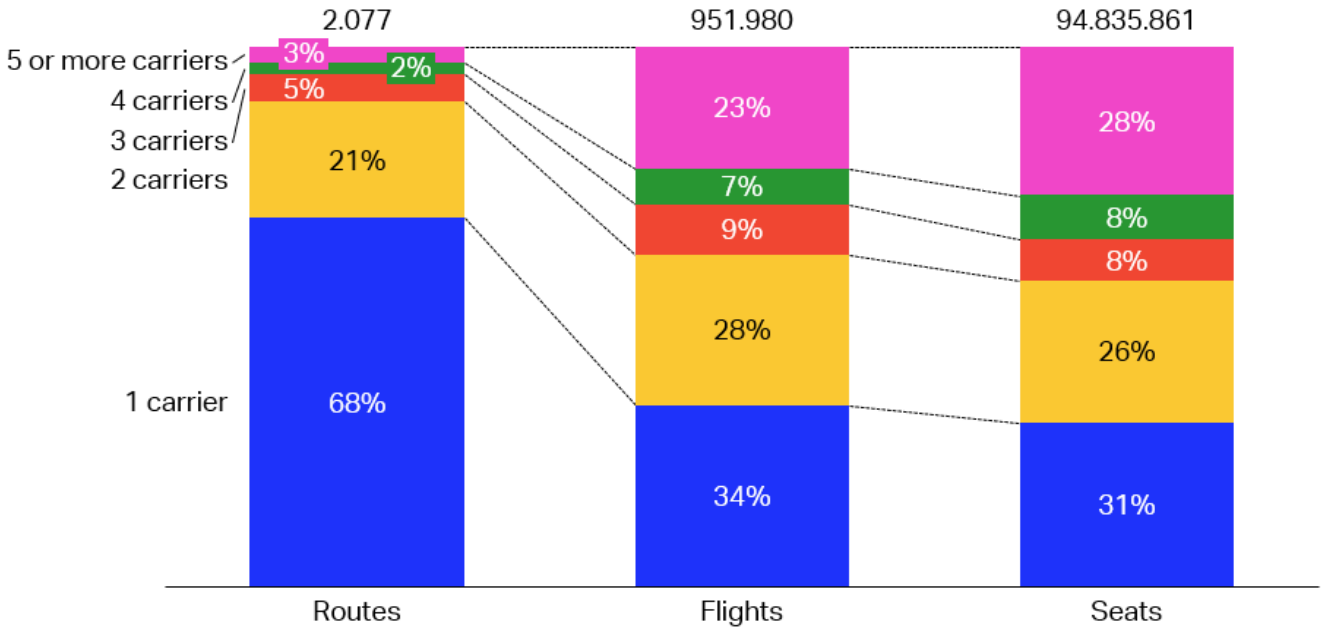
Competition in intra-African routes

Figure 17 shows the number of carriers in intra-Africa routes as a share of routes, flights and seats. The chart offers a snapshot of how competitive these routes are. The routes bar shows the share of the number of routes served by each the number of carriers. The same is shown by the other two bars: the share of flights and seats served by each number of carriers.

At first glance, one might conclude that two-thirds of intra-Africa aviation market is served by single carriers with no choice for the passenger. However, these could be routes with little demand. In fact, when we look at the flights and seats bars, we notice that this share declines significantly once we look at the capacity carried in these routes, in terms of flights and seats, rather than number of routes. What this means is that 34% of flights offer one choice only in terms of carriers, not 68% as shown in the routes bar.

For context however, if we were to compare this to the highly liberalized intra-European routes , there is a higher share that is flown by one carrier, 34% of flights in Africa, vs 26% on intra-European routes. Thus, intra-European routes are more competitive than intra-African routes. In fact, this difference would be expected given that Africa is still at a lower level of maturity in its economic and aviation markets. Once air services become more liberalized, competition will increase, and affordability of air travel can pick up in Africa. And of course, as economies develop, the ability to pay will rise with incomes, meaning there will be more demand for air travel attracting carriers to serve routes.

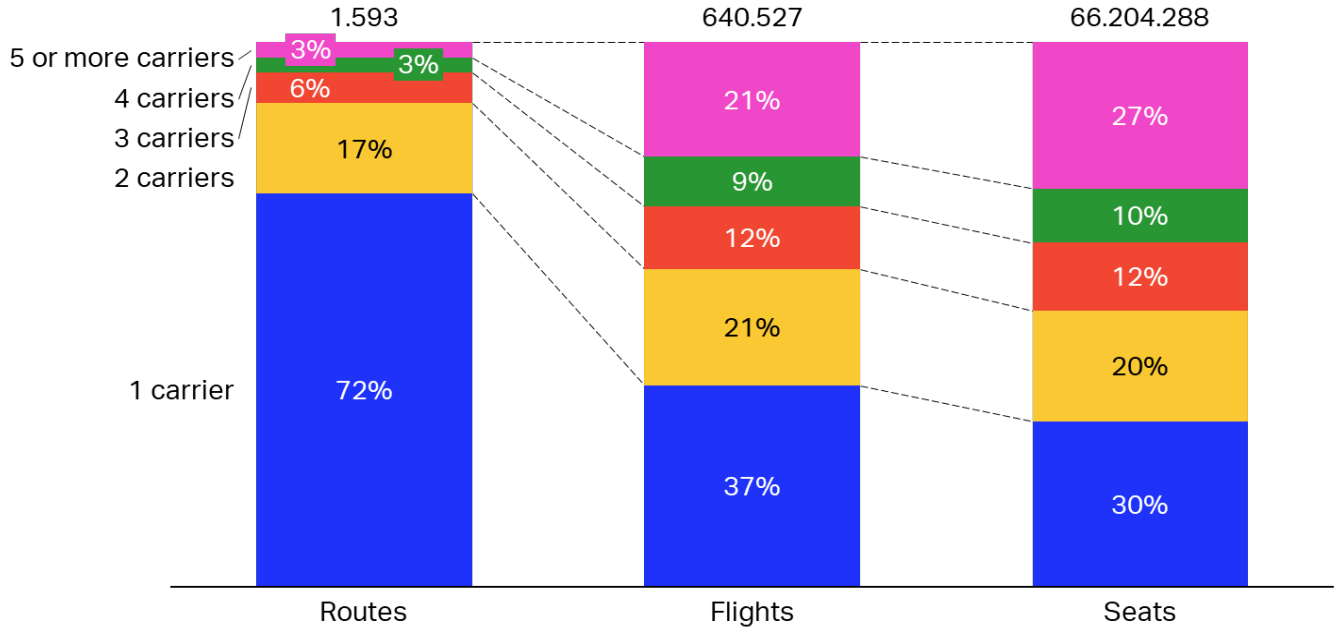
Figure 17: Number of carriers on intra-African routes, flights and seats, 2019



Source: IATA Economics using data from SRS Analyzer

Comparing these figures to 2009 (Figure 18), the differences are not significant. It can be noted that the route with the highest number of seats in 2009, JNB-CPT, was served by 10 airlines in 2009 while in 2019, even though more seats were offered on this route, the number of airlines declined to 6 airlines.

Figure 18: Number of carriers on intra-African routes, flights and seats, 2009

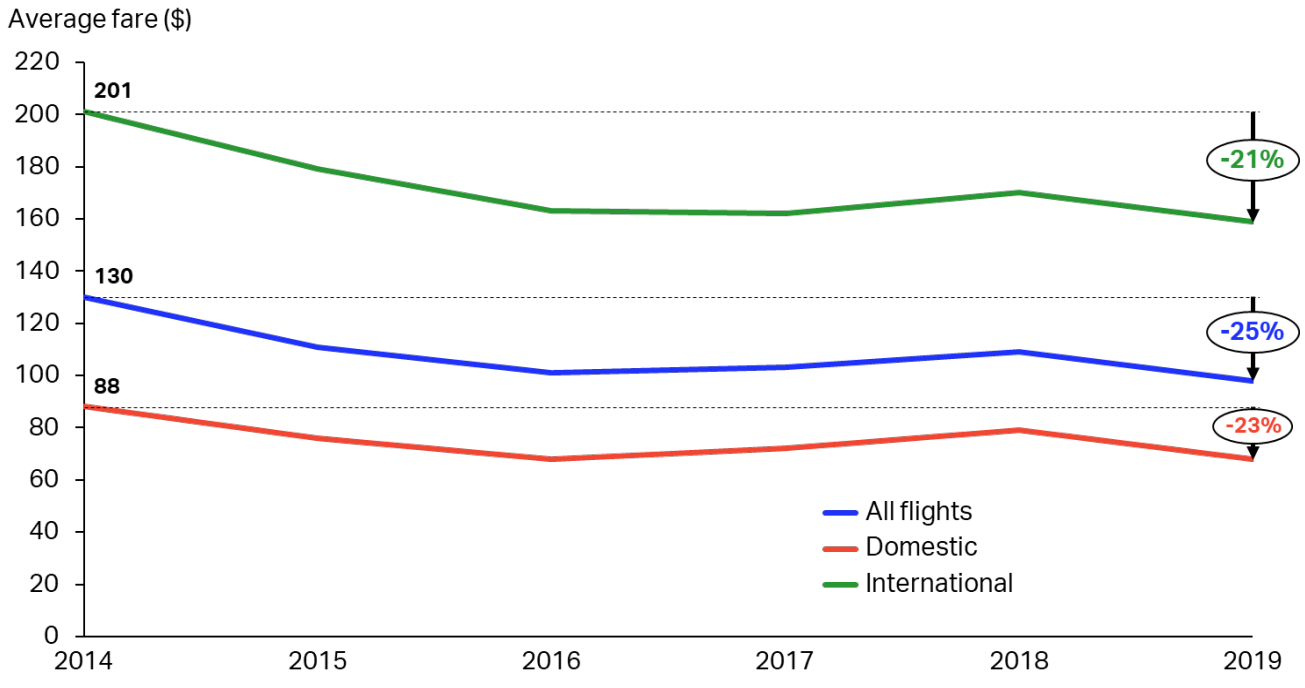


Source: IATA Economics using data from SRS Analyzer

Airfares in intra-African routes

The following section analyses the trends in the airfares in intra-African routes and further compares these trends to the intra-Asian market. Figure 19 shows the actual fare evolution (in $) for intra-Africa domestic, international, and average of all flights, 2014 to 2019. The biggest decline in the airfare happened in the domestic intra-Africa flights, falling by 23% while the international intra-Africa airfare has fallen by 21% comparing 2019 with 2014. In both types of intra-African air markets, there has been an increase in fares in 2018 by 10% for domestic fares and 5% for international fares.

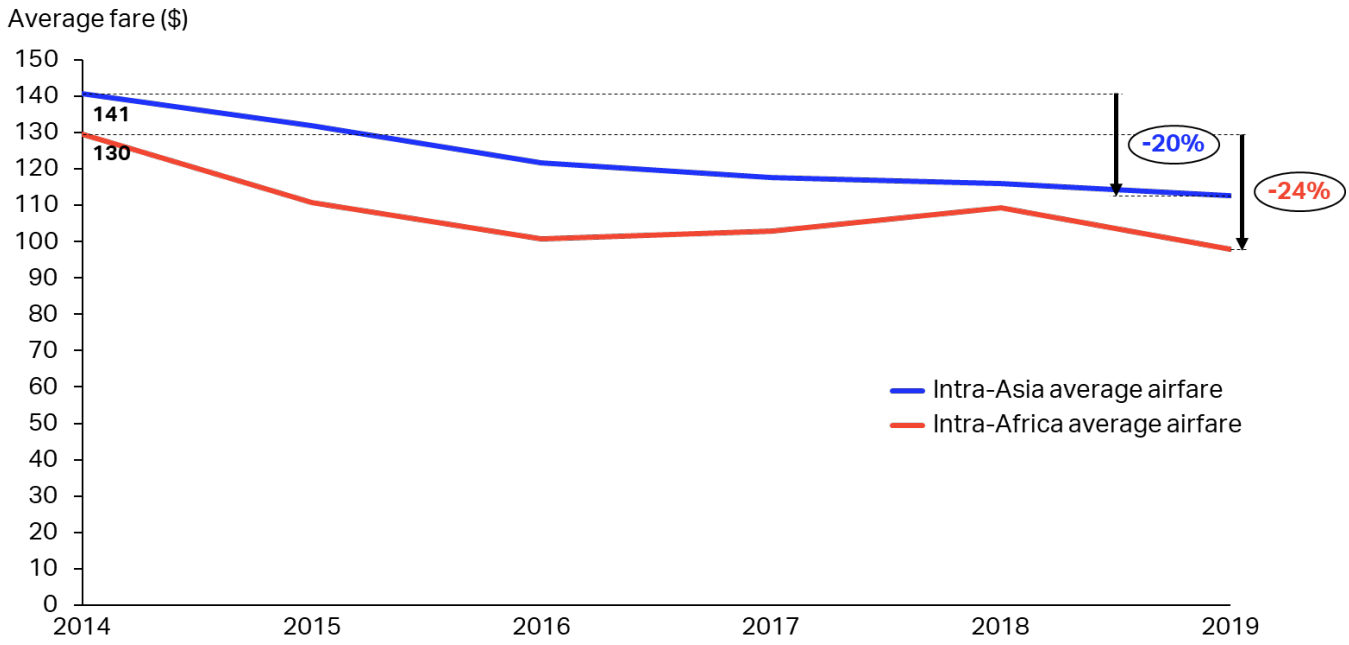
Figure 19: Actual fare evolution (in $) for intra-Africa domestic, international, and average of all flights, 2014 to 2019



Source: IATA Economics using data from DDS

Figure 20 shows the actual airfare evolution of intra-Africa compared to intra-Asia flights in the period 2014 to 2019 to benchmark the intra-Africa fares against another emerging populous market. The trend in the five-year period has been downward for both regions with intra-Africa flights reducing the airfare cost by more (24%) than intra-Asia flights (20%). As expected, average fares in intra-Asia flights are higher than intra-Africa flights. However, Asia's GDP per capita was almost four times higher than Africa's in 2019[65] while the average airfare is only 8% lower.

Figure 20: Actual fare (in$) evolution of intra-Africa compared to intra-Asia flights in the period 2014 to 2019



Source: IATA Economics using data from DDS

Affordability of air travel

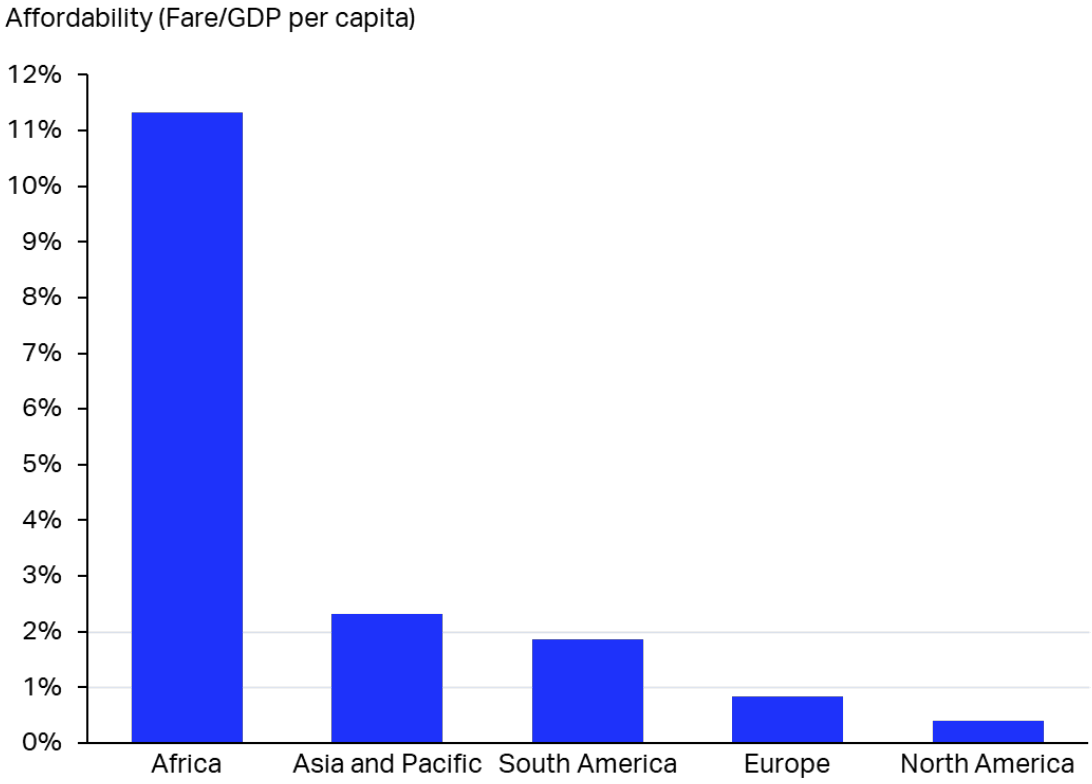
Figure 21 shows the affordability of air travel by region expressed as the fare cost as the proportion of per-capita GDP in 2018. The airfare used in this section analysis is an average fair of all routes from the region to the world, not only within the region.

[65] United Nations, World Population Prospects 2017

Africa is by far the region where the airfare is the highest proportion of the income. In fact, a fare takes up around13% of the annual income of Africa while in other regions is only a fraction of that. For North America and Europe is a mere 0.4% and 0.8% while for other emerging markets such as Asia Pacific and South America the fare as a proportion of the per-capita GDP is 2.3% and 1.9% respectively.

We would expect to see Africa where Asia and South America are in terms of affordability. Given that in Africa the GDP per capita is significantly lower – almost around four times lower than Asia Pacific and five times than South America[66] – we would expect it to translate into a lower fare. On the contrary, the average fare in Africa is higher in absolute terms than all other regions. Further collaboration would help reduce the fare, as evident from other studies[67]. This would translate in an increase in affordability of air travel for the African population.

Figure 21: Affordability of travel, average fare cost as proportion of per-capita GDP, in all routes 2018 by region



Source: IATA Economics using data from DDS and International Monetary Fund

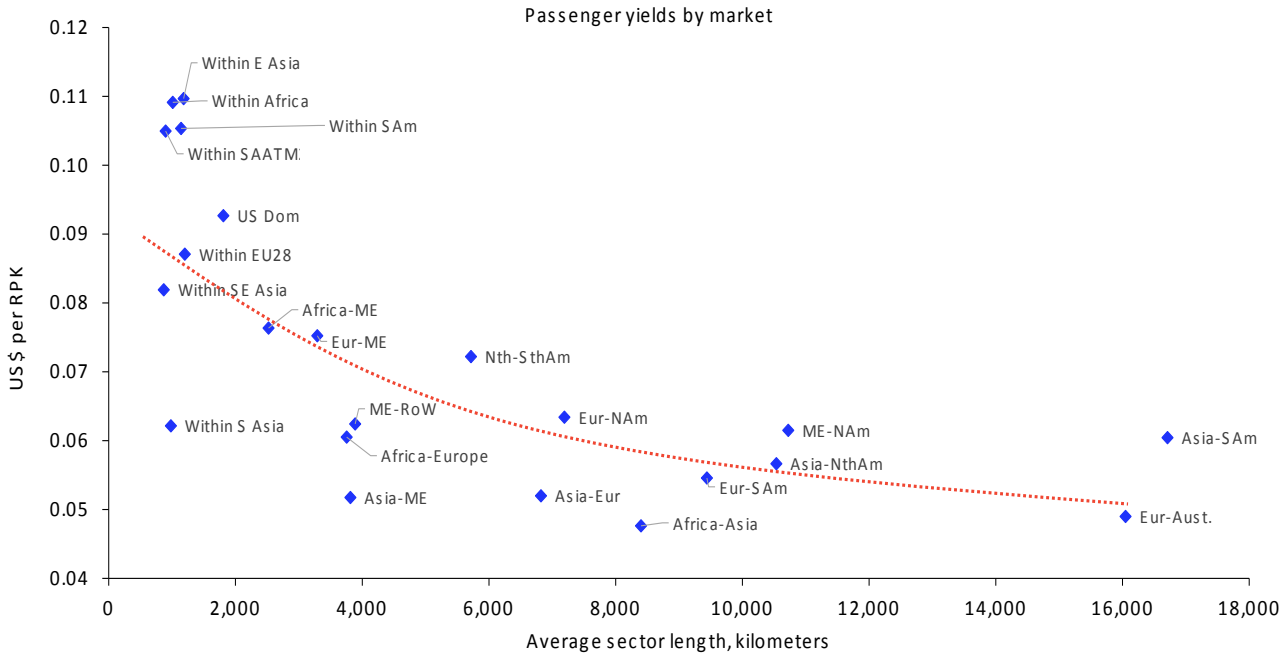
As mentioned in the previous section, air fares in Africa are higher than other regions. To analyze whether this difference in fares is related to the different trip lengths, Figure 22 shows the comparison of passenger yields by market and the average sector length. Yield is the average fare per passenger per kilometre.

We expect that when distances by air are shorter, the trip becomes more costly per unit. This is shown also from the red line of the chart. However, the chart shows that this is not the case for intra-African routes. For comparison purposes, we found that intra-South America yield is lower than intra-Africa flights for a similar

[66] International Monetary Fund, World Economic Outlook, October 2020
[67] Intervistas, Transforming Intra African Air Connectivity: The Economic Benefits of Implementing the Yamoussoukro Decision, 2014

average sector length. Even adjusting for length, intra-Africa flights are more expensive for users of air transport. More needs to be done to make it more affordable for the future.

Figure 22: Comparison of passenger yields by market and the average sector length



Source: IATA Economics using data from IATA DDS

Conclusion

i. Although Africa is home to 17% of the world's people, it accounts for less than 2.5% of the passenger traffic[68]. Africa's air connectivity growth has been one of the slowest in the world. Yet, Africa is

[68] Aviation Benefits Beyond Borders, 2020

geographically vast, the world's second most populous in the world and home to world's fastest growing economies.

ii. Air transport 's unique benefit is to connect cities that cannot be otherwise be connected in a timely manner, enabling flow of key economic activities and people. When placed in the global context for comparison, we see even more clearly that the need to improve air connectivity within Africa is pressing.

iii. In terms of airport pairs growth, intra-Africa number of airport pairs has grown much slower than in intra-Asia (30% vs 137% respectively).

iv. In terms of competition, we also see less activity than in more developed regions. This difference is expected given that Africa is still at a lower level of maturity of its aviation market.

v. Air travel in Africa is not affordable to a large majority of the African populace. Once the ability to pay and affordability of air travel picks up in Africa, there will be more demand for air travel which in turn will lead to routes being served by more carriers. A driver of the increase in affordability will be the liberalization of the intra-Africa market.

vi. In terms of affordability, Africa is by far the region where the airfare is the highest proportion of the income. Given that in Africa the GDP per capita is significantly lower – almost around four times lower than Asia Pacific and five times than South America[69] – we would expect it to translate into a lower fare. On the contrary, the average fare in Africa is higher in absolute terms than all other regions.

vii. Further coordination amongst airlines would help reduce airfares across Africa, as evident from other studies[70]. This would translate in an increase in affordability of air travel for the African population.

viii. Improved air connectivity brings about wider economic benefits, beyond the user. These are effects in the economy that extend beyond the immediate users of the air transport networks – households, businesses and the government.

ix. It is important to note that these effects are different from what is often described as the economic benefits of aviation where the main focus is on air transport entities (airlines, airports, ANSPs, manufacturers and suppliers) as employers and generators of economic activity.

The benefits of a liberalized air transport market in Africa will be studied in detail in in the coming chapters.

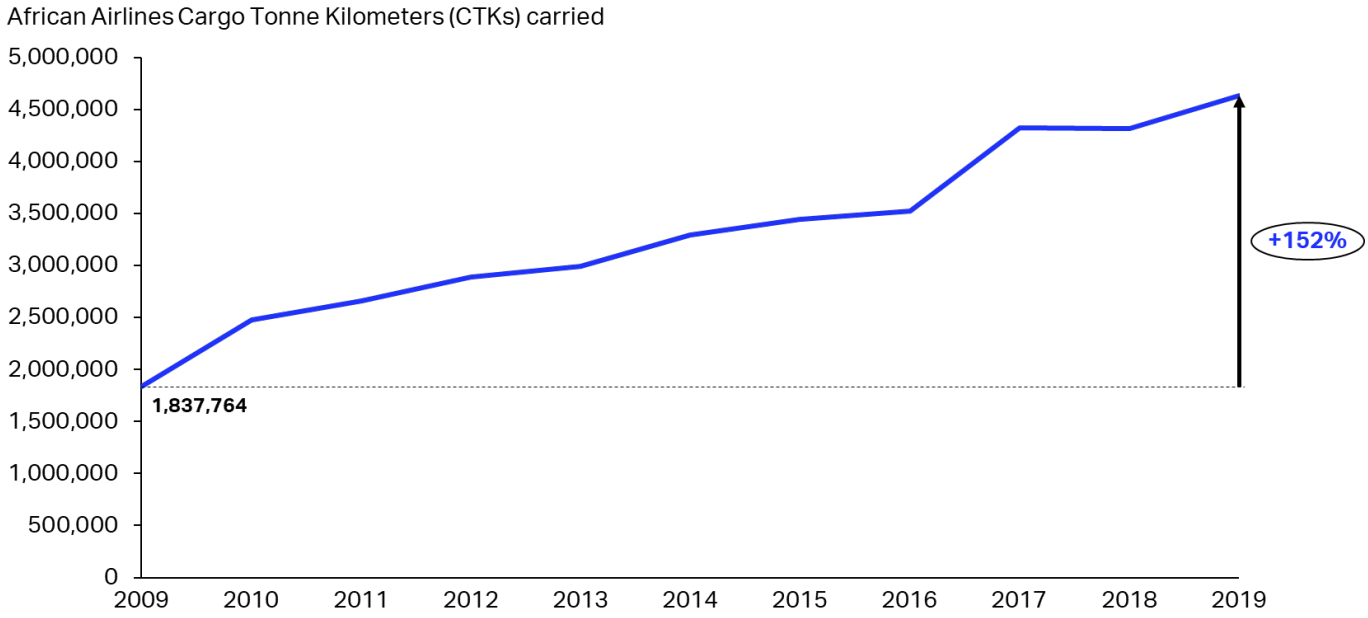
3.4. Snapshot of Africa's Air Cargo Movements

Africa is home to about 17% of the world's population which supports an expanding middle class with increasing spending power. As a result, the growth in economic activity and trade in Africa during the past decade has been supportive of air cargo demand. Business relationships centred around trade and foreign investment with nations like China, the United States, France, and the Netherlands, have boosted the need for air transportation of cargo. As a result, the continent's airlines have increased cargo tonne kilometres (CTKs) by 152% in 2019 compared with 2009.

[69] International Monetary Fund, World Economic Outlook, October 2020

[70] Intervistas, Transforming Intra African Air Connectivity: The Economic Benefits of Implementing the Yamoussoukro Decision, 2014

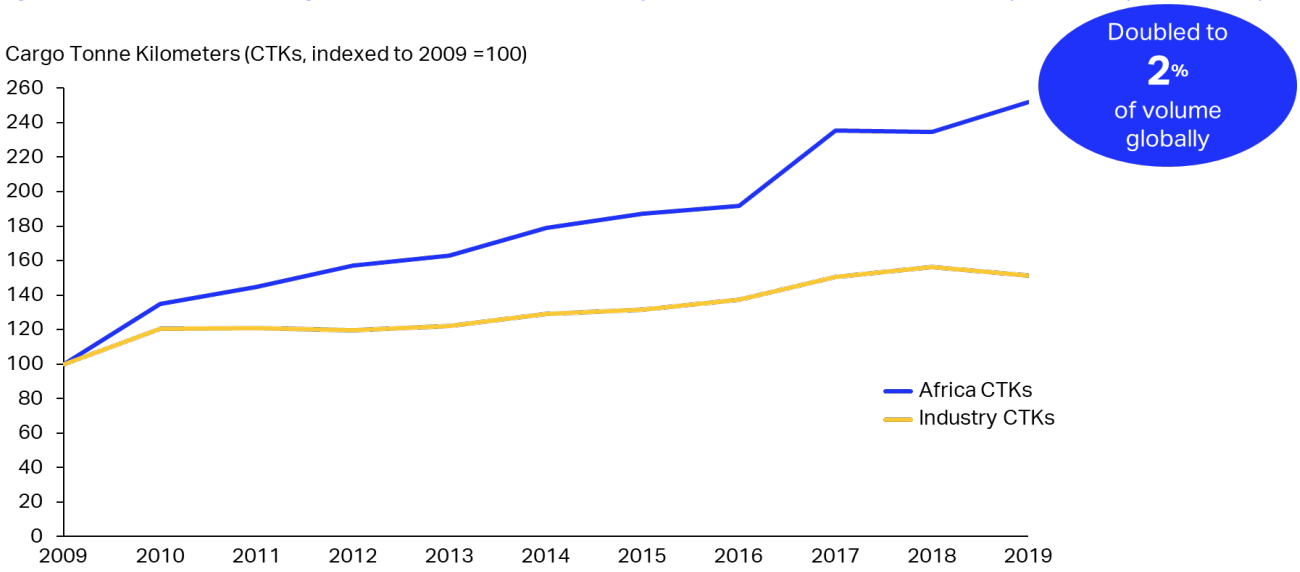
Figure 23: Evolution of Cargo Tonne Kilometers (CTKs) flown by African airlines 2009 to 2019



Source: IATA Economics using data from IATA Statistics

African airlines' CTKs have grown faster than the industry CTKs in the ten-year period from 2009 to 2019 (Figure 24). The industry CTKs have grown by around 51% in 2019 compared to 2009.

Figure 24 Evolution of Cargo Tonne Kilometres flown by African airlines and all industry airlines (2009-2019)

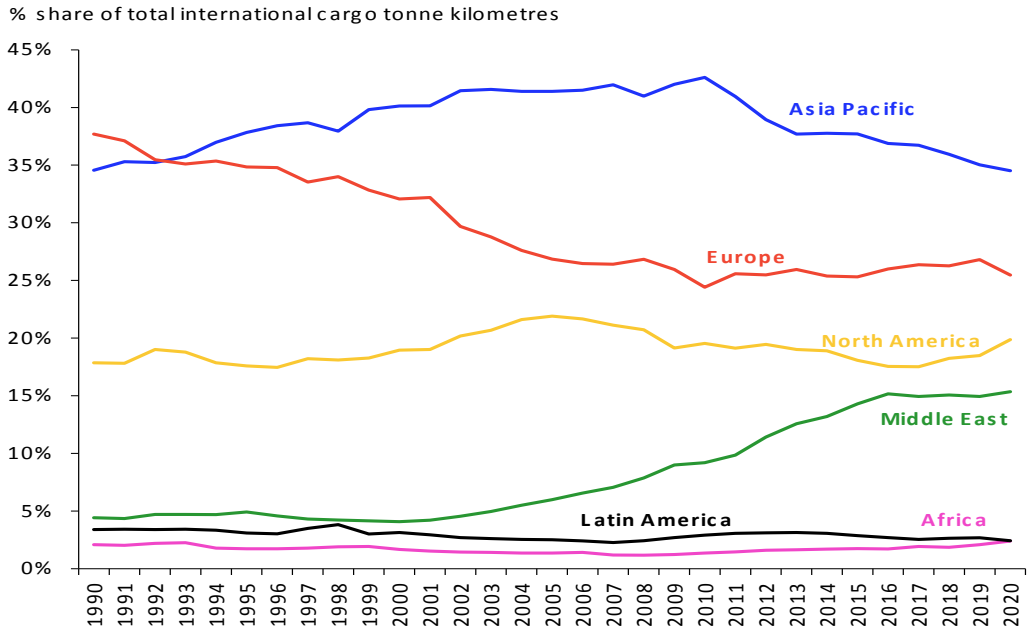


Source: IATA Economics using data from IATA Statistics

In the context of the COVID-19 pandemic in 2020, African airlines prioritized air cargo and topped the growth chart for the year. African airlines international CTKs increased by 1.9% in 2020 compared with 2019, the only region to accomplish positive growth in volumes during the year of the pandemic, which is indeed worth noting.

Putting the performance into context, we see there is ample room for further expansion in African airlines air cargo activity. Currently, they occupy about 2.4% of global internal CTKs. The solid performance of 2020 enabled African airlines to catch up with Latin American carriers with both occupying a similar share of global international CTKs. Increases in network size and capacity offered on relevant routes will support continuing performance of air cargo in Africa.

Figure 25: Regional shares of total international CTKs



Source: IATA Economics using data from IATA Statistics

Chapter 4: Dashboard mapping countries based on their adherence to the YD

One of the key outputs of the project is a coherent and user-friendly dashboard, which amalgamates and summarises the work under Chapters 1 to 3 of the study. We have used the relevant content from our work in the previous sections to compile the Dashboard content. This content will allow the Dashboard to:

- present the member States of the African Union showing how favourable their operating and regulatory environment is and how that translates to preparedness for the implementation of the Yamoussoukro Decision and operationalization of the SAATM;
- provide information on the various subcomponents which underpin the assessment of the level of preparedness for each member State.

The Dashboard content is summarized in the table below. The left-hand column includes all the descriptive information about the nation and aviation sector at a macro level, while the right-hand column contains all the SAATM Enablers which are critical to assessing the nations preparedness for SAATM implementation, as well as our country level assessment of air service liberalization.

Table 14: Dashboard content

National and Aviation Descriptors	SAATM Enablers & Air Service Liberalization

Population	Level of Air Service Liberalization (based on our BASA Analysis)
GNI per capita (standard of living)	IOSA Airline
2019 Air Passengers Carried	Effective Implementation of ICAO SARPS
2039 Forecast Air Passengers Carried	Airport Security
Travel and Tourism Contribution to GDP	Airport Infrastructure
Share of Africa Cargo Market	Optimized infrastructure status - air
Visa Openness	International Treaty Ratification
Intra-Africa Connectivity Index	*SAATM Preparedness findings*
	SAATM Preparedness assessment
	SAATM Concrete Measures level of implementation
	MOI Signatories

The Dashboard content described above will be used to create an online Dashboard that will be housed on the SAATM Advocacy Campaign Website.

PART 2:
Value and Benefits of SAATM for the Member States of the African Union

Chapter 5: Analysing the Impact of Air Transport Liberalization - Overview

The next several chapters will provide a comprehensive overview and analysis of the impacts of SAATM air service liberalization. Our analysis combines global evidence on the impacts of liberalizing Bilateral Air Service Agreements (BASAs) with local data, analysis and understanding to provide a robust examination of the user, economic and social impacts of liberalization. The next chapters present the technical work including research and analysis which has fed into the advocacy and communications materials.

5.1. Research Approach

The following research methodology was undertaken in order to derive evidence-based and robust results and recommendations, as summarised in Figure 26.

Further details on the methodology are provided in the relevant sections of this report. Given the unprecedented impact of the COVID-19 pandemic on not just the aviation industry but also the economies of Africa, the report also considers the implications for air service liberalization.

Figure 26: Research Approach

Chapter 6: Evidence on the Impact of Air Service Liberalization

A comprehensive literature review was conducted, with particular focus on research and papers specific to the African continent. Over 40 relevant papers were examined and vetted across multiple sources including:

- Academic journals, papers and textbooks (e.g., peer-reviewed journals such as the Journal of Air Transport Management, Transport Policy, the Journal of Transport, Economics and Policy, etc.);
- Papers published by private public policy institutes and industry trade associations; and
- Governmental sources including filings, submissions, policy statements, carrier selections, dockets and other policy documents on issues related to air service liberalization and its various impacts.

The purpose of the literature review is to bring together all the relevant evidence to demonstrate that benefits of liberalization have been well established and are based on credible analysis and historical experience. They were also used to provide parameters or benchmarks for the modelling analysis (described further in Chapter 4).

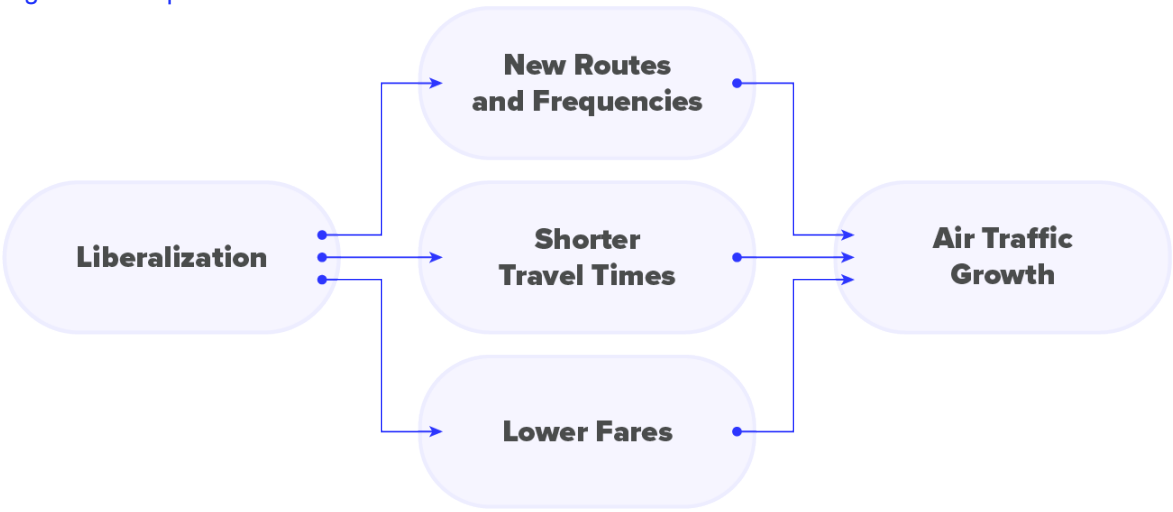
The evidence collected falls into one of three categories as summarised below

6.1. Impact of Liberalization on Aviation

There have been many studies researching the impacts of BASA liberalization on aviation markets around the globe. This research has focussed on the impacts to aviation markets arising from liberalization, with a number of key themes arising:

- Increased number of air carriers competing in the market, improving the service offering and pricing for passengers. In particular, the growth of low cost carriers (LCCs) is closely linked to air service liberalization.
- Increased routes and connectivity. Liberalization led to new routes being operated and to higher frequencies on existing routes, improving connectivity, choice and travel times for passengers.
- Reduced fares. In many cases, liberalization has led to lower fares for passengers, due to greater competition and improved air carrier efficiencies.
- The combination of increased competition, new services and lower fare led to significant increases in air traffic volumes, reflecting the greater accessibility of aviation for business and personal purposes, as summarised in Figure 27.

Figure 27: Impacts of BASA Liberalization on Aviation Markets



In general, the literature does not consider the above themes to be mutually exclusive from one another, but rather relates them through a series of different channels and mechanisms. For example, it has been well established that air service liberalization facilitates and promotes increased competition levels largely through reductions in overall entry costs for potential stakeholders. In this case, barriers of entry for potential participants within the market are greatly reduced the more liberalized aviation markets become, making it easier to operate at profitable levels. An often-cited example is the prevalence of LCCs across more liberalized routes/markets. This competition in turn allows for more consumer choice, thereby directly leading to a decrease in air fares and increase in traffic demand along certain routes.

The most relevant and recent literature highlighting the above themes include:

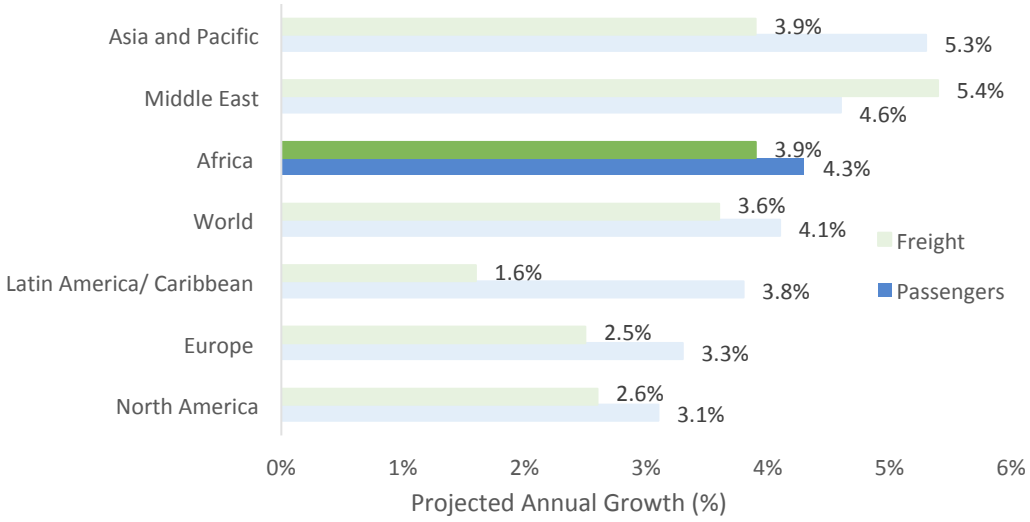
- **European Commission (2003)** - liberalization of the EU air market (the single aviation market) led to the number of city pairs served increasing by 74%, a 34% reduction in average fares and total seat capacity increasing by 105%.
- **Abate, M., & Christidis, P. (2020)** - analyzed improvements in air service agreements between select EU member and third-party countries and found that such agreements have reduced air fares between 6%-23%, generated a 27% increase in passenger demand levels, and has led to higher overall capacity utilization rates, and other efficiency improvements.
- **Fu, X. et al. (2010)** - study the impacts of air transport liberalization policies on economic growth, traffic volumes and traffic flow patterns. Specifically, the authors are primarily interested in investigating and understanding the mechanisms leading to such changes. Conclusions from the paper state that liberalization has led to substantial economic and traffic growth, allows airlines to optimise their networks within and across continental markets, which in turn alters and generates new traffic flow patterns, and allows for the expansion of low-cost carriers into the market. This results in increased competition and traffic demand levels, capacity utilization, flight frequencies, and lower pricing and entry costs, etc.
- **Zhang, Y., & Findlay, C. (2014)** – using policy indices to quantify the restrictiveness of aviation regimes across 19 economies throughout the Asia-Pacific region, the authors attempt to establish the relationship between passenger demand levels and air transport liberalization policies. Results from city-pair data suggest that more restrictive air liberalization policies have stunted passenger traffic, in addition to causing reductions in bilateral tourist flows. Specifically, the authors find that more liberalized routes had on average 24%-27% higher passenger levels when compared to more restrictive routes.

- **Burghouwt et al., (2015)** - found that passengers have benefited from liberalization through lower air fares, increased route choices and increased frequencies; some airlines have not prospered, but low cost carriers in Europe did expand post-liberalization.
- **Cristea et al., (2014)** - examining the various U.S. open skies agreements found that after five years, countries that signed open skies agreements with the U.S. had, on average, 18% higher traffic over countries that had not signed; fares were also lower after signing an open skies agreement.

6.2. Emerging Evidence of Air Service Liberalization Impacts in Africa

Africa represents a prosperous and rapidly growing aviation market, much of which is a direct result of the regions emerging industrial base and increasing population. For example, according to the most recent Aviation Benefits Report, over the next 25-years, passenger and freight traffic levels across Africa are projected to grow by approximately 4.3% and 3.9% year-over-year, respectively, which is significantly higher when compared to than Europe, North America, and the Latin America & Caribbean regions but below that of Asia and the Middle East.[71]

Figure 28: Projected Annual Growth of Total Passenger and Freight Traffic by Region Up To 2045



Source: Industry High Level Groups 2019 Aviation Benefits Report.

Empirical research on the industry and economic impacts of liberalization in Africa has been limited. However, over the last several years, an increasing amount of attention has been paid towards explaining the impacts and benefits of air service liberalization across the region. As with the general benefits of air service liberalization, much of the African literature centres around the core themes of market access, reductions in passenger air fares, increased passenger demand levels, better connectivity, and the wider economic benefits of air service liberalization, etc.

[71] ***Aviation Benefits Report 2019.***2019.https://www.icao.int/sustainability/Pages/IHLG.aspx. 10 February 2021.

Recent papers have found evidence of market changes following BASA liberalization that are similar in nature to found elsewhere in the world:

- **Oluwakoya, A (2018)** - found that there are statistically significant differences in both passenger traffic flows and aircraft movements in pre- and post-liberalization era Nigeria. In this particular case, the researcher found that this difference was slightly larger for passenger movements when compared to aircraft movement, where passenger traffic flow increased between 24% to 30% along select routes.
- **Megersa, A., & Kincaid, I. (2018)** - using a panel data set of traffic flows between East African Communities ("EAC"), Ethiopia, and other African countries, found that improvements in liberalization led to lower air fares, higher flight frequencies, and higher levels of traffic demand. Fully liberalized routes had on average 9% lower fares and 41% higher flight frequencies when compared to non-liberalized routes. Interestingly, the authors conclude that partial liberalization of air routes does not produce similar effects when compared to fully liberalized routes.
- **Njoya, E, Christidis, P., & Nikitas, A (2018)** – using data over a 15-year period that liberalized routes between 28 African and 11 European countries (Europe-Africa traffic flows) led to a reduction in average passenger air fares by approximately 14%, along with a 28% increase in departure frequencies, Moreover, these liberalized routes saw the emergence of several low-cost carriers enter the market, which placed further downward pressure on average air fare levels.
- **Abate, M (2016)** - examined the impact of bilateral agreements on air fares and frequency across 20 routes between Addis Ababa, Ethiopia and destinations in Africa using traffic data from 2000 to 2005. The analysis found that routes operating under liberal bilaterals had 35-38% higher frequency when compared to more restrictive bilaterals, all else being equal.
- **Ismaila, D., Warnock-Smith, D., and Hubbard, N. (2014)** - analysed traffic data from 2009 and 2010 for Nigeria and found that continued liberalization of Nigeria's air bilaterals could result in an increase in air passenger traffic ranging from 35% to 137%.

6.3. Aviation and Liberalization Impacts on the Wider Economy

Air travel is a derived demand; very few passengers travel purely for the sake of it but rather for some other purpose – to conduct business, to move goods to market, to visit friends and family, to vacation, etc. Therefore, when air travel becomes cheaper and more convenient, it can benefit other sectors of the economy. There is an extensive body of research outlining the wider economic and socio-economic impacts of air service liberalization. These benefits occur largely through the following channels:

- **Tourism** – aviation facilitates the arrival of larger numbers of tourists to a country. This includes business passengers and leisure tourists. Tourist spending can support a wide range of tourism-related businesses: hotels, restaurants, entertainment and recreation, and car rentals, which in turn generates larger aggregate economic benefits;
- **Trade** – aviation provides connections to export markets for both goods and services;
- **Investment** – the availability of air services is a key factor company's take into account when making decisions about the location of offices and manufacturing plants; and

- **Productivity** – aviation facilitates access to new markets, enabling businesses to achieve greater economies of scale. It also enables companies to attract and retain high quality employees.

Collectively these are referred to as the catalytic impacts or wider economic benefits of aviation. A body of research has documented and quantified the linkage between aviation and economic development including:

- **Laplace, I., Lenoir, N., & Roucolle, C. (2019)** - studied the impact of BASA liberalization amongst a group of ASEAN countries, including Cambodia, Laos, Myanmar, the Philippines, and Vietnam. They estimated that such BASA liberalization generated year-over-year increases in real GDP levels between 1%-6%.
- **ACI Europe (2015)** – econometric research found that each 10% increase in air connectivity resulted in a 0.5% increase in per capita GDP due to catalytic effects. Based on this research, it was estimated that the catalytic impacts of aviation resulted in 7.9 million jobs and € 427 billion across Europe.
- **Boileau, D., & Vesselovsky, M. (2013)** – examined the impact of BASAs and international trade levels for Canada, finding positive and statistically significant effects. The results indicated that, increases in liberalization can correspond to increases in trade by approximately 53% to 269%, depending on which type of trade is examined. In this particular case, the largest benefits occur in commercial services trade, while the lowest impacts stem from merchandise related trade.
- **PWC (2013)** - a study for the UK Airports Commission found that for the UK, a 10% increase in international seat capacity led up to a 7% increase in trade; the impact on goods exported was larger than services exported, while service imports would grow more than service exports.
- **Poole, (2010)** - found that a 10% increase in business travel by non-U.S. residents led to a 1.2% increase in the volume of exports from the U.S.
- **Bel and Fageda (2008)** - found that a 10% increase in supply of air service was associated with a 4% increase in the number of large firm headquarters located in the corresponding urban area.
- **IATA (2006)** - a survey of 625 businesses in five countries (China, Chile, United States, Czech Republic and France) found that 25% of sales were dependent on the availability of sufficient air transport links and 30% of Chinese firms reported that they had changed investment decisions because of constraints on air services (IATA, 2006).

Some research has also focussed on the wider socioeconomic benefits for Africa arising from improve air connectivity. These include:

- **Njora, E., Semeyutin, A., & Hubbard, C (2020)** - Using both a partial and general equilibrium model find that air service liberalization leads to increases in household welfare levels, citing Kenya as an example. Specifically, the researchers find that depending on the country in which air connectivity improvements are made, Kenyan household welfare could increase anywhere between 2%-95%, increase real GDP levels between 2%-24%, and improve household income levels from 1%-15%.
- **Njoya, E. (2020)** – using data from Egypt, the research assessed the link between liberalized air transport policies, tourism, and wider economic benefits. The findings reveal that reforms focused on reducing the prices of air transport services and enhancing productivity are positively associated with higher GDP growth. Moreover, price-reducing reforms increase tourism exports, GDP, labour demand and the outputs for a variety of sectors.
- **Seetanah et al. (2017)** – assessed the impacts on tourism development generated through improvements in air service liberalization for the country of Mauritius. Using an autoregressive distribution model over a 45-year period, the researchers find that the introduction of more liberalized air service policies have had a positive and statistically significant effect on the levels of tourism within the country, leading to several

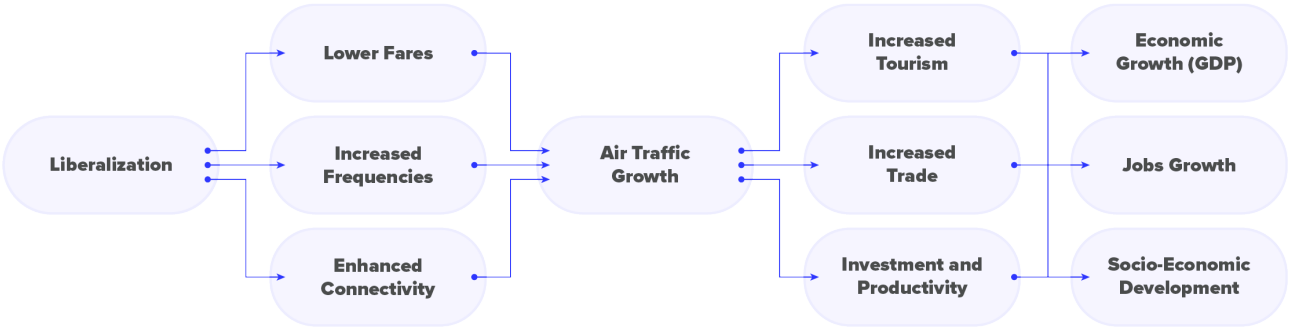
additional economic benefits for the country. This includes generating positive impacts on key economic series such as GDP, expenditure and income levels.

- **Njoya, E. (2016)** - using a calibrated computation general equilibrium model for the country of Kenya, found that improvements in air service liberalization led to a reduction in the percentage of household below the poverty line by approximately 4% to 13%, in addition to improving overall household welfare. These effects were largely a result of increased tourism expenditures facilitated by air service improvements, which "trickle down" to lower income households through labour markets.

6.4. Conclusions

As indicated in the sections above, there is clear and compelling evidence that BASA liberalization provides a number of market and economic impacts. The impacts of BASA liberalization are realised primarily through a variety of specific channels and mechanisms, including but not limited to improved market access, greater connectivity, increased competition, reductions in passenger air fares and higher traffic demand levels. Moreover, air service liberalization also generates a number of wider economic and socio-economic benefits, primarily through increases in output, value added contributions, income levels, jobs, reductions in poverty and overall welfare improvement effects. Furthermore, this evidence holds in Africa as it does in other parts of the world.

The mechanisms are summarised in the following diagram:



Chapter 7: Overview of African Aviation

The following section provides an overview of the current state of Africa's aviation landscape, in terms of passenger traffic volumes and intra-regional connectivity for 54 African Union members countries.[72]

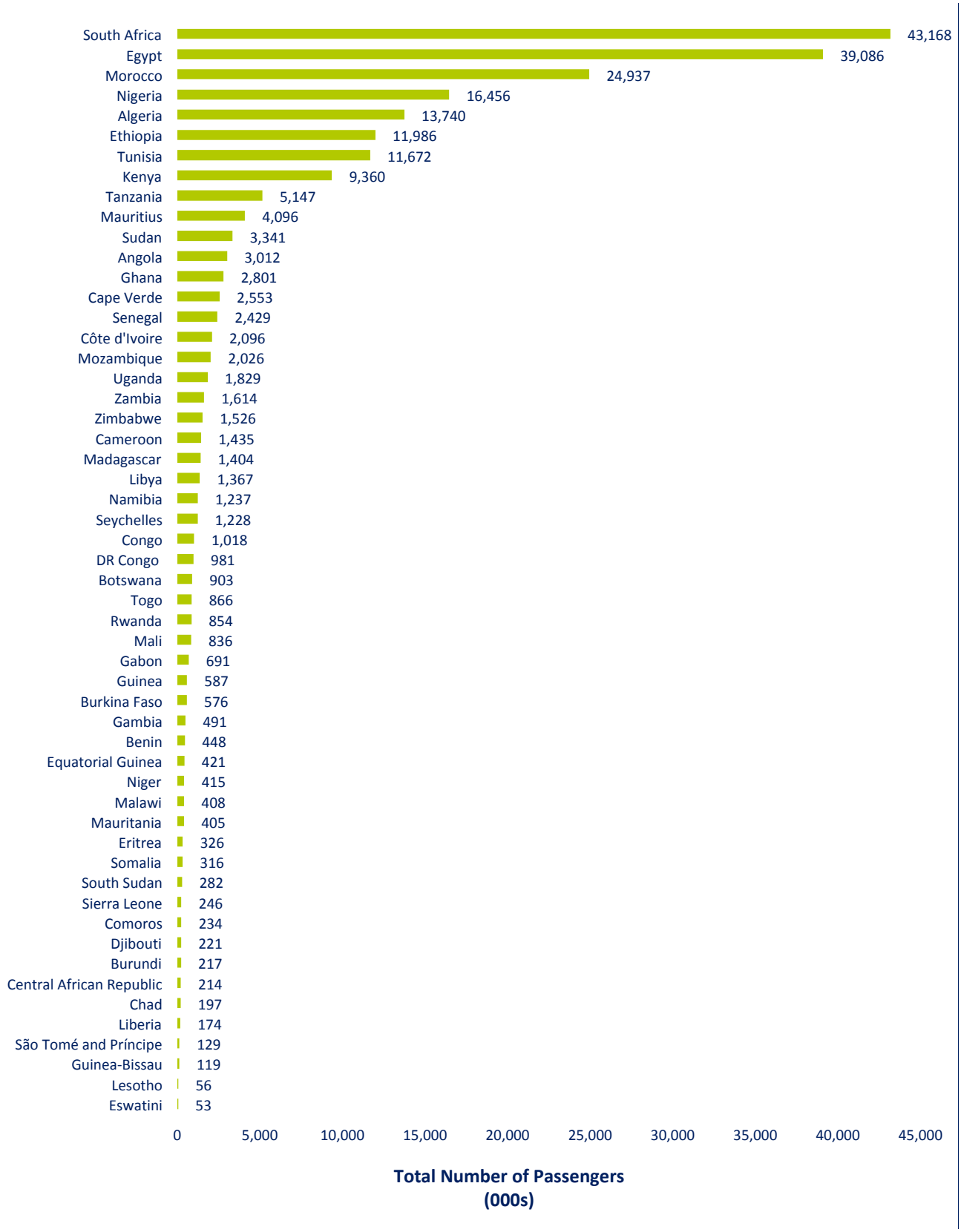
7.1. Air Traffic Volumes in Africa

Figure 29 and Table 15 show total passenger movements for each African Union country in 2019, broken down by domestic and international passengers.

Across the 54 countries, passenger movements totalled 222.2 million in 2019, of which 33% was domestic (within country) and 67% was international (both intra-Africa and intercontinental). South Africa was the largest air market with 43.2 million passenger movements, of which 70% was domestic traffic. Egypt was the second largest air market (39.1 million) and the largest in terms of international traffic (34.2 million). The next largest markets in terms of total passengers were Morocco, Nigeria, Algeria, Ethiopia, Tunisia, Kenya, Tanzania and Mauritius. The top 10 countries account for 81% of all air passengers within the African Union.

[72] Sahrawi Arab Democratic Republic is not included in the analysis due to lack of data.

Figure 29: Total Passenger Traffic within the African Union by Country, 2019



Source: InterVISTAS analysis of Airports Council International World Traffic Report 2019, individual airport statistics, World Bank Air Transport Statistics and airline schedule data.

Table 15: Summary of Domestic and International Passenger Traffic Volumes in the African Union, 2019

Country	Domestic (000s)	International (000s)	Total (000s)
Algeria	5,165	8,575	13,740
Angola	679	2,333	3,012
Benin	3	445	448
Botswana	379	524	903
Burkina Faso	64	512	576
Burundi	-	217	217
Cameroon	335	1,100	1,435
Cape Verde	821	1,733	2,553
Central African Republic	21	193	214
Chad	55	142	197
Comoros	105	129	234
Congo (Republic of the Congo)	633	384	1,018
Côte d'Ivoire	116	1,980	2,096
Djibouti	-	221	221
Democratic Republic of the Congo	390	591	981
Egypt	4,911	34,175	39,086
Equatorial Guinea	262	159	421
Eritrea	-	326	326
Eswatini	-	56	53
Ethiopia	1,846	10,140	11,986
Gabon	159	532	691
Gambia	-	491	491
Ghana	690	2,110	2,801
Guinea	9	579	587
Guinea-Bissau	0	119	119
Kenya	3,733	5,627	9,360
Lesotho	-	53	56
Liberia	-	174	174
Libya	239	1,128	1,367

Country	Domestic (000s)	International (000s)	Total (000s)
Madagascar	530	874	1,404
Malawi	80	328	408
Mali	73	763	836
Mauritania	40	365	405
Mauritius	398	3,698	4,096
Morocco	2,938	21,999	24,937
Mozambique	1,325	701	2,026
Namibia	289	948	1,237
Niger	72	343	415
Nigeria	12,214	4,242	16,456
Rwanda	21	833	854
Saharawi Arab Democratic Republic	N/A	N/A	N/A
São Tomé and Príncipe	45	84	129
Senegal	90	2,339	2,429
Seychelles	273	956	1,228
Sierra Leone	-	246	246
Somalia	37	279	316
South Africa	30,132	13,036	43,168
South Sudan	-	282	282
Sudan	324	3,017	3,341
Tanzania	2,644	2,503	5,147
Togo	-	866	866
Tunisia	393	11,279	11,672
Uganda	27	1,802	1,829
Zambia	355	1,259	1,614
Zimbabwe	258	1,268	1,526
Total African Union	**73,171**	**149,058**	**222,229**

Source: InterVISTAS analysis of Airports Council International World Traffic Report 2019, individual airport statistics, World Bank Air Transport Statistics, and airline schedule data.

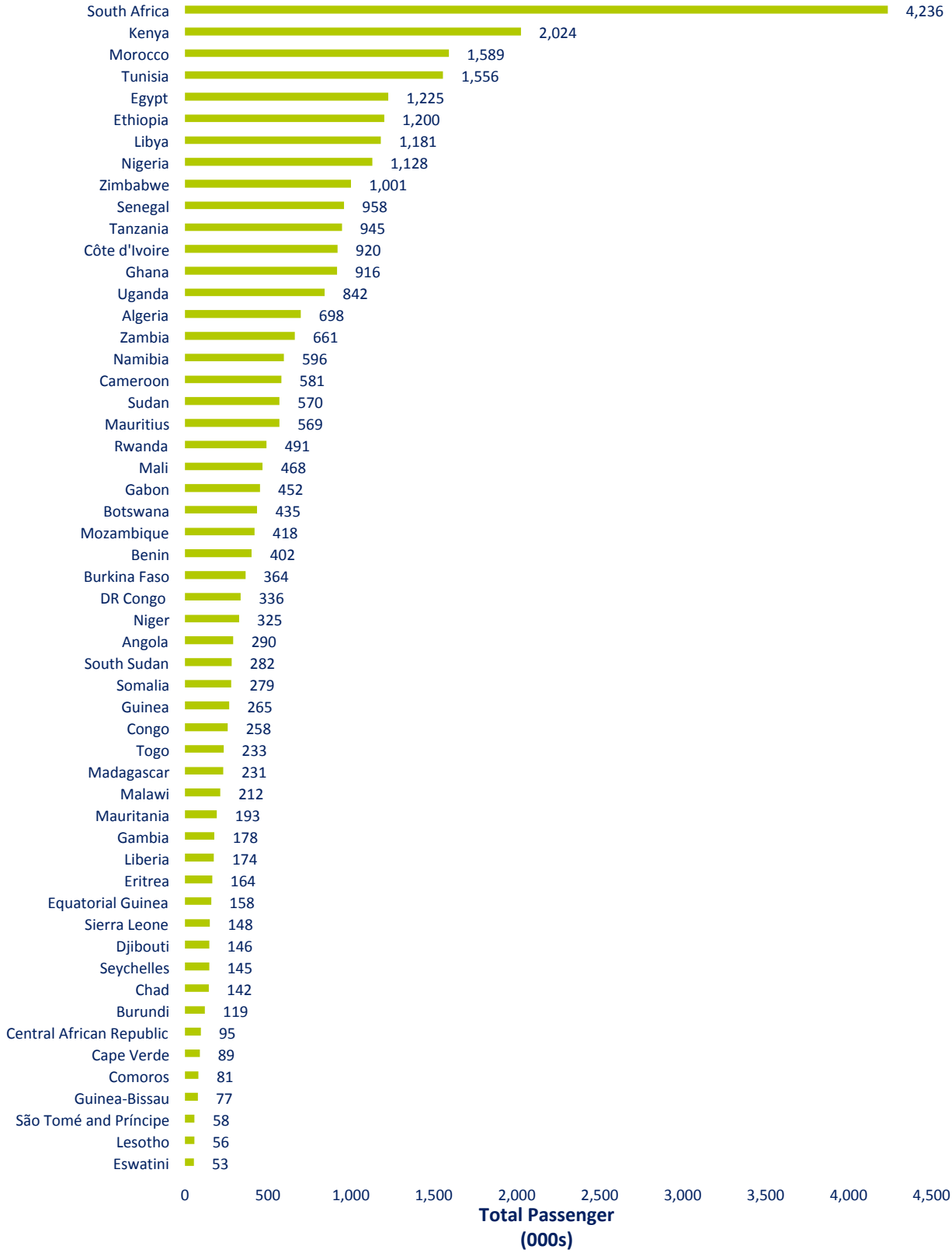
7.2. Intra-Africa Air Travel

As the primary focus of the study is intra-Africa air travel, Figure 30 and Table 16 show the volume of originating and departing passenger flows to/from each of the African Union nations. These show the volume of traffic between African Union countries through all routing itineraries – in some cases, travel will be direct, while others will involve connecting through another airport (or multiple airports). It does not include domestic travel (travel solely within the country).

In 2019 the largest intra-Africa flows were to and from South Africa, totalling approximately 4.2 million passengers, followed by Kenya (2.0 million), Morocco (1.6 million), Tunisia (1.5 million) and Egypt (1.2 million). The top ten countries accounted for approximately 51% of intra-Africa traffic. Of the 54 African Union countries, 20 had traffic flows to all other African countries totalling less than 250,000 per annum (342 one-way passengers per day). In total, intra-Africa traffic represented 21% of total international traffic in 2019.

Table 17 shows the top ten intra-Africa country pairs in 2019. Many of the largest country pairs involve travel between neighbouring or closely located countries. Six of the top country pairs include South Africa.

Figure 30: Total Intra-Africa Passenger Flows by Country, 2019



Source: InterVISTAS analysis using IATA DDS.

Figures represent the number of intra-African originating and departing passengers, in thousands, between the country and all other African countries other than itself.

Table 16: Intra-Africa Traffic Flows by Country, 2019

Country	Number of Passengers (000's)
Algeria	698
Angola	290
Benin	402
Botswana	435
Burkina Faso	364
Burundi	119
Cameroon	581
Cape Verde	89
Central African Republic	95
Chad	142
Comoros	81
Congo (Republic of the Congo)	258
Côte d'Ivoire	920
Democratic Republic of the Congo	336
Djibouti	146
Egypt	1,225
Equatorial Guinea	158
Eritrea	164
Eswatini	53
Ethiopia	1,200
Gabon	452
Gambia	178
Ghana	916
Guinea	265
Guinea-Bissau	77
Kenya	2,024
Lesotho	56
Liberia	174
Libya	1,181
Madagascar	231
Malawi	212
Mali	468

Country	Number of Passengers (000's)
Mauritania	193
Mauritius	569
Morocco	1,589
Mozambique	418
Namibia	596
Niger	325
Nigeria	1,128
Rwanda	491
Saharawi Arab Democratic Republic	N/A
São Tomé and Príncipe	58
Senegal	958
Seychelles	145
Sierra Leone	148
Somalia	279
South Africa	4,236
South Sudan	282
Sudan	570
Tanzania	945
Togo	233
Tunisia	1,556
Uganda	842
Zambia	661
Zimbabwe	1,001
Total African Union	**31,210**

Source: InterVISTAS analysis using IATA DDS.
Figures represent the number of intra-African originating and departing passengers, in thousands, between the country and all other African countries other than itself.

Table 17: Top 10 Intra-African Country Pair Routes in the African Union, 2019

County Pair	Total Passengers (000's)
Libya - Tunisia	766
South Africa - Zimbabwe	750
Namibia - South Africa	446
South Africa - Zambia	388
Botswana -South Africa	364
Ghana - Nigeria	350
Mauritius - South Africa	349
Kenya - Tanzania	342
Mozambique - South Africa	302
Kenya-Uganda	298

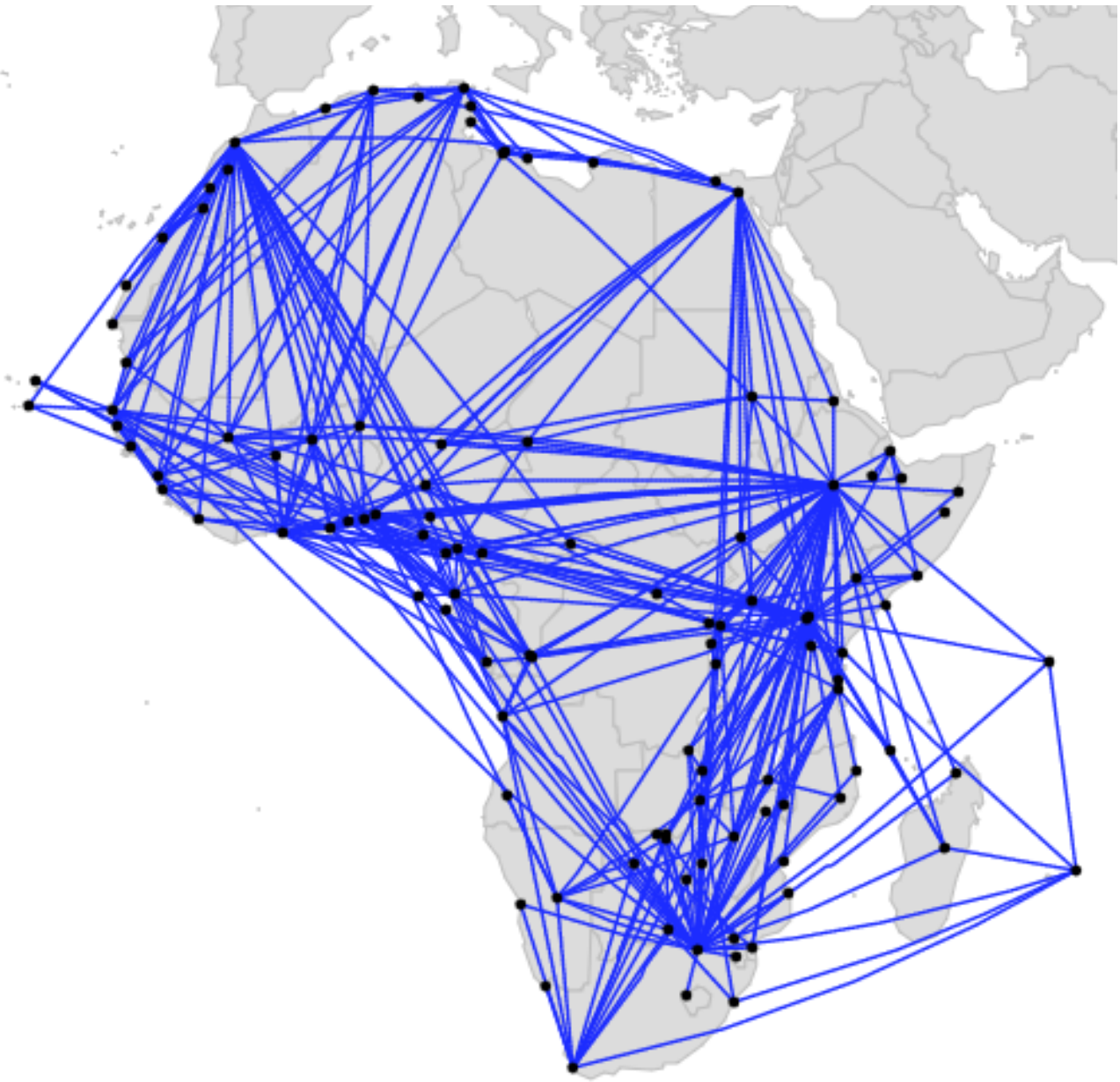
Source: InterVISTAS analysis using IATA DDS.

In 2019, a total of 375 intra-Africa routes were operated on a regular basis.[73] Figure 31 shows this route network. Of these routes, 35% were operated on a daily basis or better, and only 13% were operated on twice daily or better basis.[74] This low level of frequency makes short-duration trips (departing and returning the same day) very difficult, which is particularly important for business trips. As documented in the Chapter 3, this contributes to Africa's low level of air connectivity relative to many other parts of the world.

[73] Source: InterVISTAS analysis using IATA SRS Analyzer data. Route count based on the number of intra-Africa airport pairs (excluding domestic) operated at least once weekly on an annual basis.

[74] Source: InterVISTAS analysis using IATA SRS Analyzer data.

Figure 31: Intra-Africa Route Network, 2019



Source: InterVISTAS analysis using IATA SRS Analyzer data.

Routes shown are intra-Africa airport pairs (excluding domestic) operated at least once weekly on an annual basis.

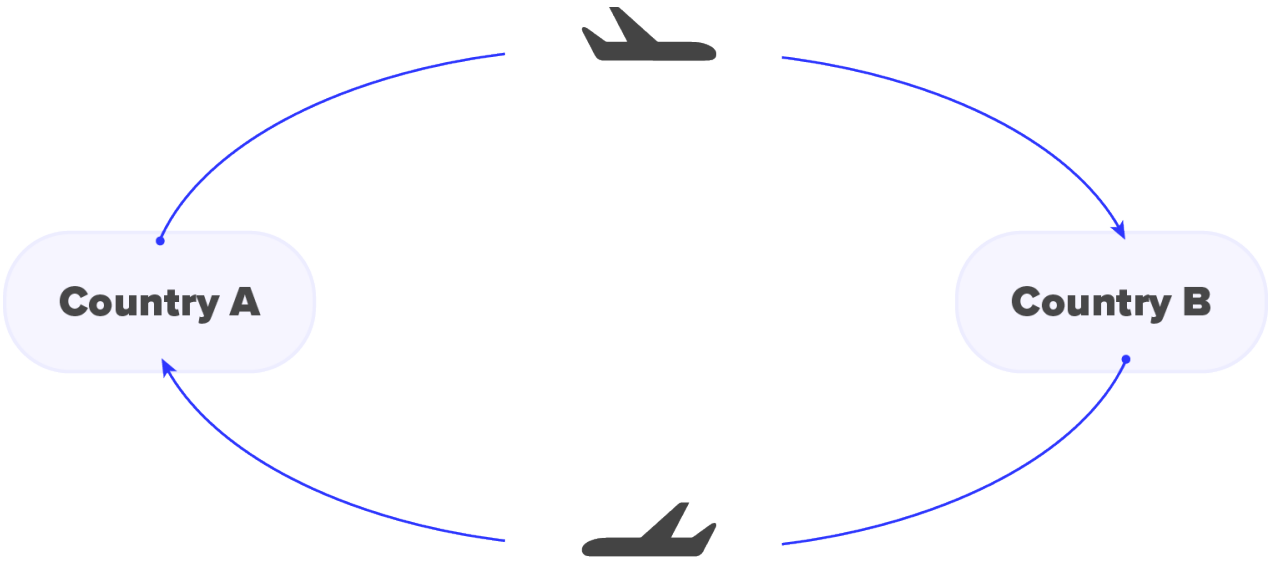
Chapter 8: Impact of Liberalization on Air Traffic, Connectivity and Users

8.1. Modelling Approach and Methodology

This chapter provides a summary of the estimated traffic impacts resulting from the liberalization of the African air market consistent with the goals of SAATM. In line with the 1999 Yamoussoukro Decision, this is based on modelling of the full liberalization of intra-African air transport services in terms of market access, the free exercise of first, second, third, fourth and fifth freedom traffic rights for air services by eligible airlines and provides for the full liberalization of frequencies, tariffs and capacity.

The impact of liberalization of BASAs between the African nations was analysed using a gravity model which forecasts traffic between any two countries based on the economic characteristics of the two countries, trade levels between the two countries, their geographic relationship, and the characteristics of the BASA between the two countries. In the field of economics, gravity models have been widely used to model both trade and transport (in the latter case, for all modes of transport). The gravity equation has been widely used to explain the flow of bilateral trade between two trading partners (see Tinbergen, 1962 and Anderson and van Wincoop, 2003). It has also been successfully applied to analyse policy effects in bilateral air transport flows (Abate and Kincaid, 2017, Cristea et al., 2014; Yan and Winston; Schipper et al, 2002; Dresner and Tretheway, 1992) as well as other economic activities, such as foreign direct investments (Brainard, 1997), financial flows (Portes and Rey, 2005), and migration (Karemera et al., 2000). In transportation, the gravity model is the basis for the classic “four stage” model used to model and forecast urban and inter-urban transport in road, rail and public transport systems. The appeal of using a gravity model is that it can capture “attractor” factors (economic growth, population, etc.) and “impedance” factors (distance, restrictive air policy, etc.). Overall, gravity models have been found to provide robust and plausible models of general tendencies in transportation markets.

The gravity model structure is set out as follows:



$$Traffic_{AB} = F(GDP_A, GDP_B, Trade_{AB}, Intervening_{AB}, BASAFactors(0,1)_{AB})$$

Where:

$Traffic_{AB}$ is the total two-way Origin/Destination (O/D) passenger traffic between the two countries, which the output of the model.

GDP_A and GDP_B is the Gross Domestic Product of the two countries, capturing their economic size (i.e., there is likely to be higher air traffic volumes between larger countries economically, all else being equal).

$Trade_{AB}$ is an estimate of the total amount of trade between the two countries (i.e., the higher the amount of trade between countries, the higher the potential air traffic volumes, all else being equal).

$Intervening_{AB}$ captures the intervening opportunities for closer travel between the two countries. Traffic between two countries was found to be less if there were opportunities for travel to closer countries. The intervening variable is calculated as an index of the sum of GDPs of every country that is 10% or less distant than the distance between the two countries. In other words, air traffic volumes are likely to be higher from nearby countries than from more distant ones, all else being equal.

$BASAFactors(0,1)_{AB}$ are dummy variables capturing the presence or absence of a specific restriction on the bilateral. For example, if the bilateral allows flights only to named points then the dummy variable takes the value 1, else if carriers are unrestricted in the airports/cities they can fly to, the dummy variable takes the value 0. The starting point for these dummy variables are coded based on the current state of the BASA (as identified in the research in Chapter 1).

The original gravity model was developed as part of a previous study by the Inter*VISTAS* group. It has since been updated and modified in subsequent studies. For this study, it has been calibrated to 2019 traffic and economic conditions and to match the findings from recent quantitative liberalization studies conducted in Africa (discussed in Chapter 2). To undertake the analysis in this report, the model was fully updated using 2019 traffic and

economic data (the most recent available on a global basis).[75] The year 2019 was used as the basis for the gravity model for two key reasons:

- It is the most recent year for which complete traffic and economic data could be obtained.
- It is not affected by the extraordinary global impact of the COVID-19 pandemic and so represents a more "typical" period on which to base the analysis. The implications of COVID-19 on liberalization is discussed in Section 4.5.

The gravity model is based on the proposition that the liberalization of the air transport market affects the supply of air services - liberalization reduces fares by introducing greater competition and also leads to greater capacity (frequencies) in the market as the carriers are not restricted by the terms of the BASA. This in turn fulfils or stimulates a greater level of demand than would not be achieved without liberalization. The impacts of liberalization were specifically modelled by specifying changes to the terms of the bilateral, e.g., the BASA Factors(0,1) dummies were switched from one (1) to zero (0), where relevant, on each BASA. The gravity model then calculates the growth in traffic stimulated by this change. In estimating the traffic, the model takes account of the fact that liberalization is a necessary but not a sufficient condition for traffic growth. No new services will result if there is no underlying demand to support them. Therefore, liberalization will not in all cases result in increased traffic if the modelled demand conditions do not support a reasonable level of air service. Similarly, if the BASA is already fully liberalized, there will be no further increase in traffic volumes. The current O/D traffic between countries includes passengers that travel direct as well as those that are on a connecting itinerary (those connecting via another country within Africa or via another continent). The modelled traffic results capture the "net" gain in traffic after allowing for some traffic switching from existing connecting itineraries to the projected new direct services. However, most of the gains from liberalization are expected to be stimulatory (due to new routes, increased capacity and lower fares) rather than passengers transferring from existing routes (carriers offering connecting options would be expected to lower fares to compete with the new direct services).

Further details on the model can be found in Appendix C.

8.2. Definition of the Scenario

The analysis in the main scenario assumes that all African Union member nations either sign an open skies Multilateral Air Services Agreement (MASA) or individual BASAs with each other, which are in accordance with the principles of the Yamoussoukro Decision, including those not yet participating in SAATM. These countries modelled are listed below (Saharawi Arab Democratic Republic was excluded from the modelling due to lack of available data).

Algeria
Angola
Benin*
Botswana*
Burkina Faso*
Burundi
Cameroon*
Cape Verde*
Central African Republic*
Chad*
Liberia*
Libya
Madagascar
Malawi
Mali*
Mauritania
Mauritius
Morocco*
Mozambique*
Namibia*

[75] The economic data was sourced from the World Bank's World Development Indicators. The traffic and fare data was sourced from IATA's PaxIS data product.

Comoros	Niger*
Congo (Republic of the Congo)*	Nigeria*
Côte d'Ivoire*	Rwanda*
Democratic Republic of the Congo*	São Tomé and Príncipe
Djibouti	Senegal*
Egypt*	Seychelles
Equatorial Guinea*	Sierra Leone*
Eritrea	Somalia
Eswatini*	South Africa*
Ethiopia*	South Sudan
Gabon*	Sudan
Gambia*	Tanzania
Ghana*	Togo*
Guinea*	Tunisia
Guinea-Bissau*	Uganda
Kenya*	Zambia*
Lesotho*	Zimbabwe*

** Indicates current SAATM participants (as of May 2021).*

This results in potentially 1,431 open skies BASAs, although not all will result in air service as explained previously. The BASAs are assumed to allow eligible airlines from either country to operate any route between the two countries without restriction on capacity, frequency, or price and with the ability to operate fifth freedom services. The analysis assumes there are no other major constraints that would prevent additional or new air service starting, such as onerous visa requirements or infrastructure limitations (e.g., lack of airport or air navigation capacity).

The traffic results from the model reflect the additional traffic that would be expected once the open skies BASAs have been in place for sufficient time for the market to respond (e.g., 2-3 years). As noted previously, it is based on 2019 traffic and economic conditions and so captures the additional gains that SAATM liberalization is expected to achieve under those conditions.

A separate scenario was also modelled which examined the impacts from liberalizing BASAs (or signing a MASA) between the 35 current participants of SAATM (as of May 2021). This would result in potentially 595 open skies BASAs, which is summarised in Section 4.6.

8.3. Traffic and Fares Impacts of Liberalization

The traffic results from the gravity model in the main scenario are provided in Table 18, showing the projected increase in intra-Africa traffic volumes to/from each of the countries. BASA liberalization is projected to increased intra-Africa passenger traffic by 51%, from 31.2 million to 47.1 million. This represents an additional 15.9 million passenger trips that currently are unable to take place for reasons of cost, flight availability or service convenience.

The traffic increases in each country are a function of how much liberalization has already taken place, the conditions of the aviation sector and general economic conditions. The highest percentage increases are projected for Central African Republic (102%), Angola (95%), Guinea-Bissau (94%), Algeria (94%) and Sudan

(84%) and Democratic Republic of the Congo (82%) due to in part to the limited air service and restrictive BASAs the countries have currently. Other countries have relatively low percentage increases in traffic as many of their key BASAs are already liberalized and currently enjoy relatively good air access. The largest absolute growth in air traffic is South Africa, followed by Kenya, Tunisia and Morocco due to the relatively large size and maturity of these air markets.

Table 18: Intra-Africa Passenger Traffic Impact of Liberalization Across the Entire African Union

Country	Traffic Before (000's)	Traffic After (000's)	Increase (000's)	% Increase
Algeria	698	1,354	656	94%
Angola	290	564	274	95%
Benin	402	577	175	44%
Botswana	435	616	181	42%
Burkina Faso	364	534	170	47%
Burundi	119	182	63	53%
Cameroon	581	723	142	24%
Cape Verde	89	128	39	44%
Central African Republic	95	192	97	102%
Chad	142	234	92	64%
Comoros	81	129	48	59%
Congo (Republic of the Congo)	258	419	161	63%
Côte d'Ivoire	920	1,404	485	53%
Democratic Republic of the Congo	336	609	274	82%
Djibouti	146	262	116	79%
Egypt	1,225	1,874	649	53%
Equatorial Guinea	158	239	81	51%
Eritrea	164	241	77	47%
Eswatini	53	91	39	73%
Ethiopia	1,200	1,709	510	42%
Gabon	452	687	235	52%
Gambia	178	241	63	36%
Ghana	916	1,350	434	47%
Guinea	265	422	157	59%
Guinea-Bissau	77	149	72	94%
Kenya	2,024	2,954	930	46%
Lesotho	56	93	37	67%
Liberia	174	304	129	74%
Libya	1,181	1,733	552	47%
Madagascar	231	358	127	55%
Malawi	212	331	119	56%
Mali	468	675	207	44%
Mauritania	193	342	150	78%
Mauritius	569	858	289	51%
Morocco	1,589	2,353	764	48%

Country	Traffic Before (000's)	Traffic After (000's)	Increase (000's)	% Increase
Mozambique	418	607	189	45%
Namibia	596	874	278	47%
Niger	325	530	206	63%
Nigeria	1,128	1,742	614	54%
Rwanda	491	683	191	39%
Saharawi Arab Democratic Republic	N/A	N/A	N/A	N/A
São Tomé and Príncipe	58	84	27	46%
Senegal	958	1,439	481	50%
Seychelles	145	261	115	79%
Sierra Leone	148	215	67	45%
Somalia	279	456	177	64%
South Africa	4,236	5,529	1,293	31%
South Sudan	282	443	162	57%
Sudan	570	1,050	480	84%
Tanzania	945	1,592	647	68%
Togo	233	326	93	40%
Tunisia	1,556	2,396	840	54%
Uganda	842	1,426	584	69%
Zambia	661	1,055	394	60%
Zimbabwe	1,001	1,492	492	49%
Total African Union	**31,210**	**47,132**	**15,922**	**51%**

Source: Before traffic volumes taken from IATA PaxIS database for 2019; after volumes based on InterVISTAS analysis. Figures are for the total originating and departing passengers in each country.

One of the impacts of liberalization identified in the research summarised in Chapter 2 is reductions in air fares as more carriers enter the market and airlines achieve greater efficiencies (such as economies of scale through larger passenger volumes). These reduced air fares contribute to the increase in traffic volumes projected to occur following liberalization. While the gravity model does not directly estimate the fare reduction, it can be inferred from the forecast increase in traffic.

In estimating the fare reduction, it was assumed that on country pairs which already have direct service prior to liberalization, one half of the traffic stimulation was attributable to the fare reductions, while on country pairs that did not previously have direct service, one third of the traffic increase was attributable to fare reductions (the remaining stimulation effect was attributable to improved service levels — direct service, increased frequency, etc.). As such, the fare reduction was calculated as follows:

Country Pairs Already with Direct Service

$\%\ \text{Fare Reduction}_{AB} = 1/2 \times \%\ \text{Traffic Increase}_{AB} / \text{Fare Elasticity}_{AB}$

Country Pairs with No Prior Direct Service

$\%\ \text{Fare Reduction}_{AB} = 1/3 \times \%\ \text{Traffic Increase}_{AB} / \text{Fare Elasticity}_{AB}$

The fare elasticities were taken from previous research which provided fare elasticities for relevant geographic markets.[76] The most applicable elasticity was selected for each country pair.

The estimated impact on passenger fares is summarised in Table 4-2. Passengers in each country are projected to benefit from fare reductions averaging 26.4% across the continent and ranging between 18.6% and 39.7% within individual countries. From this, it is possible to estimate the combined fare savings by multiplying the fare reduction by the average fare and the total number of passengers in 2019. The fare savings across all countries are estimated to be US$ 1.46 billion and range from US$ 0.7 million for Lesotho traffic to US$ 290.4 million for South Africa (the total amount of savings depends on the level of the projected fare reduction, current air fare levels, and overall intra-Africa traffic volumes).

Liberalization also results in additional passengers travelling who previously were unable to do so, due in part to the lower cost of travel. The benefit to these additional passengers is captured in a concept known as consumer surplus. Consumer surplus is a term in economics that refers to the amount that consumers benefit by being able to purchase a product for a price that is less than they would be willing to pay. Consumer surplus is a concept frequently used in economic welfare analysis.

The concept is illustrated in Figure 4-3 which shows a standard demand curve representing the relationship between price and quantity demand – as price declines the amount demanded increases. At the initial price P_0, the consumer surplus is represented by Area A. Consumers to the left of Q_0 were willing to a pay a price higher than P_0; summing the difference between each consumer's willingness to pay and P_0 produces a consumer surplus equal to area A.

If the price is reduced to P_1 (e.g., in the air market, fares are reduced), then the consumer surplus is increased by an amount equal to Area B and Area C. It is this gain in consumer surplus (Area B + Area C) that is provided in this report. As suggested by the diagram, this gain in consumer surplus is comprised of two elements:

- Area B: the fare savings for existing passengers, calculated in this analysis as: *average fare saving x number of existing passengers*. This element represents a transfer of producer surplus to consumer surplus.[77]

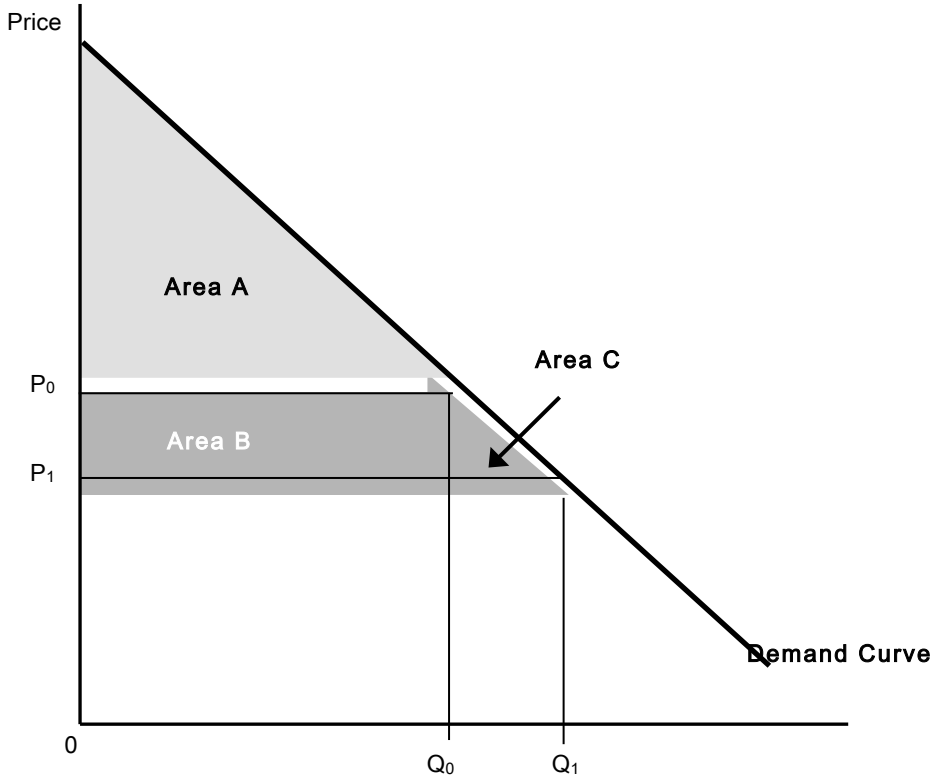
[76] "Fare elasticities of demand for direct and indirect flights in sub-Saharan Africa", Button, K., Martini, G., Scotti, D., and Volta, N., Applied Economics Letters, 24:8, 523-526, 2017; Inter*VISTAS* Consulting Inc., "Estimating Air Travel Elasticities", A report for IATA, 2008.

- Area C: this is a net gain in welfare resulting from additional passengers being able to access air services due to the lower fare. In this analysis, this element of consumer surplus is estimated as: *½ x average fare saving x number of new passengers*.

It should be noted that the calculation of consumer surplus benefits is based purely on the fare reductions. However, consumers will also benefit in other ways: more direct services, greater frequencies, and more choice of airlines. These benefits are difficult to monetarize and have not been included. As a result, the consumer benefits may be understated.

In Table 19, the total increase in consumer surplus is estimated to be US$ 2.85 billion, ranging from US$ 2.9 million for Cape Verde to US$ 401.4 million for South Africa.

Figure 32: Consumer Surplus



[77] Producer surplus is the amount producers benefit by selling at a price higher than they would be willing to sell for.

Table 19: Fare and Consumer Surplus Impacts of Liberalization Across the Entire African Union

Country	% Reduction in Average Fare	Total Fare Savings to Existing Passengers (US$ Millions)	Increase in Consumer Surplus (US$ Millions)
Algeria	33.6%	51.7	126.3
Angola	36.7%	33.3	63.8
Benin	24.3%	2.1	18.3
Botswana	29.9%	2.7	20.7
Burkina Faso	26.7%	3.8	22.8
Burundi	22.9%	3.9	12.0
Cameroon	25.1%	3.2	18.0
Cape Verde	24.6%	1.6	2.7
Central African Republic	37.8%	3.0	15.4
Chad	28.1%	7.2	16.1
Comoros	30.6%	6.7	10.7
Congo (Republic of the Congo)	38.6%	6.8	21.6
Côte d'Ivoire	23.9%	23.6	77.9
Democratic Republic of the Congo	37.1%	39.8	66.9
Djibouti	29.1%	7.6	16.3
Egypt	25.2%	57.6	100.1
Equatorial Guinea	29.3%	2.5	7.9
Eritrea	29.6%	8.9	12.5
Eswatini	22.9%	1.8	4.4
Ethiopia	31.2%	37.3	86.8
Gabon	25.2%	25.0	47.6
Gambia	31.2%	2.0	6.1
Ghana	28.8%	14.1	62.5
Guinea	25.1%	8.0	25.9
Guinea-Bissau	39.7%	4.6	7.4
Kenya	24.0%	107.8	183.5
Lesotho	30.9%	0.7	5.3
Liberia	32.3%	20.8	37.7
Libya	33.2%	81.4	101.2
Madagascar	29.5%	17.0	27.8
Malawi	30.5%	18.6	28.9
Mali	19.8%	8.6	35.4
Mauritania	37.9%	17.4	29.8

Country	% Reduction in Average Fare	Total Fare Savings to Existing Passengers (US$ Millions)	Increase in Consumer Surplus (US$ Millions)
Mauritius	33.1%	25.2	39.1
Morocco	27.9%	48.6	76.5
Mozambique	25.7%	6.4	29.9
Namibia	21.0%	9.2	34.9
Niger	37.9%	33.1	53.2
Nigeria	23.0%	47.1	127.4
Rwanda	24.9%	14.0	25.8
Saharawi Arab Democratic Republic	N/A	N/A	N/A
São Tomé and Príncipe	25.0%	3.2	4.1
Senegal	32.1%	38.3	88.2
Seychelles	38.1%	7.3	11.5
Sierra Leone	23.2%	4.0	12.1
Somalia	20.3%	13.0	26.2
South Africa	18.6%	290.4	401.4
South Sudan	30.3%	30.2	46.7
Sudan	24.9%	30.7	74.6
Tanzania	26.0%	41.3	78.5
Togo	25.8%	5.0	13.3
Tunisia	28.3%	52.2	115.3
Uganda	23.4%	30.1	89.4
Zambia	27.1%	25.4	71.5
Zimbabwe	25.9%	76.8	108.8
Total African Union	**26.4%**	**1,462.6**	**2,848.7**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.

8.4. Connectivity and Air Service Impacts

The gains from liberalization do not end with increased traffic and fare reductions. As past experience has shown, liberalization enhances air connectivity. This comes in the forms of increased frequencies and capacity on existing routes and the opening up of new routes. This benefits passengers through reduced travel times and greater convenience, and airlines through market growth and access to new markets.

Of the 1,431 country pairs between the African Union countries, only 19% had some form of significant direct service (operated at least once weekly on an annual basis). Of these routes, 35% were operated on a daily basis or better, and only 13% were operated on twice daily or better basis.[78] Frequency can be as important as direct service for passenger convenience and to provide a level of connectivity that supports growth in business travel and tourism. Low frequency services offer passengers very limited choice in terms of their journey timings and prevent passengers from obtaining a convenient itinerary (e.g., conducting a return trip within a single day, which is important to companies trying to minimise the time their staff are out of the office). With liberalization, greater service frequencies can be supported, providing greater convenience and choice for consumers. Increased service levels will not just benefit passengers within Africa, it will also make connections to points outside of Africa more convenient and attractive. For example, business or leisure travellers from Europe, Asia, and elsewhere wanting to visit multiple points in Africa will have a greater choice of intra-African services and more convenient itineraries, further stimulating demand. The gravity model projects that an additional 145 country-pairs will receive direct service as a result of liberalization and that those with direct service in 2019 will have frequencies increased by an average of 27%.

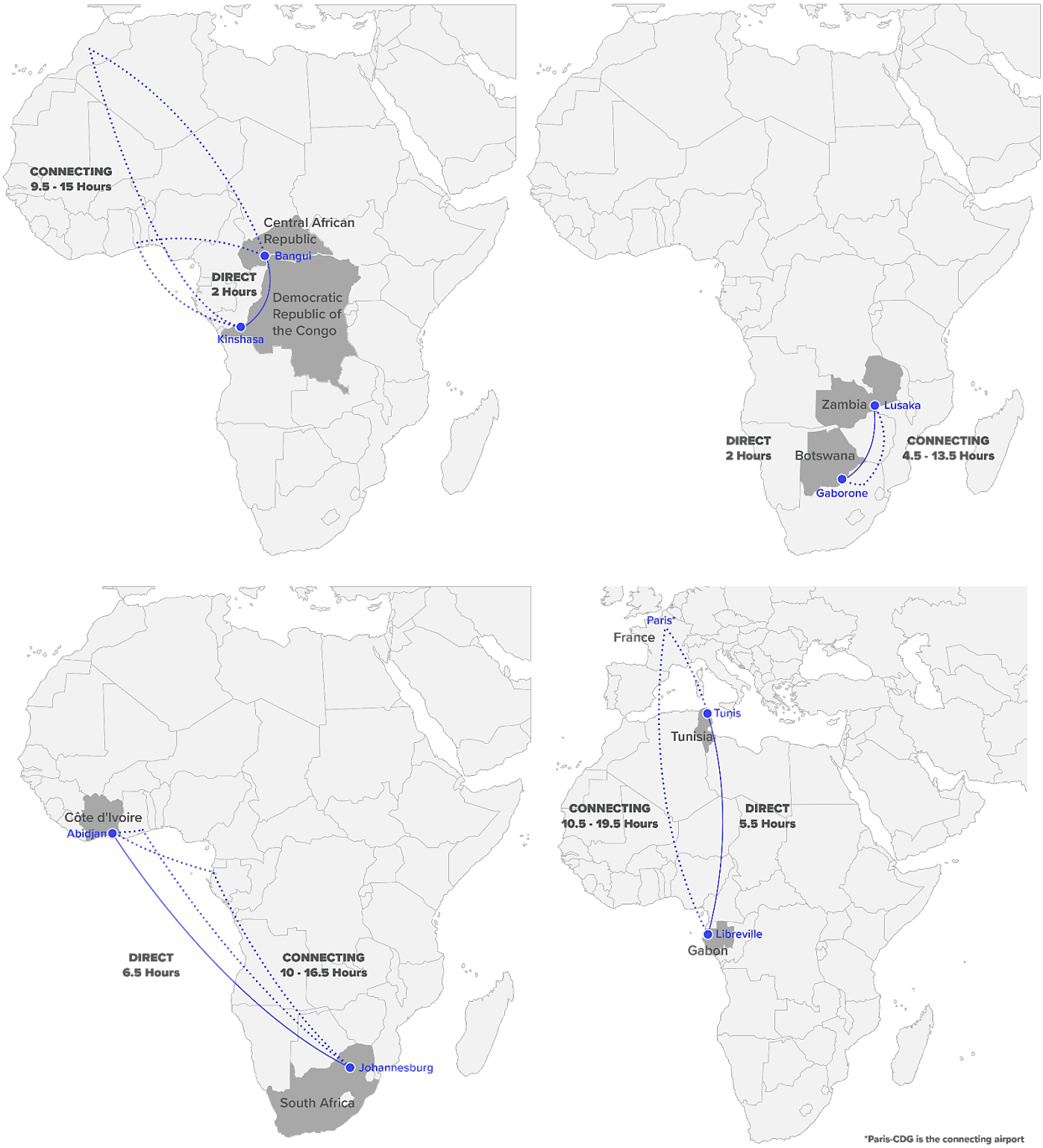
The impact of direct service in terms of passenger time savings is illustrated in Figure 33. This shows a sample of city-pairs without direct service in 2019 which have significant indirect passenger flows (passengers travelling between these cities via a connecting hub) or which involve large economies or neighbouring countries. For example, to travel between the capitals of two neighbouring countries in 2019 – Central African Republic and Democratic Republic of the Congo – required a connecting itinerary of 9.5-15.0 hours via a connecting airport in North or West Africa, whereas a direct flight would take no more than 2 hours.[79] Similarly, flying between the capitals of Botswana and Zambia involved a total flying time of 4.5-13.5 hours depending on the timings of connecting options, largely connecting through South Africa, compared with direct service of 2 hours. Similarly, travel between the largest cities in Côte d'Ivoire and South Africa required a connecting journey of 10.0-16.5 hours compared with a direct service taking 6.5 hours. In some cases, the most convenient itineraries involved a connection in Europe or the Middle East. For example, the shortest itineraries between the capitals of Tunisia and Gabon involved a connection at Paris CDG airport, taking 10.5-19.5 hours compared with 5.5 hours for a direct service.

Table 20 lists notable city pairs for each African Union country without regular scheduled direct service in 2019. In many of these cases, the travel time would be more than halved with direct service, making business and leisure travel between the two cities much more convenient and productive. While these examples have largely focussed on flights between major or capital cities, smaller secondary markets that do not receive new direct services benefit from the ability to connect to direct services between larger airports due to reduced travel times and itinerary complexity.

[78] Source: InterVISTAS analysis using IATA SRS Analyzer data.

[79] Connecting timings based on a representative sample of connecting itineraries available in 2019 involving either same-airline or interline connections. Timings include the flight times of each leg and wait time at the connecting airport.

Figure 33: Illustrative Country Pairs Without Direct Service in 2019



Source: InterVISTAS analysis using IATA SRS Analyzer data.
Connecting times are based on a representative sample of connecting itineraries available in 2019 involving either same-airline or interline connections. Travel times include flight times of each leg and wait time at the connecting airport.

Table 20: Illustrative Time Savings from Direct Air Service

Country	Route	Current Travel Time without Direct Service	Travel Time with Direct Service	Time Savings
Algeria	Algiers - Lagos (Nigeria)	9.5 - 15 Hours	4.5 Hours	5 - 10.5 Hours
	Algiers - Addis Ababa (Ethiopia)	10 - 18.5 Hours	6.5 Hours	3.5 - 12 Hours
Angola	Luanda - Cairo (Egypt)	10.5 - 19 Hours	6.5 Hours	4 - 12.5 Hours
	Luanda - Accra (Ghana)	7 - 9 Hours	3.5 Hours	3.5 - 5.5 Hours
Benin	Cotonou - Accra (Ghana)	2.5 - 7.5 Hours	1 Hours	1.5 - 6.5 Hours
	Cotonou - Johannesburg (South Africa)	11 - 16.5 Hours	6 Hours	5 - 10.5 Hours
Botswana	Gaborone - Dar es Salaam (Tanzania)	5 - 6.5 Hours	3.5 Hours	1.5 - 3 Hours
	Gaborone - Entebbe/Kampala (Uganda)	6 - 6.5 Hours	4 Hours	2 - 2.5 Hours
Burkina Faso	Ouagadougou - Libreville (Gabon)	6 - 11 Hours	3 Hours	3 - 8 Hours
	Ouagadougou - Addis Ababa (Ethiopia)	7 - 13 Hours	6 Hours	1 - 7 Hours
Burundi	Bujumbura - Johannesburg (South Africa)	6 - 14.5 Hours	3.5 Hours	2.5 - 11 Hours
	Bujumbura - Cairo (Egypt)	9 - 14.5 Hours	5 Hours	4 - 9.5 Hours
Cameroon	Douala - Dar es Salaam (Tanzania)	7 - 12 Hours	5 Hours	2 - 7 Hours
	Douala - Entebbe/Kampala (Uganda)	8.5 - 15 Hours	3.5 Hours	5 - 11.5 Hours
Cape Verde	Sal Island - Lagos (Nigeria)	11.5 - 13 Hours	4.5 Hours	7 - 7 Hours
	Sal Island - Luanda (Angola)	8 - 10 Hours	6.5 Hours	1.5 - 3.5 Hours
Central African Republic	Bangui - Kinshasa (DR Congo)	9.5 - 15 Hours	2 Hours	7.5 - 13 Hours
	Bangui - N'Djamena (Chad)	9.5 - 19 Hours	1.5 Hours	8 - 17.5 Hours
Chad	N'Djamena - Bangui (Central African Rep.)	9.5 - 19 Hours	1.5 Hours	8 - 17.5 Hours
	N'Djamena - Abidjan (Côte d'Ivoire)	8 - 9 Hours	3.5 Hours	4.5 - 5.5 Hours
Comoros	Moroni - Johannesburg (South Africa)	11.5 - 16 Hours	3.5 Hours	8 - 12 Hours
	Moroni - Cairo (Egypt)	10.5 - 16 Hours	6.5 Hours	4 - 9.5 Hours
Congo (Republic of the Congo)	Brazzaville - Bangui (Central African Rep.)	5 - 19 Hours	2 Hours	3 - 17 Hours
	Brazzaville - Cairo (Egypt)	10 - 17 Hours	5.5 Hours	4.5 - 11.5 Hours
Côte d'Ivoire	Abidjan - Johannesburg (South Africa)	10 - 16.5 Hours	6.5 Hours	3.5 - 10 Hours
	Abidjan - Entebbe/Kampala (Uganda)	11 - 19.5 Hours	5.5 Hours	5.5 - 14 Hours
DR Congo	Kinshasa - Lagos (Nigeria)	6.5 - 7 Hours	3 Hours	3.5 - 4 Hours
	Kinshasa - Cairo (Egypt)	11 - 17.5 Hours	5.5 Hours	5.5 - 12 Hours
Djibouti	Djibouti - Johannesburg (South Africa)	9 - 10.5 Hours	6 Hours	3 - 4.5 Hours
	Djibouti - Cairo (Egypt)	8 - 12.5 Hours	3.5 Hours	4.5 - 9 Hours
Egypt	Cairo - Kinshasa (DR Congo)	11 - 17.5 Hours	5.5 Hours	5.5 - 12 Hours
	Cairo - Douala (Cameroon)	10 - 11 Hours	5 Hours	5 - 6 Hours
Equatorial Guinea	Malabo - Cairo (Egypt)	10.5 - 20 Hours	5 Hours	5.5 - 15 Hours
	Malabo - Johannesburg (South Africa)	12 - 17 Hours	5.5 Hours	6.5 - 11.5 Hours
Eritrea	Asmara - Johannesburg (South Africa)	8 - 14.5 Hours	6.5 Hours	1.5 - 8 Hours
	Asmara - Entebbe/Kampala (Uganda)	6.5 - 8 Hours	3 Hours	3.5 - 5 Hours
Eswatini	Manzini - Lusaka (Zambia)	4 - 13 Hours	2 Hours	2 - 11 Hours
	Manzini - Addis Ababa (Ethiopia)	9 - 11 Hours	5.5 Hours	3.5 - 5.5 Hours

Country	Route	Current Travel Time without Direct Service	Travel Time with Direct Service	Time Savings
Ethiopia	Addis Ababa - Algiers (Algeria)	11 - 18.5 Hours	6.5 Hours	4.5 - 12 Hours
	Addis Ababa - Dakar (Senegal)	10.5 - 17.5 Hours	8 Hours	2.5 - 9.5 Hours
Gabon	Libreville - Cairo (Egypt)	10.5 - 12 Hours	5.5 Hours	5 - 6.5 Hours
	Libreville - Dakar (Senegal)	8 - 16 Hours	4.5 Hours	3.5 - 11.5 Hours
Gambia	Banjul - Abidjan (Côte d'Ivoire)	5.5 - 15.5 Hours	2.5 Hours	3 - 13 Hours
	Banjul - Lagos (Nigeria)	6 - 15.5 Hours	3.5 Hours	2.5 - 12 Hours
Ghana	Accra - Dakar (Senegal)	5 - 13 Hours	3 Hours	2 - 10 Hours
	Accra - Bamako (Mali)	4 - 8.5 Hours	2 Hours	2 - 6.5 Hours
Guinea	Conakry - Accra (Ghana)	4 - 12 Hours	2.5 Hours	1.5 - 9.5 Hours
	Conakry - Johannesburg (South Africa)	18 - 24 Hours	8 Hours	10 - 16 Hours
Guinea-Bissau	Bissau - Accra (Ghana)	7 - 16.5 Hours	3 Hours	4 - 13.5 Hours
	Bissau - Addis Ababa (Ethiopia)	12 - 12.5 Hours	8 Hours	4 - 4.5 Hours
Kenya	Nairobi - Dakar (Senegal)	11.5 - 20.5 Hours	8 Hours	3.5 - 12.5 Hours
	Nairobi - Casablanca (Morocco)	13 - 18.5 Hours	8 Hours	5 - 10.5 Hours
Lesotho	Maseru - Maputo (Mozambique)	2.5 - 5 Hours	1.5 Hours	1 - 3.5 Hours
	Maseru - Gaborone (Botswana)	3 - 6 Hours	1.5 Hours	1.5 - 4.5 Hours
Liberia	Monrovia-Roberts - Bamako (Mali)	7 - 7 Hours	1.5 Hours	5.5 - 5.5 Hours
	Monrovia-Roberts - Lagos (Nigeria)	4.5 - 14.5 Hours	2.5 Hours	2 - 12 Hours
Libya	Tripoli - Accra (Ghana)	12.5 - 17 Hours	4.5 Hours	8 - 12.5 Hours
	Tripoli - Algiers (Algeria)	4 - 10 Hours	2 Hours	2 - 8 Hours
Madagascar	Antananarivo - Cairo (Egypt)	14 - 17 Hours	7.5 Hours	6.5 - 9.5 Hours
	Antananarivo - Dar es Salaam (Tanzania)	5.5 - 11 Hours	2.5 Hours	3 - 8.5 Hours
Malawi	Lilongwe - Cairo (Egypt)	10.5 - 17.5 Hours	6.5 Hours	4 - 11 Hours
	Lilongwe - Antananarivo (Madagascar)	9 - 20.5 Hours	2.5 Hours	6.5 - 18 Hours
Mali	Bamako - Brazzaville (Congo)	6.5 - 8 Hours	4.5 Hours	2 - 3.5 Hours
	Bamako - Johannesburg (South Africa)	12.5 - 21.5 Hours	7.5 Hours	5 - 14 Hours
Mauritania	Nouakchott - Cairo (Egypt)	10.5 - 20.5 Hours	6.5 Hours	4 - 14 Hours
	Nouakchott - Abidjan (Côte d'Ivoire)	7 - 8 Hours	3 Hours	4 - 5 Hours
Mauritius	Mauritius - Cairo (Egypt)	12.5 - 20.5 Hours	8 Hours	4.5 - 12.5 Hours
	Mauritius - Addis Ababa (Ethiopia)	8.5 - 18.5 Hours	5.5 Hours	3 - 13 Hours
Morocco	Casablanca - Johannesburg (South Africa)	15 - 18.5 Hours	10 Hours	5 - 8.5 Hours
	Casablanca - Nairobi (Kenya)	12 - 18.5 Hours	8 Hours	4 - 10.5 Hours
Mozambique	Maputo - Lagos (Nigeria)	10.5 - 19 Hours	6.5 Hours	4 - 12.5 Hours
	Maputo - Harare (Zimbabwe)	4 - 15 Hours	1.5 Hours	2.5 - 13.5 Hours
Namibia	Windhoek - Nairobi (Kenya)	8 - 18 Hours	4.5 Hours	3.5 - 13.5 Hours
	Windhoek - Maputo (Mozambique)	4 - 12.5 Hours	2.5 Hours	1.5 - 10 Hours
Niger	Niamey - Johannesburg (South Africa)	14.5 - 21.5 Hours	7 Hours	7.5 - 14.5 Hours
	Niamey - Abuja (Nigeria)	7 - 7.5 Hours	1.5 Hours	5.5 - 6 Hours

Country	Route	Current Travel Time without Direct Service	Travel Time with Direct Service	Time Savings
Nigeria	Lagos - Tunis (Tunisia)	9 - 19.5 Hours	5 Hours	4 - 14.5 Hours
	Lagos - Entebbe/Kampala (Uganda)	8 - 18.5 Hours	4.5 Hours	3.5 - 14 Hours
Rwanda	Kigali - Luanda (Angola)	9.5 - 18.5 Hours	3 Hours	6.5 - 15.5 Hours
	Kigali - Abidjan (Côte d'Ivoire)	12 - 18 Hours	5.5 Hours	6.5 - 12.5 Hours
São Tomé and Príncipe	Sao Tome - Johannesburg (South Africa)	9.5 - 16 Hours	5 Hours	4.5 - 11 Hours
	Sao Tome - Addis Ababa (Ethiopia)	11.5 - 17 Hours	5 Hours	6.5 - 12 Hours
Senegal	Dakar - Nairobi (Kenya)	11 - 20.5 Hours	8 Hours	3 - 12.5 Hours
	Dakar - Douala (Cameroon)	6 - 16.5 Hours	4.5 Hours	1.5 - 12 Hours
Seychelles	Seychelles - Cairo (Egypt)	9.5 - 16.5 Hours	6 Hours	3.5 - 10.5 Hours
	Seychelles - Dar es Salaam (Tanzania)	5.5 - 11.5 Hours	3 Hours	2.5 - 8.5 Hours
Sierra Leone	Freetown - Addis Ababa (Ethiopia)	10.5 - 22 Hours	7.5 Hours	3 - 14.5 Hours
	Freetown - Entebbe/Kampala (Uganda)	13.5 - 17 Hours	7 Hours	6.5 - 10 Hours
Somalia	Mogadishu - Cairo (Egypt)	9 - 18.5 Hours	5 Hours	4 - 13.5 Hours
	Mogadishu - Johannesburg (South Africa)	8 - 16 Hours	5 Hours	3 - 11 Hours
South Africa	Johannesburg - Abidjan (Côte d'Ivoire)	10 - 16.5 Hours	6.5 Hours	3.5 - 10 Hours
	Johannesburg - Casablanca (Morocco)	15.5 - 18.5 Hours	10 Hours	5.5 - 8.5 Hours
South Sudan	Juba - Dar es Salaam (Tanzania)	4.5 - 15 Hours	2.5 Hours	2 - 12.5 Hours
	Juba - Asmara (Eritrea)	5 - 16 Hours	2.5 Hours	2.5 - 13.5 Hours
Sudan	Khartoum - Entebbe/Kampala (Uganda)	5 - 15.5 Hours	2.5 Hours	2.5 - 13 Hours
	Khartoum - Johannesburg (South Africa)	10 - 17 Hours	6.5 Hours	3.5 - 10.5 Hours
Tanzania	Dar es Salaam - Lubumbashi (DR Congo)	4.5 - 10.5 Hours	2.5 Hours	2 - 8 Hours
	Dar es Salaam - Lagos (Nigeria)	10 - 11.5 Hours	6 Hours	4 - 5.5 Hours
Togo	Lome - Cairo (Egypt)	10.5 - 16.5 Hours	5.5 Hours	5 - 11 Hours
	Lome - Monrovia-Roberts (Liberia)	5 - 10.5 Hours	2 Hours	3 - 8.5 Hours
Tunisia	Tunis - Lagos (Nigeria)	9 - 19.5 Hours	5 Hours	4 - 14.5 Hours
	Tunis - Libreville (Gabon)	10.5 - 19.5 Hours	5.5 Hours	5 - 14 Hours
Uganda	Entebbe/Kampala - Douala (Cameroon)	8.5 - 15 Hours	3.5 Hours	5 - 11.5 Hours
	Entebbe/Kampala - Lusaka (Zambia)	5.5 - 15.5 Hours	2.5 Hours	3 - 13 Hours
Zambia	Lusaka - Cairo (Egypt)	10.5 - 15 Hours	7 Hours	3.5 - 8 Hours
	Lusaka - Gaborone (Botswana)	4.5 - 13.5 Hours	2 Hours	2.5 - 11.5 Hours
Zimbabwe	Harare - Lagos (Nigeria)	10 - 17.5 Hours	5.5 Hours	4.5 - 12 Hours
	Harare - Maputo (Mozambique)	4 - 15 Hours	1.5 Hours	2.5 - 13.5 Hours

Source: InterVISTAS analysis using IATA SRS Analyzer data.
Connecting times are based on a representative sample of connecting itineraries available in 2019 involving either same-airline or interline connections. Travel times include flight times of each leg and wait time at the connecting airport.

Passenger growth resulting from liberalization opens the opportunity for carriers to increase the frequency of operations on existing routes, as well as open new ones. Indicative analysis was undertaken to illustrate the growth in air service that may arise following liberalization. The analysis is based on the results from the liberalization gravity model augmented by analysis of existing traffic flows between the countries. The analysis is data-led assessment of the type of service developments that may arise following liberalization, based in part on experiences elsewhere. However, every market is unique, and other political, industry, or economic factors may affect the outcome. Thus, the analysis is designed to illustrate the potential new route development, but it cannot be guaranteed that services will develop in this way. In reality, new routes may start that were not envisioned in this analysis, and other routes will not grow in the way projected. However, the analysis provides the scale of air service development expected with liberalization.

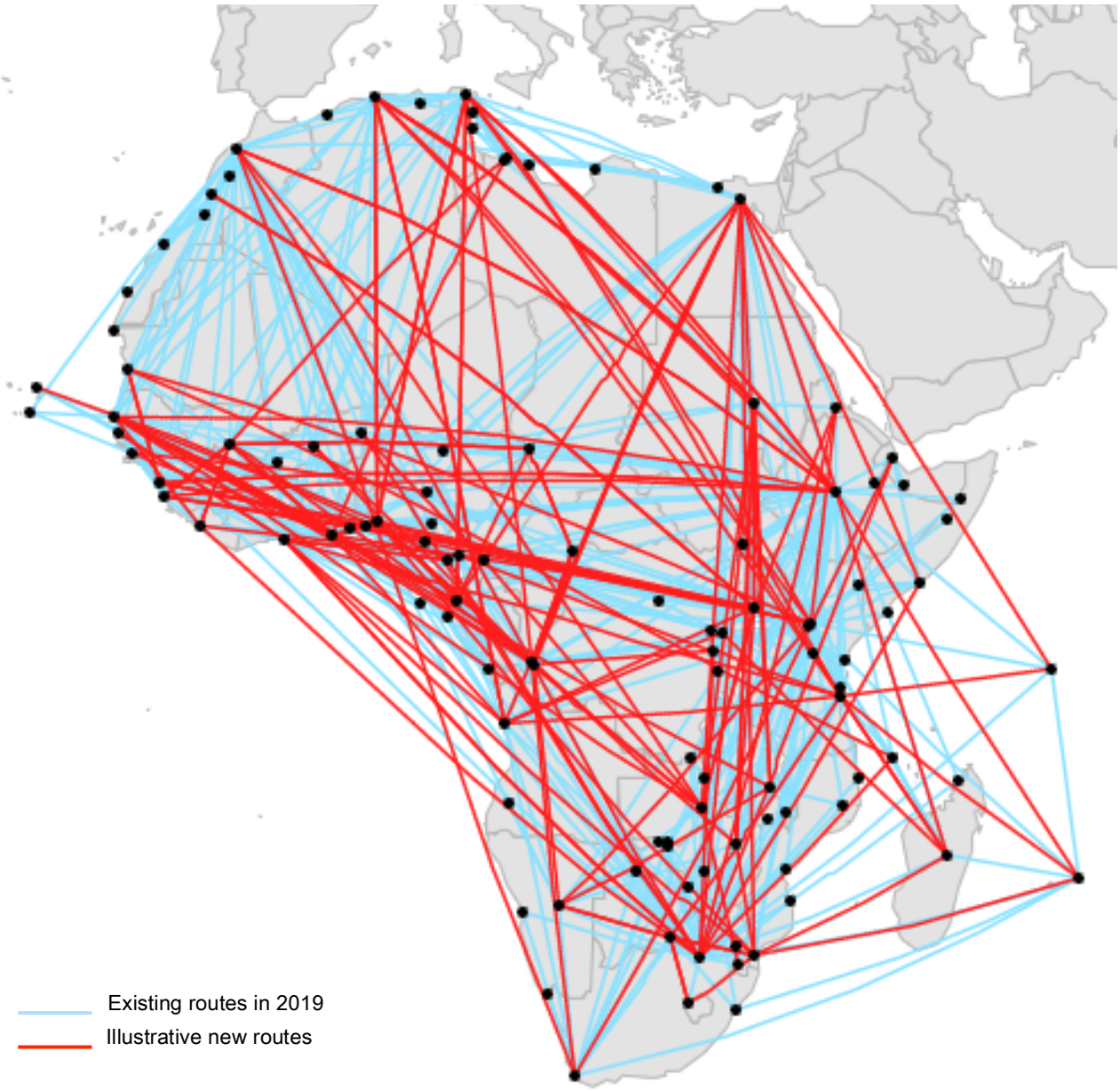
The illustrative air service developments (new direct services) that may occur following liberalization are summarised in Figure 34.

There is always a concern that liberalization will harm the profitability and viability of existing carriers. Indeed, a possible result is that liberalization leads to loss of market share as new competitors enter the market. However, the stimulatory impact of liberalization also means that the incumbent home carrier often still experiences a growth in traffic volumes despite this loss of market share. While increased competition has the potential to weaken the viability and profitability of home carriers in some instances, liberalization also offers a means to restructure the carriers and protect profitability by expanding into new markets, accessing a wider pool of investment and through consolidation. Ultimately, liberalization, per se, does not set off an inevitable chain of events. Whether the home carrier prospers or suffers under liberalization will depend in greater part on the quality of management of the carrier and how the carrier chooses to respond to liberalization. This is captured in a quote from an airline representative based in East Africa in a 2016 study commissioned by the East Africa Research Fund: [80]

> "*The dis-benefit one might expect is that protection of home carriers would be eliminated, which means that monopoly over certain markets would cease, thus requiring airlines to do a lot more to maintain or gain market share. However, this has a benefit on the other side since the competition created would encourage airlines to improve their services, efficiency and lower costs, which leads to sustainability in the long run. Ultimately, the threat only exists to carriers not adopting changes to meet the new market conditions*." (page 22).

[80] "Costs and Benefits of 'Open Skies' in the East African Community (EAC)", InterVISTAS Consulting for the East Africa Research Fund, 2016. https://www.tralac.org/images/docs/12689/costs-and-benefits-of-open-skies-in-the-eac-key-findings-eabc-intervistas-consulting-earf-september-2016.pdf

Figure 34: Illustrative New Routes Following SAATM Liberalization



Source: InterVISTAS analysis.

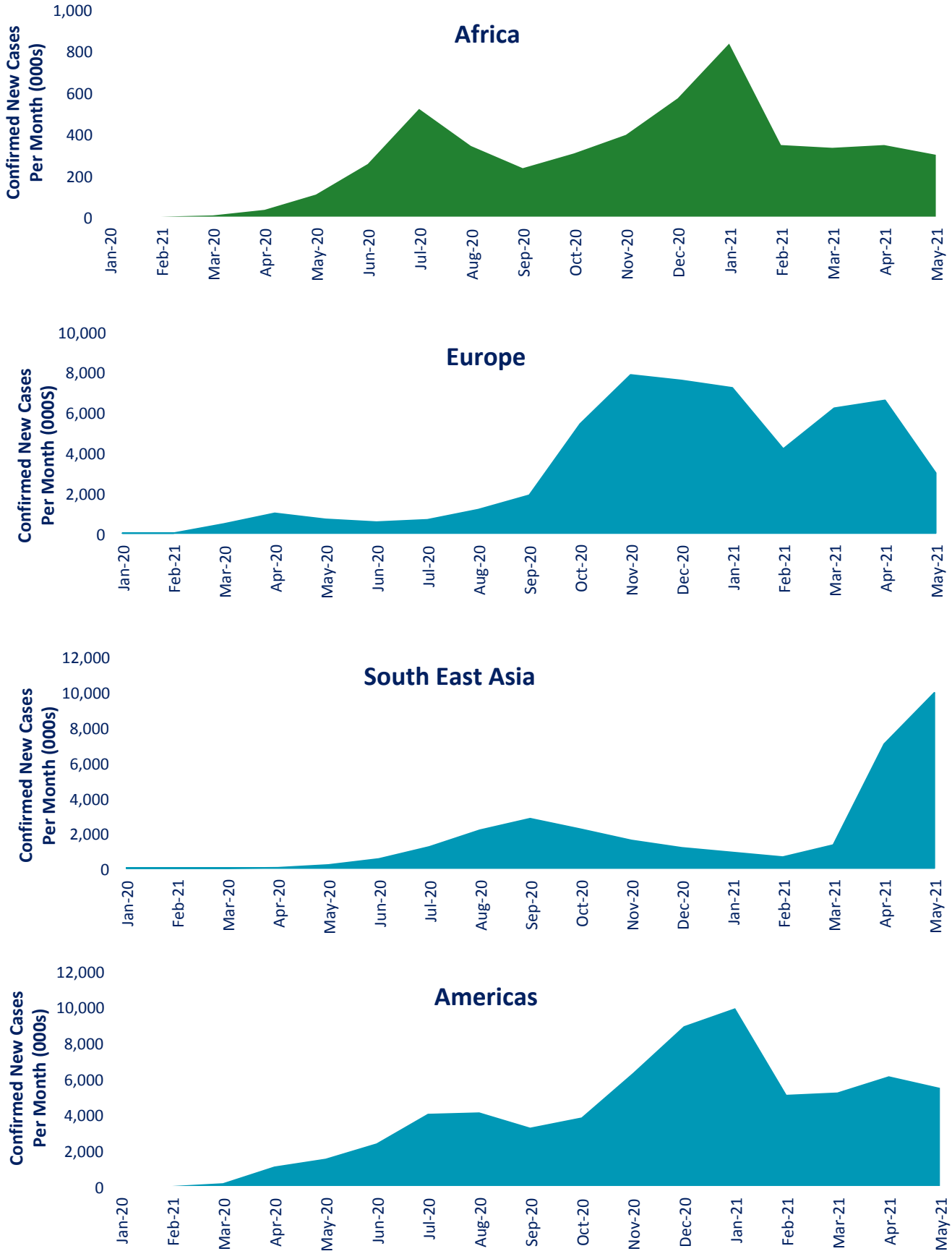
8.5. Implications of COVID-19

The COVID-19 pandemic has had an unprecedented impact on not just the aviation industry, but on the global economy. Up to May 31st, 2021, confirmed cases of COVID-19 globally have reach approximately 179 million, while the number of deaths associated with the pandemic was approximately 3.9 million.[81] According to the World Health Organization, in terms of confirmed cases, regions most impacted by the virus include the Americas (40% of globally confirmed cases), Europe (31% of globally confirmed cases), and South-East Asia (19% of globally confirmed cases).[82] In Africa, confirmed cases of COVID-19 have are approximately 4.9 million, representing approximately 3% of all global cases.

The development of COVID-19 cases since the start of the pandemic, by major region, is shown in Figure 35.

[81] World Health Organization (11th June 2021). *WHO Coronavirus (COVID-19) Dashboard*. Retrieved from https://covid19.who.int/
[82] Ibid.

Figure 35: Confirmed Cases Per Month of COVID-19 by Select World Region, 2020-2021



Source: World Health Organization COVID-19 Dashboard.
Figures represent monthly new cases of COVID-19 and are in thousands.

Within the African Union, the countries with the most confirmed cases are South Africa (34% of all cases), Morocco (11%), Tunisia (7%) and Ethiopia (6%). The top 10 countries in terms of reported cases and the total in Africa are shown in Table 21.

Table 21: Confirmed COVID-19 Cases by Select African Union Country up to 31st May 2021

Country	Confirmed Cases (000's)	Share of Total African Cases (%)
South Africa	1,663	34%
Morocco	519	11%
Tunisia	345	7%
Ethiopia	271	6%
Egypt	262	5%
Libya	185	4%
Kenya	171	3%
Nigeria	166	3%
Algeria	129	3%
Zambia	95	2%
Other African Union	1,097	22%
African Union	4,902	100%

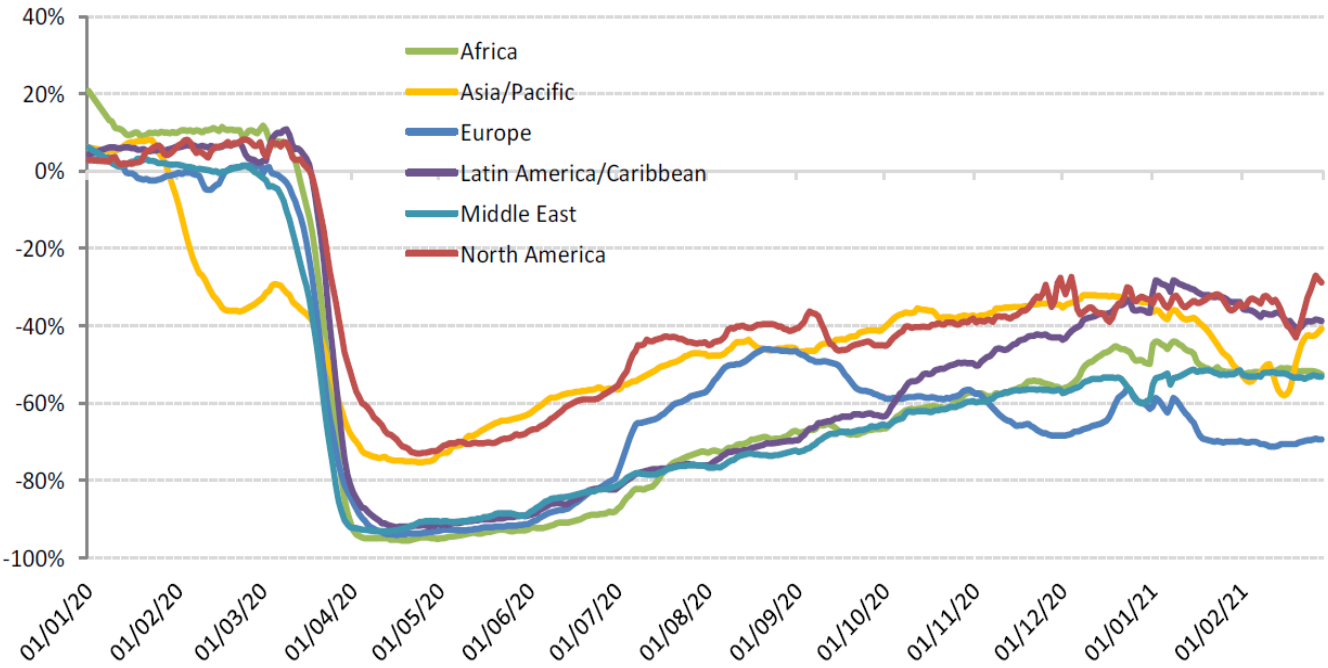
Source: InterVISTAS analysis of WHO COVID-19 Dashboard data.
Figures represent cumulative totals up to 31st May 2021.

The global aviation industry has been particularly impacted by the pandemic due to government restrictions or bans on international (and in some cases domestic) air travel and collapsing demand due to concerns about catching the virus.

International Civil Aviation Organization (ICAO) reports that world scheduled passenger traffic declined by 2.7 billion passengers in 2020, a 60% reduction from 2019, with seats offered by global airlines declining 50%.[83] This resulted in an estimated loss of approximately US$ 371 billion in gross passenger operation revenues. Reductions were greatest in international air travel – a 66% reduction in seat capacity, compared with a 38% reduction in domestic capacity. The decline in total seats operated in each region is shown in Figure 35.

[83] ICAO. *Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis.* March 2021. https://www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf.

Figure 35: Total Seat Capacity by Global Region (7 Day Rolling Average)



Source: ICAO. Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis. March 2021. https://www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf.

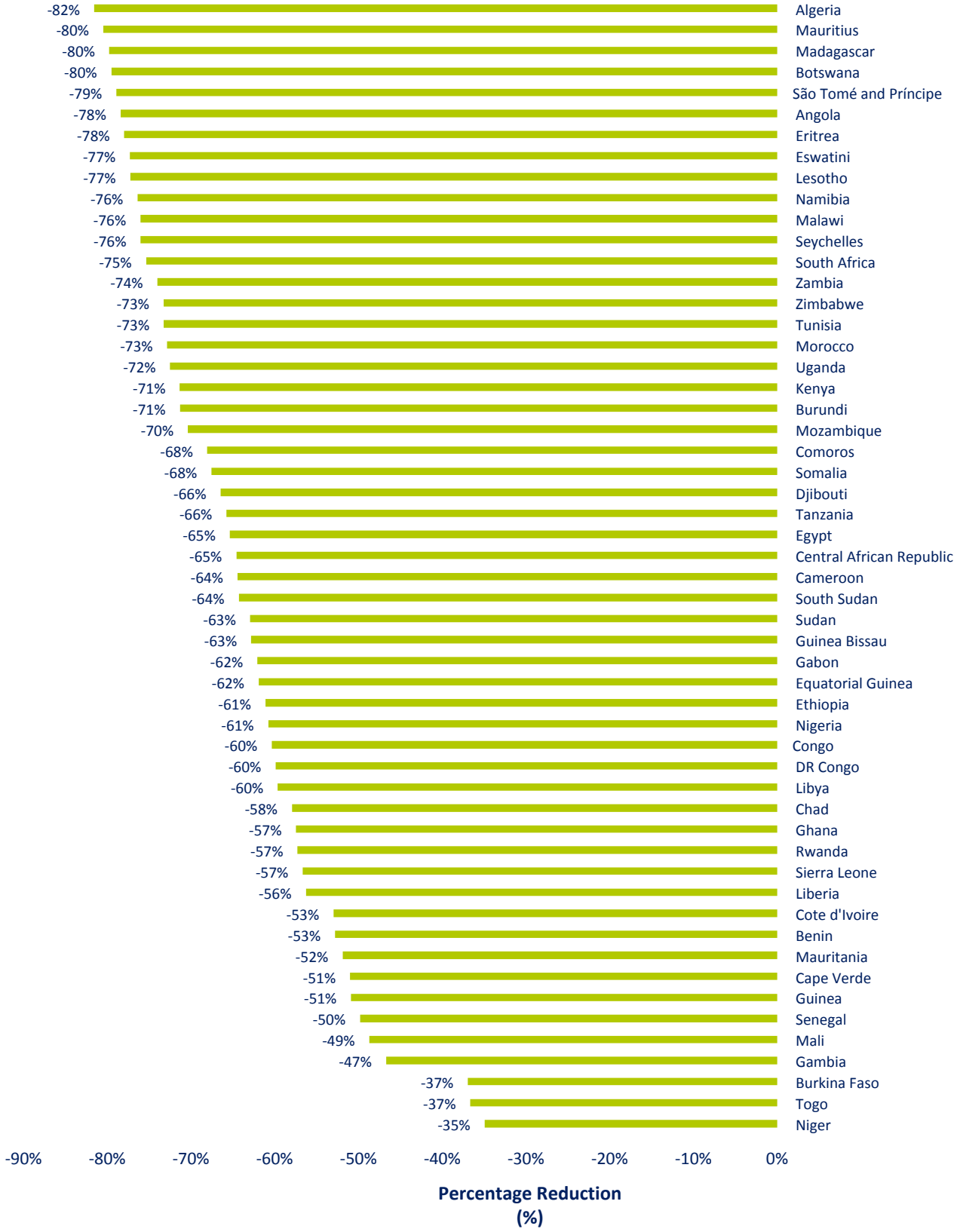
For Africa, ICAO estimates that capacity within the region has dropped by approximately 58% when compared to 2019, while passenger numbers dropped by 77.9 million or 68%. As with the global situation, the declines have been greatest in international traffic (70% decline in passengers compared with 63% in domestic).

Declines in passenger traffic have largely been a result of national governments imposing stringent border restrictions caused by COVID-19, where some countries within the region have decided to suspend international flights entirely (e.g., Algeria, Libya), while others have suspended international travel from countries determined to be COVID-19 hotspots (enacted by countries such as Madagascar, Tunisia, Guinea, Morocco).[84]

Intra–African passenger traffic levels have also declined sharply as a result of the COVID-19 pandemic, as shown in Figure 36. Between all African Union countries, intra-Africa traffic declined by 66% in 2020 when compared with 2019, where the largest declines occurred in Algeria, Mauritius, Madagascar, Botswana, and São Tomé and Príncipe.

[84] Given the rapidly evolving nature of the international response to the COVID-19 outbreak, border restrictions are subject to change. These restrictions do not apply to medevac or repatriation flights.

Figure 36: Reduction in Intra-Africa Air Passenger Traffic, 2020 vs 2019



Source: InterVISTAS analysis of IATA DDS data.
Percentages represent declines in intra-African travel from 2019 to 2020.

Clearly, the COVID-19 pandemic has had a profound impact on the aviation sector, the effects of which may last for several years. However, this does not change the fundamental need for liberalization in African air markets. In fact, liberalization may help air markets to recover faster from the pandemic and make it more robust to future shocks and challenges.

Research in a number of sectors of the economy (such as trade and finance) has found that market liberalization has a significant impact on mitigating the effects of shocks and exposure to negative economic shocks. A major benefit of liberalization often cited is that it allows for a certain degree of risk sharing between agents.[85] In this case, effects associated with negative shocks tend to be more evenly distributed among different parties, lessening their overall impacts for a single entity. Likewise, liberalization also assists in mitigating exposure and impacts of harmful economic shocks through the promotion of economic cooperation amongst countries, primarily through greater levels of resource sharing, investment, and various "spill-over" effects. Specifically, liberalization allows various markets to become more easily diversified and spread out, thereby lowering their exposure to negative events.[86]

Airlines in liberalized markets have responded to the COVID-19 crisis in innovative ways and have positioned themselves for strong growth in the recovery period. This includes LCCs which have emerged following liberalization. For example:

- *Ryanair,* an LCC and Europe's largest carrier by total passengers carried, is financially well positioned to weather some of the impacts brought on by the COVID-19 pandemic with minimal access to state aid (other than furlough schemes), and has announced plans to improve its position when travel resumes. This will largely be accomplished through the airline's aggressive growth strategy into major European markets such as Britain, Germany, Italy, and Spain. More specifically, the airline is seeking to stimulate demand through low air fares and the opening of additional routes.[87]
- *Wizz Air,* Europe's third largest LCC, has partnered with public health firms to offer cheaper COVID-19 tests for passengers in order to attract more traffic demand.[88] The airline has also continued to improve its financial position since the beginning of the pandemic through the sale of bonds and receiving additional stakeholder investments.[89] Likewise, over the course of the pandemic, the airline has engaged in ambitious growth strategy, by launching several new routes and bases, including the establishment of Wizz Air Abu Dhabi in the Middle East.[90]
- *FlySafari,* an LCC based in South Africa, credits its business model of maintaining a small and identical fleet of aircraft as the main reason for its COVID-19 recovery plan, allowing the company to achieve greater economies of scale and profitability. The airline has also been, and will continue to, focus specifically on domestic route, allowing it to minimize overall costs.[91]

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[85] Iwata, S., & Wu, S (2009). Stock Market Liberalization and International Risk Sharing. *Journal of International Financial Markets, Institutions and Money, 19(3),* 461–476. https://doi.org/10.1016/j.intfin.2008.05.003

[86] Gnangnon, S. (2017). Multilateral Trade Liberalization and Developing Countries Economic Exposure to Shocks. *World Trade Organization Paper*, 496–515. www.emeraldinsight.com/0144-3585.htm

[87] Humphries, C. (2021). *Ryanair predicts strong recovery after record annual loss*, Accessed from https://www.thechronicleherald.ca/news/world/ryanair-forecasts-record-annual-loss-as-covid-19-wreaks-havoc-547305/

[88] Reuters (2020). *Wizz Air partners with COVID-19 testing firm for cheaper tests*. Accessed from https://www.reuters.com/article/health-coronavirus-britain-wizz-air-hldg-idUSL8N2IA1XM.

[89] Pesket, J. (2021). *The Big Interview:* József Váradi, CEO, Wizz Air. Accessed from https://www.aviationbusinessme.com/airlines/23189-the-big-interview-jozsef-varadi-ceo-wizz-air.

[90] Bailey, J. (2020). *Wizz Air's Admirable Confidence to Fly in A Post- COVID-19 World.* Accessed from https://simpleflying.com/wizz-airs-admirable-confidence-to-fly-in-a-post-covid-19-world/.

[91] CNN Travel (2020). *South African airlines are struggling, but FlySafari hopes to weather the storm.* Accessed from https://edition.cnn.com/travel/article/south-african-airlines-lockdown-flysafair-spc-intl/index.html.

- *Southwest Airlines* – similar to FlySafari, the largest LCC in North America credits its business model of maintaining a single identical fleet as being a primary determinant for its COVID-19 recovery strategy. Moreover, the airline plans to focus its attention mostly on its U.S. based operations, reducing overall costs. For example, over the course of the pandemic, it has added approximately 17 new U.S. routes to its portfolio[92]. In addition, the airline will also take advantage of its pre-COVID-19 customer base. As well, like other LCCs, the airline entered the pandemic with a robust balance sheet with strong cash flow.[93]
- *Spring Airlines,* a Chinese LCC, plans to leverage its low-cost position within the region to attract customers with cheap fares when passenger traffic begins to recover, along with pursuing an aggressive expansion strategy in order to turn profitable post-COVID-19.[94]
- *British Airways* has set out plans to make its daily operations more efficient across the board, from optimizing the number of pilots and crew members staffed on each flight to lower passenger fares to capture increases in passenger demand levels.[95]
- *Cathay Pacific* is working closely with government officials in implementing various recovery initiatives, including assisting in establishing air travel bubbles with certain countries and working collaboratively with members of the Hong Kong tourism industry. Moreover, the airline also plans to bolster the air cargo side of its business.
- Similarly, *Ethiopian Airlines* has diversified its operations in order to ensure a successful recovery, by switching much of its passenger fleet to transporting air cargo. It has also been working with the African Union on the implementation of the African Union Trusted Travel Pass to make continental travel easier and safer amidst the COVID -19 pandemic.[96]

Some carriers operating in liberalized air markets have received state aid to deal with the unprecedented impacts of COVID-19 and specifically government restrictions on international travel, including Lufthansa, Air France, KLM, SAS, TAP Portugal and others.[97] So liberalization does not necessarily rule out state aid in extraordinary circumstances. However, it is notable than many major carriers in liberalized markets did not taken significant state aid (other than staff furlough schemes offered to all sectors of the economy) and instead relied on their own reserves and private sector funding. These include Ryanair, British Airways, EasyJet, Wizz, Southwest Airlines, Delta Air Lines, and others. Thus, the general taxpayer has not been burdened with support for these airlines even during a global crisis.

Certainly, COVID-19 has reduced air traffic levels in Africa as it has in most parts of the world. As a result, the initial gains from liberalization may be smaller in the short term but the long term gains will be in line with the projections in this report as air transport markets recover from the pandemic. In fact, liberalization is expected play a role in speeding up the recovery of traffic and will be critical to the long-term development and robustness of air transport markets. COVID-19 does not change the fundamental case for liberalization, just as past shocks such as the 9/11 terrorist attacks, regional conflicts, and economic shocks did not change the long-term trend towards

[92] Purgett, J. (2021). *Southwest Airlines CEO Foresees Recovery.* Accessed from https://www.aviationpros.com/airlines/article/21213892/southwest-airlines-ceo-foresees-recovery.
[93] Yahoo Finance (2020). Southwest Airlines: Set up Nicely for a Post-Pandemic World. Accessed from https://finance.yahoo.com/news/southwest-airlines-set-nicely-post-212713662.html.
[94] CNN Travel (2020). *South African airline are struggling, but FlySafari hopes to weather the storm.* Accessed from https://edition.cnn.com/travel/article/south-african-airlines-lockdown-flysafair-spc-intl/index.html.
[95] Horton, W. (2020). *British Airways at The Forefront of Change For a Post-COVID-19 Airline World.* Accessed from https://www.forbes.com/sites/willhorton1/2020/05/03/british-airways-at-the-forefront-of-change-for-a-post-covid-19-airline-world/?sh=3b9d35ce677c.
[96] https://www.traveldailynews.com/post/ethiopian-airlines-joins-african-union-to-launch-test-and-vaccine-passport.
[97] https://www.lexology.com/library/detail.aspx?g=06619755-4510-419c-9a50-f4a37e247969.

deregulation. Conversely, COVID-19 gives greater impetus to the need for liberalization, by allowing private capital and expertise to have a greater role in facing the challenges resulting from the pandemic.

8.6. Analysis of Current SAATM Members

As noted previously, a separate scenario was also modelled which examined the impacts from liberalizing BASAs (or signing a MASA) between the 35 current participants of SAATM (as of May 2021). The 35 countries are:

> Benin, Botswana, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Egypt, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Mali, Morocco, Mozambique, Namibia, Niger, Nigeria, Republic of the Congo, Rwanda, Senegal, Sierra Leone, South Africa, Swaziland, Togo, Zambia, Zimbabwe

Between the 35 countries, this scenario would result in potentially 595 open skies BASAs. The traffic impact of liberalization between these countries is summarised in Table 22. The passenger traffic between the 35 countries totalled 17.3 million in 2019, 55% of traffic between all the African Union countries. Following liberalization, the volume of traffic between 35 countries is forecast to increase by 6.4 million or 37%. All 35 countries will gain traffic from this more limited form of liberalization, although the impacts are smaller than from pan-Africa liberalization.

Table 22: Intra-Africa Passenger Traffic Impact of Liberalization Between Current SAATM Members

Country	Traffic Before (000's)	Traffic After (000's)	Increase (000's)	% Increase
Benin	395	469	75	19%
Botswana	423	526	104	24%
Burkina Faso	337	486	148	44%
Cameroon	563	650	88	16%
Cape Verde	76	111	34	45%
Central African Republic	91	186	95	104%
Chad	128	188	61	47%
Congo (Republic of the Congo)	248	408	160	64%
Côte d'Ivoire	851	1,107	255	30%
Democratic Republic of the Congo	302	572	270	89%
Egypt	420	743	324	77%
Equatorial Guinea	150	195	45	30%
Eswatini	51	89	39	76%
Ethiopia	711	965	254	36%
Gabon	427	602	175	41%
Gambia	176	240	63	36%
Ghana	875	1,091	215	25%
Guinea	252	354	102	40%
Guinea-Bissau	76	148	72	95%
Kenya	957	1,564	607	63%
Lesotho	54	92	37	69%
Liberia	172	289	117	68%
Mali	402	514	112	28%
Morocco	615	912	298	48%
Mozambique	381	481	100	26%
Namibia	536	688	152	28%
Niger	173	258	86	50%
Nigeria	1,046	1,427	381	36%
Rwanda	353	436	84	24%
Senegal	875	1,248	373	43%
Sierra Leone	145	187	42	29%
South Africa	3,279	3,951	672	20%
Togo	229	296	67	29%
Zambia	580	867	287	50%
Zimbabwe	922	1,355	433	47%
Total Current SAATM	**17,271**	**23,694**	**6,423**	**37%**

Source: Before traffic volumes taken from IATA PaxIS database for 2019; after volumes based on InterVISTAS analysis. Figures are for the total originating and departing passengers in each country.

Chapter 9: Economic Impact of Liberalization

Air passengers and airlines are not the only beneficiaries of liberalization. The increased air traffic and air services generates new economic activity and employment and facilitates other sectors of the economy, as documented in this chapter. These include:

- **Direct Economic Impact**
  This is the employment and economic activity associated with the operation and management of activities in the aviation sector including airlines, airport operators, air traffic control, ground handlers, airport security, immigration and customs, aircraft maintenance, etc.
- **Indirect and Induced Economic Impact**
  Indirect impacts are the "spin-off" employment and economic activity of industries that supply and support the activities in the aviation sector. For example: fuel refining for jet fuel, wholesalers providing food for inflight catering, companies providing accounting and legal services to airlines, etc. Induced impacts capture the economic activity generated by the employees of businesses directly or indirectly connected to the aviation sector spending their income in the national economy. For example, an airline employee might spend his/her income on groceries, meals, medical services, transportation, and other items which, in turn, generate employment in a wide range of sectors of the general economy.
- **Catalytic Impacts**
  While the economic impacts described above are the direct and multiplier impacts resulting from activities in the aviation sector, catalytic impacts capture the way in which aviation facilitates the business of other sectors of the economy. As such, air transportation facilitates employment and economic development in the economy through a number of mechanisms:
  - *Tourism effects* - air service facilitates the arrival of larger numbers of tourists to a region or country. This includes business as well as leisure tourists. The spending of these tourists can support a wide range of tourism-related businesses, including hotels, restaurants, theatres, car rentals, etc.
  - *Trade effects* – air transport provides connections to export markets for both goods and services (the actual export of goods and services) and to facilitate trade development, such as by marketing, training, repair, and financing activities.
  - *Investment effects* – a key factor many companies take into account when making decisions about the location of offices, manufacturing plants, or warehouses is proximity of an international airport.
  - *Productivity effects* – air transportation offers access to new markets which in turn enables businesses to achieve greater economies of scale. Air access also enables companies to attract and retain high quality employees.

The sections below provide estimates of the broader economic impacts, measured in terms of employment and contribution to Gross Domestic Product associated with BASA liberalization.

9.1. Aviation Sector: Direct, Indirect and Induced Impacts

As more aircraft take-off and land, additional staff will be needed to crew, clean and maintain the aircraft, to serve passengers and transport their luggage, and to process, load and unload air cargo (i.e., the direct impacts). Air carriers and other businesses at the airport will order additional goods and services from their suppliers (indirect impacts), and the increased employment will stimulate spending in the general economy (induced impacts). The parameters and methodology used to estimate the employment impacts in the aviation sector are described in Appendix C. The estimates are based on the 2019 employment and sector data, obtained from established sources, and calculated using established methodologies.

The estimated direct, indirect, and induced impacts in each of the study countries is provided in Table 23**.** The increase in air services and traffic arising from the liberalization of BASAs across the African Union countries is projected to result in additional 31,240 direct jobs in the aviation sector in Africa. Including indirect and induced jobs, the total aviation-related incremental employment is estimated to be 96,440 jobs. Furthermore, an additional US$ 1.1 billion is projected to be generated annually in GDP across the African Union including multiplier impacts. The projected employment gains in each country range from 170 employees in São Tomé and Príncipe to 5,450 in Kenya, broadly following the scale of traffic increase projected for each country.

Table 23: Incremental Aviation Related Employment and GDP Impacts from Liberalization Across the Entire African Union

Country	Employment (Jobs)			GDP per Annum (US$ Millions)		
	Direct	Indirect+ Induced	Total	Direct	Indirect+ Induced	Total
Algeria	1,100	2,060	3,160	42.6	33.9	76.5
Angola	610	1,950	2,560	13.5	7.6	21.1
Benin	380	690	1,070	3.5	2.8	6.3
Botswana	340	620	960	9.6	12.9	22.5
Burkina Faso	370	670	1,040	2.4	1.9	4.3
Burundi	130	420	550	0.5	0.2	0.7
Cameroon	300	560	860	3.2	2.5	5.7
Cape Verde	70	120	190	1.7	1.2	2.9
Central African Republic	210	380	590	0.8	0.6	1.4
Chad	200	370	570	1.1	0.9	2.0
Comoros	110	190	300	1.7	1.3	3.0
Congo (Republic of the)	350	640	990	6.0	4.8	10.8
Côte d'Ivoire	950	3,020	3,970	21.5	12.1	33.6
DR Congo	610	1,120	1,730	3.2	2.6	5.8
Djibouti	250	460	710	3.9	5.0	8.9
Egypt	1,880	1,710	3,590	17.8	36.1	53.9
Equatorial Guinea	170	320	490	3.6	8.7	12.3
Eritrea	170	300	470	0.7	0.6	1.3
Eswatini	70	120	190	1.3	1.8	3.1
Ethiopia	920	2,940	3,860	19.1	5.5	24.6
Gabon	450	1,440	1,890	11.6	19.7	31.3
Gambia	140	260	400	1.0	0.8	1.8
Ghana	840	2,690	3,530	14.3	8.0	22.2
Guinea	360	650	1,010	3.0	2.4	5.4
Guinea-Bissau	150	270	420	0.8	0.6	1.4
Kenya	1,580	3,870	5,450	45.0	15.7	60.7
Lesotho	70	120	190	0.3	0.4	0.6
Liberia	280	510	790	1.2	1.0	2.2
Libya	1,180	2,140	3,320	26.2	63.0	89.2
Madagascar	270	500	770	0.9	0.7	1.5
Malawi	270	480	750	0.8	0.6	1.4
Mali	460	830	1,290	3.3	2.6	5.9

Country	Employment (Jobs)			GDP per Annum (US$ Millions)		
Mauritania	330	590	920	6.1	4.9	11.0
Mauritius	360	650	1,010	13.8	20.5	34.3
Morocco	1,320	2,470	3,790	51.1	29.1	80.2
Mozambique	430	780	1,210	1.5	1.2	2.7
Namibia	630	1,140	1,770	14.0	18.7	32.7
Niger	450	820	1,270	2.1	1.7	3.8
Nigeria	1,060	3,360	4,420	26.8	11.2	38.0
Rwanda	390	1,260	1,650	3.8	1.7	5.5
Saharawi ADR	N/A	N/A	N/A	N/A	N/A	N/A
São Tomé and Príncipe	60	110	170	0.5	0.8	1.4
Senegal	1,090	1,980	3,070	18.8	14.9	33.6
Seychelles	150	270	420	6.1	9.6	15.6
Sierra Leone	160	290	450	0.8	0.6	1.3
Somalia	390	720	1,110	0.3	0.2	0.6
South Africa	1,730	3,130	4,860	58.9	78.7	137.6
South Sudan	350	640	990	2.8	2.2	5.0
Sudan	1,040	1,890	2,930	8.0	6.3	14.3
Tanzania	1,320	2,410	3,730	9.4	7.4	16.8
Togo	210	370	580	0.9	0.7	1.7
Tunisia	1,400	2,620	4,020	35.4	30.2	65.5
Uganda	1,180	3,740	4,920	14.5	6.3	20.8
Zambia	890	1,620	2,510	8.6	6.8	15.4
Zimbabwe	1,060	1,920	2,980	10.0	7.9	17.9
Total African Union	**31,240**	**65,200**	**96,440**	**560.2**	**519.8**	**1,079.9**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.

9.2. Tourism Impacts

According to research by the World Travel and Tourism Council (WTTC), tourists in Africa spent a total of US$ 61.3 billion in 2019, an increase of 4.8% over the previous year. Based on 2019 levels, the tourism sector in Africa is estimated to contribute US$ 168.5 billion to the continent's GDP (7.1% of total GDP) and support 24.6 million jobs.

Tourism is widely recognised as a major driver for economic development in many parts of Africa. The African Union has incorporated the crucial role of the tourism sector in the attainment of the main goals of the AU Agenda 2063. The AU's First Ten Year Implementation Plan of Agenda 2063 includes the African Tourism Strategic Framework with the following mission:[98]

> *"Africa becomes the preferred destination for tourism offering unique and diverse African experience and committed to sustainable and inclusive tourism development that contributes to regional integration and the socio-economic well-being of the African People."*

The Framework document notes that regional (intra-Africa) tourism is significantly underserved with only 4 out of 10 international tourists to Africa originating from Africa, much lower than the 4 out of 5 global average.[99]

The United Nations and World Bank have also focussed on the importance of tourism as an engine for inclusive growth and sustainable economic development. The UN's Sustainable Development Goals 8, 12 and 14 highlight the central role of tourism in job creation, local promotion of culture, and economic development. As noted in the 2017 UN report, "Economic development in Africa: Tourism for transformative and inclusive growth":[100]

> *"Tourism – in terms of its contribution to gross domestic product, employment and trade – is an important sector in many African economies, and its growth is increasingly driven by tourists originating from the continent itself."*

The World Bank notes that tourism has the potential to stimulate economic and job opportunities:

> *"As tourism grows, the sector's job creation and income-generating potential rises exponentially. Tourism compares well with*
>
> *other sectors regarding the opportunities for small and medium enterprise (SME) development, career advancement, and lifelong learning potential …. Tourism is also a more efficient job creator than many other sectors due to the multiple downstream effects."*[101]

The African Union SAATM is a critical part of achieving this tourism mission, along with the free movement of people. The tourism sector is a major beneficiary of increased air services. Air service facilitates the arrival of tourists (both business and leisure) to a country or region. The spending by these tourists can support a wide range of tourism related businesses: hotels, restaurants, tour guides, theatres, car rentals, etc. In addition, the tourism industry generates significant indirect impacts on businesses that supply and support tourism. For example, food wholesalers for hotels and restaurants, taxi firms, hotel laundering services, delivery trucks, etc.[102]

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[98] https://au.int/sites/default/files/documents/36370-doc-ie24366_e_original-summary_african_tourism_strategy.docx.
[99] Ibid.
[100] https://unctad.org/system/files/official-document/tdb64d2_en.pdf.
[101] World Bank, "Tourism in Africa: Harnessing Tourism for Growth and Improved Livelihoods", 2014, http://documents1.worldbank.org/curated/en/738471468299123752/pdf/Tourism-in-Africa-harnessing-tourism-for-growth-and-improved-livelihoods.pdf
[102] By this definition, air transport could be considered part of the indirect industries benefiting from tourism. The multipliers used in this analysis exclude air transport as part of the indirect impact of tourism, to avoid double counting. Details of the tourism calculations are provided in Appendix A.

The forecast number of tourists to each of the African Union countries stimulated by liberalization is provided in Table 24, along with the incremental tourism spend and the direct, indirect, and induced employment generated by this increased tourism. Liberalization is projected to stimulate an additional 4.0 million tourism visits among the African Union nations, spending a total of US$ 1.65 billion, an increase of 2.7% on total international tourism spend in 2019 (US$ 61.3 billion).

This tourism spending is projected to create 267,530 jobs in tourism and in downstream industries contributing to an additional US$1.40 billion in GDP per annum. The employment impacts in the individual countries are largest in established tourist markets such as Egypt, Kenya, South Africa and Tanzania, but all countries are expected to benefit, aiding some to develop a larger tourism industry.

The AU's African Tourism Framework contains a number of growth targets for tourism in Africa to be achieved by 2028:[103]

- Increase the share of intra-Africa tourists to 80%;
- Treble non-aviation revenues from tourism;
- Treble the contribution of tourism to African GDP;
- Increase tourism's share of total employment in Africa from 10% to 15%.

The results in Table 24 clearly shows that SAATM will significantly contribute to the wider tourism goals for Africa.

[103] **https://au.int/sites/default/files/documents/36370-doc-ie24366_e_original-summary_african_tourism_strategy.docx.**

Table 24: Incremental Tourism Impacts from Liberalization Across the Entire African Union

Country	Additional Tourism Visits (000s)	Additional Tourism Spend (US$ Million)	Direct + Multiplier Employment (Jobs)	Direct + Multiplier GDP (US$ Millions)
Algeria	111,700	37.3	14,970	112.0
Angola	57,000	53.1	11,140	71.9
Benin	38,200	11.3	3,830	8.3
Botswana	35,800	6.8	2,710	22.7
Burkina Faso	38,700	17.6	3,660	11.5
Burundi	10,500	1.0	380	0.3
Cameroon	30,000	7.6	2,780	9.5
Cape Verde	14,800	5.2	460	3.4
Central African Republic	23,400	1.9	760	1.5
Chad	21,500	10.6	3,310	9.1
Comoros	9,500	4.0	580	3.0
Congo (Republic of the)	40,300	4.6	1,830	7.2
Côte d'Ivoire	121,200	42.4	8,890	57.4
DR Congo	65,600	6.0	2,410	4.7
Djibouti	30,100	6.0	2,390	10.3
Egypt	198,600	105.3	6,780	80.3
Equatorial Guinea	21,800	2.0	800	6.7
Eritrea	21,500	2.0	330	0.7
Eswatini	10,100	0.9	350	3.0
Ethiopia	141,700	72.1	9,790	30.0
Gabon	55,900	5.5	770	10.3
Gambia	11,900	1.8	360	0.8
Ghana	122,700	85.2	13,810	73.3
Guinea	34,300	3.2	1,290	6.6
Guinea-Bissau	18,000	3.5	440	1.3
Kenya	241,700	126.9	26,420	88.0
Lesotho	7,800	0.7	290	1.1
Liberia	21,900	2.0	250	0.6
Libya	94,400	29.4	6,160	68.1
Madagascar	34,300	36.1	7,210	10.7
Malawi	24,400	2.2	890	0.9
Mali	43,900	26.5	10,640	43.9
Mauritania	33,800	3.1	1,130	3.9
Mauritius	105,600	72.2	1,860	47.9

Country	Additional Tourism Visits (000s)	Additional Tourism Spend (US$ Million)	Direct + Multiplier Employment (Jobs)	Direct + Multiplier GDP (US$ Millions)
Morocco	239,900	80.1	4,110	44.1
Mozambique	48,700	3.1	1,240	1.8
Namibia	67,900	15.8	1,030	17.7
Niger	55,000	18.4	3,840	10.9
Nigeria	124,600	60.1	21,070	113.6
Rwanda	54,000	11.9	1,790	5.5
Saharawi ADR	N/A	N/A	N/A	N/A
São Tomé and Príncipe	6,600	7.7	690	5.0
Senegal	126,400	37.9	7,320	43.0
Seychelles	42,000	34.1	550	17.5
Sierra Leone	15,800	5.8	1,870	3.7
Somalia	41,800	3.8	1,530	0.7
South Africa	274,700	125.1	10,310	114.0
South Sudan	33,300	3.0	580	1.7
Sudan	94,500	63.8	12,200	35.0
Tanzania	203,100	195.1	28,350	80.2
Togo	21,900	3.3	420	1.2
Tunisia	245,700	65.4	4,390	42.0
Uganda	151,000	69.3	9,290	20.6
Zambia	92,100	36.5	5,040	18.3
Zimbabwe	119,900	11.0	2,240	8.8
Total African Union	**3,951,500**	**1,647.0**	**267,530**	**1,396.2**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.

9.3. Trade and Catalytic Impacts

Liberalization opens new markets to many businesses as a result of higher frequencies, better flight connections and lower fares offered. This leads to a broader demand for existing products. The increase in trade in goods resulting from liberalization was estimated based on the existing trade flows and the projected increase in air traffic. The methodology is summarised in Appendix C.

The estimated increase in the trade of goods is provided in Table 25. The table shows the increase in imports and exports for each country, and the percentage increase relative to total trade among the countries. The percentage growth in trade is partially a function of existing cargo capacity and each country's current trade volumes. The balance between exports and imports for each country is a result of the type of goods each country exports and imports. For example, Nigeria is projected to have only a 0.07% increase in trade (compared with the 1.1% average) because a larger part its trade is oil exports which are not transported by air. The mix of goods shipped may change in the future as the economy develops and air services develop, and therefore these estimates

should be considered conservative. Furthermore, the recent implementation of the African Continental Free Trade Area (AfCFTA) will further leverage the trade gains resulting from BASA liberalization, as discussed further in Chapter 6.

Table 25: Trade Impacts from Liberalization Across the Entire African Union

Country	Increased Imports (US$ Million)	Increased Exports (US$ Million)	Combined Imports + Exports (US$ Million)	% Growth in Trade (Imports + Exports)
Algeria	15.5	26.2	41.7	1.05%
Angola	6.4	35.7	42.0	1.79%
Benin	0.0	3.0	3.1	0.24%
Botswana	1.8	1.2	3.0	0.05%
Burkina Faso	0.1	4.9	5.0	0.28%
Burundi	0.0	0.7	0.7	0.23%
Cameroon	0.0	3.8	3.8	0.21%
Cape Verde	0.0	0.0	0.0	0.03%
Central African Republic	0.0	0.6	0.6	0.73%
Chad	0.1	0.4	0.5	0.36%
Comoros	0.7	2.2	2.9	6.48%
Congo (Republic of the)	4.8	2.3	7.1	0.73%
Côte d'Ivoire	3.3	29.3	32.6	0.58%
DR Congo	0.8	72.7	73.5	1.82%
Djibouti	0.4	4.6	5.0	1.15%
Egypt	132.3	19.7	152.0	2.08%
Equatorial Guinea	0.2	0.3	0.5	0.23%
Eritrea	0.1	1.3	1.4	1.05%
Eswatini	2.3	38.1	40.4	0.85%
Ethiopia	21.2	22.7	43.9	5.48%
Gabon	0.4	4.7	5.2	1.32%
Gambia	0.4	0.7	1.1	0.47%
Ghana	14.1	1.8	15.9	0.19%
Guinea	0.1	0.9	1.1	0.24%
Guinea-Bissau	0.0	1.3	1.3	1.09%
Kenya	34.3	39.3	73.6	1.56%
Lesotho	0.0	0.0	0.0	0.00%
Liberia	0.2	1.6	1.8	1.20%
Libya	1.3	62.1	63.5	3.49%
Madagascar	4.8	30.6	35.4	2.34%
Malawi	7.8	26.4	34.2	2.92%

Country	Increased Imports (US$ Million)	Increased Exports (US$ Million)	Combined Imports + Exports (US$ Million)	% Growth in Trade (Imports + Exports)
Mali	0.2	4.9	5.1	0.24%
Mauritania	1.2	32.4	33.6	3.62%
Mauritius	18.4	37.9	56.3	3.10%
Morocco	79.8	57.3	137.1	3.18%
Mozambique	0.7	2.5	3.2	0.06%
Namibia	63.9	3.0	66.9	0.88%
Niger	3.3	6.2	9.5	1.61%
Nigeria	2.3	8.1	10.4	0.07%
Rwanda	1.2	48.6	49.8	3.40%
Saharawi ADR	N/A	N/A	N/A	N/A
São Tomé and Príncipe	0.0	0.1	0.1	0.17%
Senegal	16.3	16.1	32.4	1.06%
Seychelles	18.5	9.7	28.2	5.88%
Sierra Leone	3.4	0.3	3.8	1.62%
Somalia	0.0	6.6	6.7	2.06%
South Africa	289.5	31.8	321.4	0.84%
South Sudan	0.0	11.5	11.5	2.23%
Sudan	0.8	2.2	3.0	0.26%
Tanzania	57.4	25.4	82.7	3.06%
Togo	3.0	0.8	3.8	0.17%
Tunisia	53.0	14.3	67.3	1.62%
Uganda	13.9	10.4	24.3	1.04%
Zambia	26.6	76.7	103.3	1.55%
Zimbabwe	13.3	74.5	87.8	1.74%
Total African Union	**920.4**	**920.4**	**1,840.8**	**1.09%**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.

Chapter 2 described the linkages between air services and the growth of the economy (catalytic effects). As well as tourism (already discussed), air transportation facilitates employment and economic development in the national and regional economies through increased trade, attracting new businesses to the region, and encouraging investment.

Quantifying these business impacts that aviation provides to the economy is difficult. To do so in detail would require a massive survey covering the majority of businesses in a country. Even with such a survey, some aspects of the impacts would be impossible to ascertain reliably. While measuring the trade transported by air cargo is relatively straightforward, it is far more difficult to determine and value of aviation's role in affecting business location decisions, investment, and expansion decisions, facilitating corporate mobility, and attracting international talent. Furthermore, determining how future changes in aviation regulation will impact businesses is even more problematic.

An alternative approach is to use generalised parameters drawn from statistical analysis of historical data. This analysis seeks to determine the contribution of air transport to economic growth by examining the relationship between these factors over time or compared between different countries (or both). The analysis attempts to control for other factors that also contribute to economic growth (education spending, government policies, investment, research and development spending, etc.), in order to isolate the impact of air transport. This and similar approaches have been used in other studies examining the catalytic impact of aviation in Europe and North America.[104]

The catalytic impact of liberalization on productivity, trade and investment was estimated in this way, using parameters estimated from previous research. This parameter was taken from a study undertaken by InterVISTAS described in Appendix C.[105] It was selected because it is one of few studies that is based on global data – most studies have used U.S. data. Further details of the analysis are provided in Appendix C.

The employment and GDP impacts resulting from increased trade, investment, and productivity are provided in Table 26. The catalytic impacts of liberalization are projected to result in an additional 224,780 jobs and US$ 1.5 billion in annual GDP. The largest employment impacts are in countries such as DR Congo, Uganda, and Niger, which will benefit from better trade and business links with the rest of Africa.

[104] For example see: http://www.airport-business.com/2015/04/new-study-reveals-real-economic-impacts-airports/ and https://www.eurocontrol.int/eec/see/gallery/content/public/documents/workshop_2005_Adrian_Cooper.pdf.
[105] InterVISTAS Consulting Inc., "Measuring the Economic Rate of Return on Investment in Aviation".

Table 26: Catalytic Impacts from Liberalization Across the Entire African Union

Country	Employment (Jobs)	GDP per Annum (US$ Million)
Algeria	3,190	85.5
Angola	4,260	52.6
Benin	5,940	32.5
Botswana	1,170	37.0
Burkina Faso	6,320	24.7
Burundi	4,120	4.6
Cameroon	3,200	20.2
Cape Verde	70	1.2
Central African Republic	2,510	5.4
Chad	8,530	29.4
Comoros	260	2.5
Congo (Republic of the)	1,100	11.3
Côte d'Ivoire	6,060	77.0
DR Congo	19,740	62.0
Djibouti	630	9.5
Egypt	2,020	37.7
Equatorial Guinea	820	31.0
Eritrea	1,170	3.0
Eswatini	750	16.7
Ethiopia	8,080	27.2
Gabon	830	36.2
Gambia	320	1.4
Ghana	6,470	61.3
Guinea	3,550	18.0
Guinea-Bissau	1,280	3.9
Kenya	7,190	52.8
Lesotho	1,810	8.3
Liberia	4,560	11.6
Libya	1,750	70.9
Madagascar	4,570	8.5
Malawi	6,280	10.9
Mali	5,500	23.9
Mauritania	1,580	17.8
Mauritius	200	9.5
Morocco	1,270	24.4

Country	Employment (Jobs)	GDP per Annum (US$ Million)
Mozambique	4,090	8.7
Namibia	690	17.1
Niger	12,190	34.2
Nigeria	8,120	111.0
Rwanda	3,610	10.9
Saharawi ADR	N/A	N/A
São Tomé and Príncipe	190	2.1
Senegal	2,740	28.1
Seychelles	90	4.6
Sierra Leone	1,890	5.4
Somalia	6,470	2.8
South Africa	2,480	70.4
South Sudan	7,780	37.1
Sudan	6,060	27.9
Tanzania	10,880	46.0
Togo	1,310	3.6
Tunisia	970	18.2
Uganda	16,070	61.1
Zambia	5,250	30.3
Zimbabwe	6,800	38.1
Total African Union	**224,780**	**1,487.6**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.

9.4. Summary of Impacts

Table 27 summarises the total employment and GDP impacts of liberalization, combining the impacts in the aviation and tourism sectors and the other catalytic impacts. Across the African Union countries, BASA liberalization is projected to result in an additional 588,750 jobs and US$ 4.0 billion additional GDP per annum (0.17% of the total GDP of these countries). The impact for individual countries is a function of the degree of liberalization already undertaken (those markets that have not significantly liberalized air service are likely to see the biggest impacts from full liberalization), the size of the air traffic markets and the economic structure of that country. The incremental GDP represents a 0.06%-2.21% increase on 2019 GDP levels, with all countries expected to gain economically from liberalization.

Table 27: Total Incremental Economic Impact Stimulated by Liberalization Across the Entire African Union

Country	Employment (Jobs)	GDP per Annum (US$ Million)	GDP Impact*
Algeria	21,320	273.9	0.16%
Angola	17,960	145.7	0.16%
Benin	10,840	47.1	0.33%
Botswana	4,840	82.2	0.45%
Burkina Faso	11,020	40.5	0.25%
Burundi	5,050	5.6	0.19%
Cameroon	6,840	35.4	0.09%
Cape Verde	720	7.5	0.38%
Central African Republic	3,860	8.3	0.37%
Chad	12,410	40.5	0.36%
Comoros	1,140	8.5	0.73%
Congo (Republic of the)	3,920	29.3	0.24%
Côte d'Ivoire	18,920	168.0	0.29%
DR Congo	23,880	72.5	0.14%
Djibouti	3,730	28.8	0.86%
Egypt	12,390	171.9	0.06%
Equatorial Guinea	2,110	50.0	0.45%
Eritrea	1,970	5.0	0.24%
Eswatini	1,290	22.9	0.51%
Ethiopia	21,730	81.8	0.09%
Gabon	3,490	77.7	0.46%
Gambia	1,080	4.1	0.22%
Ghana	23,810	156.8	0.23%
Guinea	5,850	30.0	0.24%
Guinea-Bissau	2,140	6.7	0.50%

Country	Employment (Jobs)	GDP per Annum (US$ Million)	GDP Impact*
Kenya	39,060	201.5	0.21%
Lesotho	2,290	10.0	0.42%
Liberia	5,600	14.3	0.47%
Libya	11,230	228.1	0.44%
Madagascar	12,550	20.8	0.15%
Malawi	7,920	13.2	0.17%
Mali	17,430	73.7	0.43%
Mauritania	3,630	32.7	0.43%
Mauritius	3,070	91.6	0.65%
Morocco	9,170	148.7	0.12%
Mozambique	6,540	13.2	0.09%
Namibia	3,490	67.4	0.55%
Niger	17,300	48.8	0.38%
Nigeria	33,610	262.6	0.06%
Rwanda	7,050	21.9	0.21%
Saharawi ADR	N/A	N/A	N/A
São Tomé and Príncipe	1,050	8.4	2.00%
Senegal	13,130	104.7	0.44%
Seychelles	1,060	37.7	2.21%
Sierra Leone	4,210	10.4	0.25%
Somalia	9,110	4.0	0.44%
South Africa	17,650	322.0	0.09%
South Sudan	9,350	43.8	0.37%
Sudan	21,190	77.2	0.25%
Tanzania	42,960	143.0	0.23%
Togo	2,310	6.5	0.12%
Tunisia	9,380	125.7	0.32%
Uganda	30,280	102.6	0.29%
Zambia	12,800	63.9	0.27%
Zimbabwe	12,020	64.8	0.30%
Total African Union	**588,750**	**3,963.7**	**0.17%**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.
** GDP impact is the incremental GDP as a percentage of national GDP in 2019.*

9.5. Analysis of Current SAATM Members

Analysis was also conducted of the economic impact of a scenario where BASAs were liberalized (or a MASA signed) between the 35 current participants of SAATM (as of May 2021). The results are presented in Table 28.

In this scenario, a total of 239,650 incremental jobs are projected, combining the impacts in the aviation and tourism sectors and the other catalytic impacts, along with US$ 1.6 billion in annual GDP. This is approximately 40% of the jobs and economic activity forecast for liberalization across the entire African Union.

Table 28: Total Incremental Economic Impact Stimulated by Liberalization Across Current SAATM Members

Country	Employment (Jobs)	GDP per Annum (US$ Million)	GDP Impact*
Benin	5,050	21.8	0.15%
Botswana	2,930	49.8	0.27%
Burkina Faso	9,690	35.6	0.22%
Cameroon	1,330	7.1	0.02%
Cape Verde	660	6.7	0.34%
Central African Republic	3,780	8.1	0.37%
Chad	8,190	27.0	0.24%
Congo (Republic of the Congo)	3,900	29.1	0.24%
Côte d'Ivoire	10,110	90.4	0.15%
Democratic Republic of the Congo	23,540	71.5	0.14%
Egypt	5,850	81.9	0.03%
Equatorial Guinea	1,220	29.2	0.26%
Eswatini	1,290	22.9	0.51%
Ethiopia	10,810	40.9	0.04%
Gabon	2,580	58.4	0.35%
Gambia	1,080	4.1	0.22%
Ghana	12,680	82.7	0.12%
Guinea	3,820	19.6	0.16%
Guinea-Bissau	2,140	6.7	0.50%
Kenya	25,260	130.5	0.14%
Lesotho	2,290	10.0	0.42%
Liberia	5,170	13.2	0.43%
Mali	9,670	40.9	0.24%
Morocco	3,680	60.0	0.05%
Mozambique	3,540	7.2	0.05%
Namibia	1,930	37.4	0.30%
Niger	7,790	22.0	0.17%
Nigeria	21,930	168.9	0.04%
Rwanda	3,150	9.8	0.09%
Senegal	10,080	80.8	0.34%
Sierra Leone	2,650	6.6	0.16%
South Africa	10,120	177.7	0.05%
Togo	1,660	4.7	0.09%
Zambia	9,410	47.2	0.20%
Zimbabwe	10,670	57.5	0.27%
Total Current SAATM	**239,650**	**1,567.7**	**0.09%**

Source: InterVISTAS analysis. All financial figures are in 2019 prices.
* GDP impact is the incremental GDP as a percentage of national GDP in 2019.

Chapter 10: Social Impacts of SAATM and Contribution to Development

The benefits of air liberalization are not just confined to employment and GDP related impacts documented in Chapter 5. The increased air service and connectivity resulting from liberalization has the potential to enhance and support a wide range of activities and opportunities that improve the quality of life in local communities, as well as throughout the country and continent. In addition to generating economic growth and alleviating poverty, air transportation enables access to healthcare, food, and education, while enhancing mobility and connecting different cultures.

The following sections evaluates how air liberalization further supports priority areas of the African Union's Agenda 2063, the UN Sustainable Development Goals (SDGs), and priorities of the African Development Bank.

10.1. African Union Agenda 2063

The African Union (AU) is a multilateral political body which facilitates collaboration and integration in socio-economic policymaking across all of Africa.[106] Today, the African Union is the largest continental union in the world in terms of representation, covering the entirety of Africa's sovereign population of over one billion people under a vision for "An Integrated, Prosperous and Peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena".[107] It is comprised of both political and administrative bodies, and also serves as a key continental representative for Africa in global forums such as the United Nations.

Representing the 55 member states that make up the countries of the African Continent, the African Union's principal objectives include economic and social development.[108] To ensure the integration and realisation of Africa's socio-economic goals, the AU developed Agenda 2063. This strategic framework is a long-term plan with concrete initiatives for economic growth and sustainable development.[109] Agenda 2063 outlines the following seven aspirations for Africa's future, which in turn are defined by a set of 20 goals and numerous priorities for success:[110]

- **Aspiration 1: A prosperous Africa based on inclusive growth and sustainable development**
  - A focus on the eradication of poverty and building shared prosperity through various social and economic reforms, including creating well-paying jobs, educating citizens (with an emphasis on science, technology, and innovation), expanding health care services, modernizing and improving the industrial, agricultural, and natural resource sectors, and developing policies around environmental sustainability.

[106] https://au.int/en/overview
[107] Ibid.
[108] Ibid.
[109] https://au.int/agenda2063/overview
[110] https://au.int/agenda2063/aspirations & https://au.int/en/agenda2063/goals

- Goals include:
    1. A high standard of living, quality of life and well-being for all
    2. Well-educated citizens and skills revolutions underpinned by science, technology and innovation
    3. Healthy and well-nourished citizens
    4. Transformed economies and jobs
    5. Modern agriculture for increased proactivity and production
    6. Blue/ocean economy for accelerated economic growth
    7. Environmentally sustainable climate and resilient economies and communities.

- **Aspiration 2: An integrated continent, politically united and based on the ideals of Pan-Africanism and the vision of Africa's Renaissance**
    - Continental unity that empowers Africa to be an international power driven by its own self-determination and the democratic will of its people. Focus on the formal creation of a continental federation or confederation, developing world-class infrastructure (including improved transportation connectivity), and decolonisation of all remaining African territories under occupation.

    - Goals include:
        8. United Africa (Federal or Confederate)
        9. Continental Financial and Monetary Institutions are established and functional
        10. World class infrastructure criss-crosses Africa.

- **Aspiration 3: An Africa of good governance, democracy, respect for human rights, justice, and the rule of law**
    - Develop a common continental culture grounded in a set of key norms such as democratic practices, universal human rights, gender equality, and respect for the rule of law. Build capable institutions at all levels of government which focus on development and progressive policies.

    - Goals include:
        11. Democratic values, practices, universal principles for human rights, justice, and rule of law entrenched
        12. Capable institutions and transformed leadership in place at all levels.

- **Aspiration 4: A peaceful and secure Africa**
    - Establish conflict prevention/resolution and peace-making protocols as well as cultural values around peace and tolerance. This includes priorities around reducing gun violence, strengthening policies for peace at all levels of government, and financing institutions which monitor and address security threats to Africa.

    - Goals include:
        13. Peace security and stability is preserved
        14. A stable and peaceful Africa
        15. A fully functional and operational African Peace and Security Architecture (APSA).

- **Aspiration 5: An Africa with a strong cultural identity, common heritage, shared values, and ethics**
    - Values which underscore the common identity and heritage of African people, while also respecting religious diversity, supporting creative arts, and preserving cultural diversity including languages.

    - Goals include:
        16. African cultural renaissance is pre-eminent.

- **Aspiration 6: An Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children.**
    - Enforcing inclusivity in all political, economic, and social spheres, underpinned by the elimination of discrimination and violence against women and girls, the pursuit of gender equality, and expanding resources and opportunities available to Africa's youth.

    - Goals include:
        17. Full gender equality in all spheres of life
        18. Engaged and empowered youth and children.

- **Aspiration 7: Africa as a strong, united, resilient, and influential global player and partner**

    - Asserting Africa's presence and agency in global affairs, along with self-sufficiency and independence from external influence (including strategies for Africa to finance its own development and growth).

    - Goals include:
        19. Africa as a major partner in global affairs and peaceful co-existence
        20. Africa takes full responsibility for financing her development.

In order to initiate action in pursuit of the long-term aspirations outlined above, the African Union outlined key "flagship projects" as necessary first steps to be prioritized in the *first ten years* of the Agenda 2063 strategy. This set of 15 programmes is geared toward accelerating the continent's economic development and protecting its cultural identity with focused projects around developing infrastructure, education, science, technology, arts, and peace.[111] One of these projects is SAATM, while two other programmes are closely linked to SAATM: the free movement of people *and* the free trade of goods and services.[112] BASA liberalization is particularly important in successfully implementing these initiatives, as explained further in the sections below.

[111] https://au.int/agenda2063/flagship-projects
[112] https://au.int/en/agenda2063/flagship-projects

Protocol on Free Movement of People, Right of Residence and Right of Establishment

The African Union's treaty protocol on the "free movement of people, right of residence, and right of establishment" was adopted in January 2018, together with a roadmap to guide the implementation of each of the phases for abolishing visa requirements, and implementing the right of entry, residence and establishment.[113] This priority initiative falls under Aspiration 2 of Agenda 2063, and is summarised as follows:

> **THE AFRICAN PASSPORT AND FREE MOVEMENT OF PEOPLE**
>
> *Remove restrictions on Africans' ability to travel, work and live within their own continent. The initiative aims at transforming Africa's laws, which remain generally restrictive on movement of people despite political commitments to bring down borders with the view to promoting the issuance of visas by Member States to enhance free movement of all African citizens in all African countries.*[114]

Guidelines have been developed with technical specifications on the design, production and issuance of the African Passport, and these were adopted by the AU Assembly on February 2019.[115] As of July 2019, the protocol had been signed by 32 Member States and already ratified by four Member States, including Mali, Niger, Rwanda, and Sao Tome and Principe.[116] A total of 15 Member States need to ratify the protocol in order for it to come into force.[117] With the goal of having seamless borders across the continent by 2063, next steps include increasing advocacy efforts to encourage signature and ratification of the protocol; providing support to Member States with restrictive visa regimes to allow them to grant visas upon entry and eventually eliminate visa requirements completely; continuing discussions on benefits and security implications; collaborating with the International Civil Aviation Organisation (ICAO) and the International Organisation for Migration (IOM) on the issuance of the African Passport; and facilitating access to important information.[118]

As documented in previous chapter, the full implementation of SAATM will greatly enhance intra-regional connectivity. The modelling summarised in Chapter 5 indicates that intra-Africa passenger travel will increase by 52%. This improved connectivity will augment the value of the African passport and open-borders legislation by further reducing the barriers to intra-Africa travel. A more comprehensive air network, along with more affordable air fares, help provide the means by which African citizens can actually exercise their right to free movement.

Air transportation is essential for facilitating free movement because it can provide better connectivity than other modes of transport, particularly for intra-regional and longer lanes of travel. Regional infrastructure connectivity in Africa needs to be developed further, with only a quarter of the continent's road network paved.[119] Although road conditions have improved over the years, a report by the World Bank entitled "Africa's Infrastructure: A Time for Transformation" found that in addition to the low density and poor condition of road networks, access to interurban roads from rural roads is limited.[120] The same report indicates that passenger services on railways are declining,[121] making it difficult for people to move across the continent by rail transportation. The benefits from the free movement of people will not be fully realised without the transportation network to facilitate those movements.

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[113] https://au.int/sites/default/files/treaties/36403-treaty-protocol_on_free_movement_of_persons_in_africa_e.pdf
[114] https://au.int/en/agenda2063/flagship-projects
[115] https://au.int/sites/default/files/newsevents/workingdocuments/35139-wd-guidelinesfinal_copy_2_1-edited_final_version.pdf
[116] https://au.int/sites/default/files/treaties/36403-sl-PROTOCOL%20TO%20THE%20TREATY%20ESTABLISHING%20THE%20AFRICAN%20ECONOMIC%20COMMUNITY%20RELAT....pdf
[117] https://www.sabcnews.com/sabcnews/au-adopts-new-protocol-on-free-movement-of-people-across-africa/
[118] https://www.nepad.org/agenda-2063/flagship-project/free-movement-all-persons-and-african-passport
[119] https://www.un.org/africarenewal/web-features/why-infrastructure-development-africa-matters
[120] "Foster, Vivien; Briceno-Garmendia, Cecilia. 2010. Africa's Infrastructure : A Time for Transformation : A Time for Transformation. Africa Development Forum. World Bank.
[121] Ibid.

BASA liberalization will help contribute to these benefits through improved connectivity (routes and frequency) and lower travel costs.

African Continental Free Trade Area (AfCFTA)

Another Agenda 2063 flagship project focuses on the establishment of the African Continental Free Trade Area (AfCFTA) which is driven by the objectives summarized below:

> **ESTABLISHMENT OF THE AFRICAN CONTINENTAL FREE TRADE AREA (AfCFTA)**
> *Accelerate intra-African trade and boost Africa's trading position in the global market place. The AfCFTA aims to significantly accelerate growth of Intra-Africa trade and use trade more effectively as an engine of growth and sustainable development by doubling intra-Africa trade, strengthening Africa's common voice and policy space in global trade negotiations.*[122]

AfCFTA was formally founded in 2018, with trade commencing as of January 2021. The AfCFTA constitutes the largest free trade area in the world in terms of participating countries, with the aim of creating a single market for goods and services, facilitated by the movement of persons in order to promote economic development and deepen the economic integration of the African Continent. The World Bank calls the AfCFTA "a major opportunity for countries to boost growth, reduce poverty, and broaden economic inclusion," with the socio-economic gains from free trade having the potential to lift Africans out of extreme poverty, boost the incomes of many others, and increase employment and trade opportunities across many demographics, including women.[123] In that regard, SAATM along with the Protocol on Free Movement of People, Right of Residence and Right of Establishment are projects that are essential to the successful operationalisation of the AfCFTA.

Trade competitiveness in Africa has historically been impaired by high costs associated with a lack of reliable, secure, and efficient cross-border transport. As the World Bank-sponsored Africa Transport Policy Programme (SSATP) explains, "Cross-border movements suffer from long delays and cumbersome procedures at borders, arbitrary transit tariffs, transport restrictions, and a lack of security for transport users."[124] As a result, intra-African trade accounts for only 15% of the continent's trade flows (compared to 61% in Asian and 67% in Europe), and 40% of the final price of goods in Africa is due to high transport costs.[125] Furthermore, a study by the World Bank has shown that without a strong infrastructure network, national economic growth for many African countries has declined by 2 percentage points annually.[126] As one of the most secure, reliable, and fastest modes of transport, aviation could help reduce the risk and costs associated with intra-regional trade in Africa, while opening more trade lanes and opportunities to conduct business across the continent. As documented in Chapter 5, it is estimated that SAATM will stimulate an additional US$ 937 million in trade flows across the continent. The speed and reliability of air transport enables the regionalisation and globalisation of business and supply chains.

Although the AfCFTA has only recently launched into operation (and amidst the ongoing COVID-19 pandemic), regional governments have been pushing to spread awareness to citizens and businesses and encouraging more cross-border trade of the many goods which have lower tariffs (and will eventually be entirely duty free).[127] However, several additional ratifications and trade terms must be worked out before the AfCFTA can be fully

[122] https://au.int/en/agenda2063/flagship-projects
[123] https://www.worldbank.org/en/topic/trade/publication/the-african-continental-free-trade-area
[124] https://www.ssatp.org/topics/regional-integration
[125] Ibid.
[126] https://www.un.org/africarenewal/web-features/why-infrastructure-development-africa-matters
[127] *https://www.herald.co.zw/more-awareness-critical-for-afcfta/*

implemented, and many reiterate that the agreement's ultimate success will depend in part on reducing other trade barriers and developing better infrastructure, including transport.[128] As explained by Wamkele Mene, Secretary-General of the AfCFTA Secretariat, "*if you don't have the roads, if you don't have the right equipment for customs authorities at the border to facilitate the fast and efficient transit of goods… if you don't have the infrastructure, both hard and soft, it reduces the meaningfulness of this agreement.*"[129]

10.2. United Nations Sustainable Development Goals (SDGs)

In 2015, all United Nations Member States adopted the 2030 Agenda for Sustainable Development, a global "call to action" to eradicate poverty, commit to environmental protections, and enable collective improvement in the lives of all people worldwide.[130] It involves an integrated, indivisible approach across social, economic, and environmental dimensions of sustainable development, with emphasis on universal application across all countries and peoples.

In practice, the 2030 Agenda is a 15-year plan outlined by a set of 17 Sustainable Development Goals (SDGs) and 169 specific targets which aim to "improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests."[131] The SDGs build upon the Millennium Development Goals – previously established goals which included cutting extreme poverty rates in half, halting the spread of HIV/AIDS, and providing universal primary education by the year 2015 – and apply additional focus on issues like gender equality and environmental sustainability.

The 17 UN SDGs are summarised as follows:

1. No poverty
    - More than 700 million, or 10% of the world's population, still live in extreme poverty (defined as living on less than $1.25 per day).
    - This goal incorporates a set of targets including eradicating extreme poverty by 2030, reducing the proportion of all people living in poverty by half, and various policy reforms.

2. Zero hunger
    - Nearly 690 million people suffer from hunger – a figure that has been growing since 2015.
    - This goal focuses on ending hunger and all forms of malnutrition, along with boosting agricultural productivity and stability in food markets.

3. Good health and well-being
    - Increase life expectancy and health by eradicating a range of diseases, providing more efficient funding of health systems, increased access to health care, and improving sanitation and hygiene.
    - Renewed focus on health crisis preparedness in the wake of the COVID-19 pandemic.

4. Quality education

[128] http://sdg.iisd.org/commentary/policy-briefs/african-continental-free-trade-area-completes-first-month-of-trading/
[129] https://www.un.org/africarenewal/magazine/january-2021/afcfta-africa-now-open-business
[130] https://sdgs.un.org/2030agenda
[131] https://sdgs.un.org/goals

- Free and equitable access to early childhood development programs as well as primary and secondary education, along with equal access to later forms of schooling.
- Remove gender disparities in access to quality education.
- Expand proficiency rates in literacy, numerous, and various skillsets for youth and adults.

5. Gender equality
   - End all forms of discrimination, violence, and harmful practices against women and children.
   - Ensure gender equal participation, opportunities, access across all levels of political, economic, and social life.

6. Clear water and sanitation
   - Universal and equitable access to safe and affordable drinking water.
   - Improvements in sanitation and hygiene, water quality, water use efficiency, and resource management.

7. Affordable and clean energy
   - Universal access to energy services and substantial increases energy infrastructure, renewable energy use, and energy efficiency.

8. Decent work and economic growth
   - Targets for economic growth and productivity, eradication of forced labour and promotion of quality jobs, access to aid and investment, along with environmentally conscious methods for growing economic prosperity.

9. Industry, innovation, and infrastructure
   - Invest in resilient infrastructure, sustainable and inclusive forms industrialization, access to technology, and research and development to foster innovation.

10. Reduced inequalities
    - Inclusive and universally accessible policies for all peoples regardless of any status, enhanced investment, and representation for developing countries, protection for migration and mobility of people.

11. Sustainable cities and communities
    - Universal access to housing, basic services, and transport systems, with inclusive planning policies.
    - Sustainable urbanization and reduced environmental and economic costs of cities.

12. Responsible consumption and production
    - Reduce waste and achieve sustainable management and use of natural resources.

13. Climate action
    - Policies and mechanism for addressing and planning for climate change impacts, and improving education on climate change.

14. Life below water
    - Sustainable management of marine resources, including reduction of pollution, conservation measures, expanded research on marine ecosystems, and regulation of fisheries.

15. Life on land
    - Sustainable management of terrestrial and inland resources, including preservation of biodiversity and combatting harmful trends such as desertification and poaching and trafficking of protected species.

16. Peace, justice, and strong institutions
    - Reduce all forms of violence and related death rates, organised crime, corruption, and bribery.
    - Promote the rule of law and inclusive, non-discriminatory governance.

17. Partnerships for the goals
    - Global partnerships and cooperation across all levels of governance to achieve the SDGs.

In its latest review of implementation efforts to date, the UN notes that the quality of living for many people around the world has improved compared to ten years ago, with average increases in access to healthcare, improved work opportunities, and education. The regions in Africa saw positive progressions in certain metrics, such as falling rates of HIV infections and improvements in resource efficiency.[132]

However, most global improvements have not been evenly distributed across all geographies, with progress lagging for some of the most vulnerable and disadvantaged populations. For instance, over half of the global population living in extreme poverty in 2015 lived in sub-Saharan Africa, and the number of residents there facing extreme poverty, hunger, and other health concerns has been growing in recent years.[133] Growing inequalities and threats from climate change may challenge any progress made worldwide, warranting investments for more inclusive and sustainable development. With less than a decade remaining in this 2030 Agenda, the UN has redoubled its efforts to focus more prominently on halting poverty, empowering women and girls, and addressing the climate emergency.[134]

10.3. African Development Bank Priorities

The African Development Bank Group (AfDB) is a multilateral institution dedicated to financing projects that contribute to the economic development goals of Africa. The AfDB promotes both public and private investment in initiatives which assist African countries' economic development and social progress. With this mission, the AfDB acknowledges that its primary goal is to reduce poverty in Africa, explaining that "combating poverty is at the heart of the continent's efforts to attain sustainable economic growth."[135] The AfDB is comprised of 54 regional member countries from Africa; it also partners with various international and development organizations, including the UN, the World Bank, and the International Monetary Fund, along with roughly two dozen non-regional member countries which serve as additional sources of funding.

[132] https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf
[133] Ibid.
[134] https://www.un.org/sustainabledevelopment/development-agenda/
[135] https://www.afdb.org/en/about-us/frequently-asked-questions

For its long-term strategy the AfDB, like other multilateral development institutions, has adopted the same set of 17 SDGs for 2015-2030 developed by the UN and described in the preceding section. The AfDB also created its own 10-year strategy for 2013-2022, which focuses on two key objectives: inclusive growth and the transition to green growth.[136] These two objectives are underpinned by the following five priorities, each which the AfDB notes have seen significant achievements as of 2019: [137]

1. **Infrastructure Investment** – investments in energy infrastructure created new electricity connections to nearly 470,000 residents (47% women) in 2019, with additional investments to provide clean energy access to 4.5 million people by 2025. Additionally, climate-related financing has grown to 36% of all projects approved by the AfDB (on track to reach the 2020 target of 40%).
2. **Regional economic integration** – over 400 km of cross-border roads have been constructed or rehabilitated, improving regional trade lanes and granting better transport services to an estimated 17.7 million people.
3. **Private sector development –** over 53,000 owner-operators and micro, small, and medium businesses have been provided with access to financial services.
4. **Governance and accountability** – in 2019 alone, the AfDB approved 25 projects (a total of UA 1.1 billion and 15% of the AfDB's approvals) related to improving economic and financial governance, helping national governments provide public services, and facilitating private business and investment.
5. **Skills and technology –** development projects completed in 2019 alone gave 180,000 people (50% women) with better access to education.

10.4. Summary of Impact of Liberalization

The realisation of SAATM will have significant impacts on areas such as social mobility, poverty, gender, and education. BASA liberalization will contribute to the goals and objectives of the African Union, UN, and the AfDB.

The goals and priorities of Agenda 2063 align with the 17 UN SDGs.[138] In turn, the AfDB has adopted the same UN SDGs to support its objective of spurring "sustainable economic development and social progress in its regional member countries (RMCs), thus contributing to poverty reduction,"[139] as seen in the five priorities of the AfDB's 10-year strategy.

Table 29 summarises how the achievement of SAATM will contribute to the relevant Agenda 2063 Goals and the UN SDGs. It is recognized that while SAATM will make a positive contribution to these areas, it will certainly not solve them and that other actions and policy measures will also need to be taken. SAATM and aviation will contribute to some goals more than others and the table focusses on those where the largest impact is expected.

[136] https://www.afdb.org/en/about-us/mission-strategy/objectives
[137] https://www.afdb.org/en/documents/annual-report-2019
[138] https://au.int/agenda2063/sdgs
[139] https://www.afdb.org/en/about/mission-strategy

Table 29: Contribution of SAATM to the AU Agenda 2063 Goals and UN SDGs

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
SAATM implementation will result in higher employment and national income growth. Liberalization will lead to greater employment opportunities and access to higher income employment, helping to alleviate poverty.		
1. **A high standard of living, quality of life and well-being for all citizens.**	**#1. No Poverty** *End poverty in all its forms everywhere* **#2 Zero Hunger** *End hunger, achieve food security and improved nutrition, and promote sustainable agriculture* **#8 Decent Work and Economic Growth:** *Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*	▪ As documented in Chapter 5, SAATM implementation will result in 597,460 jobs and US$ 4.2 billion in GDP across the AU nations. ▪ Aviation is an important generator of local employment for highly skilled, high-paying jobs. ▪ Globally, air transportation generates 87.7 million jobs directly in aviation and indirectly in other sectors.[140] ▪ With SAATM, tourist visits within Africa are forecast to increase by 4.0 million visits, with additional spending of US$ 1.7 billion and tourism related employment increasing by 272,790 jobs. ▪ SAATM along with free movement of people will enhance opportunities for work in Africa. Increased worker mobility will provide new work opportunities and enhance productivity.

[140] Air Transport Action Group. *Aviation Benefits Beyond Borders* (September 2020)

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
	#10 Reducing Inequality: *Reduce income inequality within and among countries*	▪ Air transportation supports high-skilled employment, with average wages in the industry significantly higher than overall national average wages and average wages of other industries. ▪ Air transportation employees in the U.S. had an annual wage more than 1.5 times the overall median national wage.[141] ▪ In Canada, the aerospace manufacturing industry had the second highest salaries in 2018, next to the energy sector.[142]
	#11. Sustainable Cities and Communities: *Make cities and human settlements inclusive, safe, resilient, and sustainable*	▪ Airport cities maximize development value of the land and increasing aviation connectivity, while supporting economic growth and social inclusion. ▪ Johannesburg and Durban in South Africa, as well as Cairo, Egypt are developing aerotropolises.[143]

[141] https://www.businessinsider.com/what-do-airline-workers-earn-2019-5
[142] https://www.aerospace-technology.com/features/aviation-jobs-salary/
[143] https://centreforaviation.com/analysis/reports/the-airport-city-or-aerotropolis-concept-comes-to-africa-funding-will-be-key-part-2-181444

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
SAATM liberalization will promote better access to education by supporting the movement of international students relying on air transportation to study abroad. Jobs in the aviation industry are also highly skilled positions that require different levels of training and education.		
2. **Well educated citizens and skills revolution underpinned by science, technology and innovation.**	**#4 Quality Education:** *Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*	▪ With more than 4 million students travelling abroad to study annually,[144] UNESCO Institute for Statistics' data on global flow of tertiary-level students shows international mobility of students, who rely on air transportation when studying abroad.[145] ▪ Aviation businesses, such as Boeing and Airbus have partnered with universities to fund research for new technologies and provide training opportunities.[146] ▪ National Aviation Services (NAS) offers IATA certified training courses at its Aviation Training Centre. NAS offers 250 different courses focused on developing aviation-related technical skills, and has granted over 8,000 certificates to students.[147] ▪ With continuous growth in aviation, it is a forward-looking sector with global opportunities for young people, the fastest growing demographic in Africa. African organizations, such as Dream Alive[148] and Young African Aviation Professional Organisation,[149] have been established to encourage youth, especially children from rural and at-risk areas, to pursue a career in aviation.
18. **Engaged and empowered youth and children.**		

[144] https://aviationbenefits.org/un-sustainable-development-goals/sdg-4-quality-education/
[145] http://uis.unesco.org/en/uis-student-flow
[146] http://www.boeing.co.uk/boeing-in-the-uk/research-and-technology/universities-research-and-technology.page & https://aviationbenefits.org/case-studies/airbus-global-university-partner-programme/
[147] https://www.nas.aero/TrainingCenter.aspx
[148] https://unitingaviation.com/news/capacity-efficiency/africas-next-generation-of-aviation-professionals-a-pilots-vision-takes-flight/
[149] https://www.pointsoflight.gov.uk/young-african-aviation-professional-organisation-cameroon/

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
By providing increased air access, especially to remote areas, SAATM will help ensure good health and well-being of citizens through increased connectivity to health and medical services, and through the transportation of essential supplies.		
3. **Healthy and well-nourished citizens.**	**#3 Good Health and Well-being:** *Ensure healthy lives and promote well-being for all at all ages*	▪ Aviation enables connectivity for remote regions as new routes develop. Liberalization in Europe has led to new commercial airports opening in underserved regions (such as ex-military airports). This will allow for fast and reliable transportation of essential supplies to communities, especially during disasters and conflicts. ▪ Air transportation plays a critical role in providing access to medical services, both emergency and non-emergency. Better connectivity and lower costs through SAATM will greatly expand access to these services. Transport of organs for transplants and time-sensitive vaccines also rely on aviation.[150] ▪ On routes not viable for jet engines, smaller turboprop aircraft enable access to remote communities and provide essential air services. ▪ The increase employment opportunities in the aviation sector, tourism and the wider economy will increase incomes, allowing better access to food and health and medical services.

[150] https://aviationbenefits.org/un-sustainable-development-goals/sdg-3-good-health-and-well-being/

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
The catalytic impacts released by SAATM will enhance economic productivity and attract greater investment in the economy and in people. New, improved infrastructure will be necessary to handle the growth in air traffic and economic activity.		
4. **Transformed economies.** **10.** **World class infrastructure criss–crosses Africa.**	**#9 Industry, Innovation and Infrastructure:** *Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation*	▪ As previously described, aviation facilities the wider economy through catalytic impacts. These include increased productivity and attracting increase investment and company locations. It is estimated that these catalytic impacts will increase GDP by US$ 1.5 billion across the AU nations and stimulate additional employment of 227,290. ▪ As a driver of innovation, aviation supports the development of urban infrastructure from new airport developments and new technology for air traffic management. ▪ At the 2019 Aviation Infrastructure for Africa Gap Analysis Workshop, ICAO Council President Olumuyiwa Benard Aliu indicated that "continued investment and development for aviation infrastructure, capacity and technology" was necessary to support improved air connectivity and increased air traffic.[151] ▪ As of October 2019, there were 54 construction projects at African airports, with an estimated total capital expenditure of $19.3 billion.[152]

[151] https://www.passengerterminaltoday.com/news/airport/airport-infrastructure-investment-in-africa-is-crucial-says-icao.html

[152] Source : CAPA Airport Construction Database. The data is accurate as of Oct-2019. (https://centreforaviation.com/analysis/reports/airport-construction-expenditure-is-lagging-capa-report-497969)

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
The aviation industry is committed to improving efficiencies and focusing on sustainability, taking a lead role in environmental stewardship. Liberalization will assist in the shift to more efficient means of transport, reducing the continent's overall environmental footprint.		
7. **Environmentally sustainable and climate resilient economies and communities.**	**#6. Clean Water and Sanitation:** *Ensure availability and sustainable management of water and sanitation for all* **#7. Affordable and Clean Energy:** *Ensure access to affordable, reliable, sustainable and modern energy for all* **#12. Responsible consumption and production:** *Promoting resource and energy efficiency* **#13. Climate Action:** *Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy*	▪ Increased direct air services following SAATM will reduce the need for less efficient connecting options involving longer flight distances and sometimes connections outside of Africa. ▪ Improved aircraft cleaning methods can reduce water consumption by 95%.[153] ▪ With 2,000 solar panels producing almost 750 kW every daily, South Africa's George Airport is the first facility in Africa to operate with 100% self-produced solar power, with the extra production used to provide energy to more than 250 residences nearby.[154] ▪ The industry supports the use of sustainable aviation fuels (SAF), with over 40,000 commercial flights already completed with SAF.[155] ▪ Civil aviation globally is responsible for only 2% of total global emissions.[156] Global greenhouse gas emissions are less than that of other sectors and modes of transportation. ▪ Improvement in fuel efficiency in modern aircraft will reduce CO_2 emissions even further. ▪ ICAO developed a carbon offsetting and reduction scheme for international aviation (CORSIA).[157] As of May 2019, 12 African countries, including Botswana, Burkina Faso, Cameroon, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Ghana, Kenya, Namibia, Nigeria, Uganda and Zambia, have indicated their intention to voluntarily participate in CORSIA.[158] ▪ Abidjan's Félix Houphouet-Boigny International Airport is the first African airport to receive carbon neutral status (Level 3+) in ACI's Airport Carbon Accreditation.[159]

[153] https://aviationbenefits.org/un-sustainable-development-goals/sdg-6-clean-water-and-sanitation/
[154] https://www.airportcarbonaccreditation.org/component/news/news/806.html?view=news
[155] https://aviationbenefits.org/un-sustainable-development-goals/sdg-7-affordable-and-clean-energy/
[156] https://ourworldindata.org/emissions-by-sector
[157] https://www.icao.int/environmental-protection/CORSIA/Pages/default.aspx
[158] https://afraa.org/wp-content/uploads/2019/08/An-overview-of-CORSIA-for-African-airlines.pdf
[159] https://airport-world.com/investing-in-africa/

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
	#15. Life on Land: *Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss*	▪ Project Manondroala aims to protect Madagascar's forests from fragmentation. Finnair, the Finnish flag carrier, is one of the supporters of this project and has developed programs for its passengers to donate their points in exchange for new seedlings to be planted.[160]
SAATM liberalization will contribute to intra-Africa unity, culture and connectivity.		
8. **United Africa (Federal or Confederate).**	**#17 Partnership for the goals:** *Strengthen the means of implementation and revitalize the global partnership for sustainable development*	▪ The increased access to air service will contribute to the connecting African nations and regions and improve continental integration. ▪ Partnership within the aviation industry further promotes unity across the continent. ▪ Partnerships between industry, international organizations and governments have enabled close cooperation on issues and development of regulations on key areas such as climate change, safety, and security.
16. **African cultural renaissance is pre-eminent.**		
19. **Africa as a major partner in global affairs and peaceful co-existence.**		

[160] **https://aviationbenefits.org/case-studies/protecting-madagascar-s-forests/**

AU Agenda 2063 Goals	UN SDGs	Indicator/Data
SAATM liberalization can result in increased female employment, as the aviation industry aims to increase greater workforce diversity.		
17. **Full gender equality in all spheres of life.**	**#5 Gender Equality:** *Achieve gender equality and empower all women and girls*	▪ In Africa, as of 2018, approximately 8% of senior executive roles in aviation are held by women.[161] ▪ In Europe, where air service was liberalized decades ago, women comprise 41% of the air transportation sector's labour force.[162] ▪ IATA launched a new initiative in 2019 that aims to increase female labour force participation in the airline industry globally by 25% by 2025.[163] ▪ The International Aviation Women's Association (IAWA) supports young women entering the aviation industry and promotes their career advancement.[164]

10.5. Conclusions

This section of the report considers the value of YD liberalization to the member states of the African Union. From this analysis, a number of conclusions can be made:

1. Decades of experience and research have established that air service liberalization has led to increased traffic volumes, greater connectivity and consumer choice, and reduced air fares. Furthermore, the benefits of air service liberalization extend well beyond the aviation industry and passengers – it contributes to greater trade and tourism, inward investment, productivity growth, increased employment and economic development. More recently, research has found similar effects occurring in Africa where governments have chosen to remove restrictions on air services.

2. Analysis and modelling conducted in this study substantiates the idea that African Union members fully implementing YD liberalization will lead to substantial benefits in the Africa aviation sector. Intra-Africa traffic volumes are projected to increase by 51%, and all countries in the Africa Union are expected to experience increases in traffic. Furthermore, average fare levels are projected to decline by 26%, providing fare savings of US$ 1.46 billion per annum. Connectivity and travel convenience are also expected to improve, with an additional 145 country-pairs receiving direct service and frequencies on existing routes increasing by 27%.

3. The impacts of liberalization extend beyond the benefits to passengers and the aviation industry. The increased air service levels will stimulate employment in the aviation industry to handle the additional passengers and their baggage and to operate, service, and maintain aircraft. This is estimated to results in

[161] https://www.iata.org/contentassets/93253b033dea48e38aabc9f639d7b486/chart-of-the-week-09-mar-2018.pdf
[162] https://aviationbenefits.org/un-sustainable-development-goals/sdg-5-gender-equality/
[163] https://www.iata.org/en/pressroom/pr/2019-09-26-01/
[164] https://www.iawa.org/mission_statement.php

an addition 96,440 jobs in aviation and supporting industries, generating US$ 1.1 billion per annum in GDP for the continent.

4. The tourism sector in Africa is also expected to benefit from YD liberalization, by stimulating an additional US$ 1.65 billion per annum in tourism spending, resulting in 267,530 incremental jobs in tourism and in downstream industries, contributing to an additional US$1.40 billion in GDP per annum. The employment impacts in the individual countries are largest in established tourist markets such as Egypt, Kenya, South Africa and Tanzania, but all countries are expected to benefit, aiding some to develop a larger tourism industry.

5. Perhaps most significantly, the increase air service can facilitate a range of other sectors of the economy by supporting increased trade, attracting new businesses to the region, encouraging investment and enhancing productivity. Industries and activities that would otherwise not exist in a region can be attracted by improved air transport connectivity. The value of this to Africa economies totals almost US$1.5 billion in annual GDP and is projected to support an additional 224,780 jobs.

6. Combining the aviation activity, tourism, trade, investment, productivity, and other economic benefits, YD liberalization is projected to result in an additional 588,750 jobs and US$ 4.0 billion in additional GDP (0.17% of the total GDP of the African Union countries). The impact for individual countries is a function of the degree of liberalization already undertaken (those markets that have not significantly liberalized air service are likely to see the biggest impacts from full liberalization), the size of the air traffic markets and the economic structure of that country. The incremental GDP represents a 0.06%-2.21% increase on 2019 GDP levels, with all countries expected to gain economically from liberalization.

7. The benefits of air liberalization are not just confined to employment and GDP related impacts. The increased air service and connectivity resulting from liberalization has the potential to enhance and support a wide range of activities and opportunities that improve the quality of life in local communities, as well as throughout the country and continent. In addition to generating economic growth and alleviating poverty, air transportation enables access to healthcare, food, and education, while enhancing mobility and connecting different cultures, and can contribute to social mobility.

8. While the COVID-19 pandemic has had an acute impact on the Africa aviation industry, it has not fundamentally changed the argument for liberalizing the African aviation market. The pandemic has severely reduced air traffic levels in Africa, as it has in most parts of the world, and so the initial gains from liberalization may be smaller in the short term. However, liberalization will play a role in speeding up the recovery of traffic and will be critical to the long-term development and robustness of air transport markets. If anything, COVID-19 gives greater impetus to the need for liberalization, by allowing private capital and expertise to have a greater role in facing the challenges resulting from the pandemic.

9. The results of this study provide renewed impetus for the rapid and complete YD liberalization of African air markets. The gains to member state economies and societies are evident and substantial and will contribute to the long term development goals for the continent.

10. The benefits of liberalization can be enhanced by other related measures such as infrastructure investment, tax optimisation, visa and trade policies, and increased training of aviation professionals.

PART 3: Communication Strategy and Advocacy Material

Chapter 11: SAATM High-Level Communication Plan

YD/SAATM advocacy and communications over the years have been very robust. Most of the SAATM Stakeholders - Supranational, Regional Industry, Development and (pro SAATM) National stakeholders listed in Chapter 1 of this Study have been involved in sustained advocacy for improved intra-African connectivity for several years. From these consistent stakeholder engagements, it was clear that the decision makers desired concise, recently updated evidence of the impacts of liberalizing intra-African air markets.

In 2014, a partnership between the African Civil Aviation Commission (AFCAC), International Air Transport Association (IATA) and the African Airlines Association (AFRAA) illustrated the importance of objective industry economic analysis in raising awareness and support for the Single Air Transport Market in Africa. IATA commissioned a 12-country report which highlighted the benefits of intra-Africa connectivity amongst key states in North, West, South and East Africa. Since the formal launch of the Study in Johannesburg in 2014, there has been a concerted effort by all Stakeholders to spread the messaging and information in the Study across Africa to a wide variety of Stakeholders.

Based on the proliferation of the messaging and the success of the advocacy campaign which spanned over 5 years and almost all of the African Continent, it was agreed by the relevant stakeholders to expand the scope of the 12 Country Study to all African States. As a result, in December 2020, the African Union Commission (AUC) commissioned IATA, in partnership with InterVISTAS Consulting and Simplicity, to conduct a continent wide study ("The Study") to examine the current status of implementation of the YD in each member country and the benefits of the SAATM (full YD liberalization across Africa).

11.1. Goals and Objectives

The outputs from the Study, as presented in previous chapters, have been translated into advocacy and communication strategy materials. The strategy materials comprise of the following:

- Country Specific Executive Summaries (per country)
- Country Fact sheets (per country)
- Inspirational Video (1x2 minutes) describing the whole Study
- Short Social Media Adaptations of the Inspirational Video (2 x 30s adaptations of the full video)
- SAATM Advocacy Campaign Website with editable Implementation Dashboard
- Advocacy Presentation distilled from the Study

These materials will be used by the AUC and other stakeholders to promote and support the implementation of the SAATM across the continent. SAATM Advocacy is intrinsically political; therefore, an understanding of the political dynamics of each target State is at the heart of effective SAATM advocacy. The aim of this High-Level Communication Plan (HLCP) is to provide a high-level outline of how the above resources can be deployed by the AUC to maximum effect. This HLCP will also identify the key targets for the materials, the key messaging from the Study and the events and opportunities for presenting the messaging. The Continental Study and the advocacy materials will form the heart of every engagement.

OVERALL AIM AND SPECIFIC OBJECTIVES

Despite the steady success of ongoing advocacy efforts by all stakeholders, current aviation trends indicate that the Yamoussoukro Decision is not being fully implemented by African States and SAATM uptake and implementation seems to have stalled. Indeed, results from the Study confirm that the YD is only partially implemented by all African States as no State is in a situation where all its BASAs are 100% YD compliant.

The main objective of the Study is to encourage the full implementation of the SAATM across all AU Member States. In addition, with the new information provided by the Study and the new communication materials the SAATM is expected to receive enhanced visibility, publicity and increased awareness of the social and economic benefits of the SAATM amongst all stakeholders.

Based on the overall objectives, there are two specific objectives, namely:

1. Encourage existing SAATM Members to fully implement the SAATM.
2. Encourage the outstanding non SAATM States to sign on to the SAATM and fully implement.

Based on the output from the Study, in order to achieve these specific objectives, African States have the following high-level policy requirements:

i. Sign the SAATM Solemn Commitment Letter (non SAATM States only)
ii. Adopt a MASA and abolish all BASAs or Aamend Amend all BASAs with African States to ensure full compliance with YD provisions
    a. All BASAs must comply with Articles 2, 3, 4, 5 and 6 of the YD Text
    b. Grant, as a minimum, the fifth freedom traffic rights to SAATM Member States
    c. Recognition of all designated African eligible airlines
iii. Adherence to ICAO and other best practice on Safety (e.g. IOSA)
iv. Fully implement all SAATM Concrete Measures
v. Focus on adherence to SAATM Enablers to support a holistic aviation sector

11.2. Advocacy and Communication Planning

STAKEHOLDER MAPPING

Both SAATM and non - SAATM States have identical stakeholders which have been identified extensively in Chapter 1 as Supranational, Regional Industry, Development and National stakeholders. The HLCP will identify which of these stakeholders fall into two main following categories:

1. Decision makers
2. Allies - Champions/Enablers/ Influencers
3. Opponents – Blockers/Threats

Decision makers are empowered to solve the problem and help achieve the objectives; they must be influenced with our messaging. Allies support the goals and overall objectives. They are already convinced and converted. What they require is support in building their advocacy capacity. They are useful for formal coalitions and ad hoc

collaborations to amplify the messaging and reach the decision makers. Opponents will oppose and actively undermine ongoing advocacy efforts either due to a lack of understanding, protection of their national carrier/domestic market or other vested interests. They are a risk to the success of the HLCP and the messaging should anticipate their resistance and seek to proactively counter their opposition.

Based on the five main identified high-level policy requirements, the following decision makers, allies and opponents can be identified:

i. Sign the SAATM Solemn Commitment Letter (non SAATM States only)

Decision makers – Presidents, Ministers of Transport/Aviation/Finance, CAA Director Generals

Allies - CAA Director Generals, regional organizations (AFCAC, AFRAA, IATA, ICAO, UNECA, RECs, etc), senior government officials, Airlines, State Ministries - Tourism, Trade

Opponents – Senior government officials, Airlines

ii. Amend all BASAs with African States to ensure full compliance with YD provisions

Decision makers - Ministers of Transport/Aviation/Finance, CAA Director Generals

Allies - Regional organizations (AFCAC, AFRAA, IATA, ICAO, UNECA)

Opponents - CAA Director Generals, senior government officials, Airlines

iii. Adherence to ICAO and other best practice on Safety (e.g. IOSA)

Decision makers - CAA Director Generals

Allies - Regional organizations (AFCAC, AFRAA, IATA, ICAO), Senior CAA officials, Airlines

Opponents - Airlines

iv. Fully implement all SAATM Concrete Measures

Decision makers - Ministers of Transport/Aviation, CAA Director Generals

Allies - Regional organizations (AFCAC, AFRAA, IATA, ICAO, UNECA, RECs, etc), senior government officials, Airlines

Opponents – government officials, Airlines

v. Focus on adherence to SAATM Enablers

Decision makers - Ministers of Transport/Aviation/Finance, CAA Director Generals

Allies - Regional organizations (AFCAC, AFRAA, IATA, ICAO, UNECA, RECs, etc), senior government officials, Airlines

Opponents – government officials, Airlines

KEY MESSAGES

Based on the above high-level stakeholder mapping exercise, the decision makers for the main objectives are either Presidents, Ministers of Transport/Aviation or CAA Director Generals. This means that the messaging must be clear, simple, impactful and concise. Other factors to consider when developing the key messages:

- What is the call to action?
- What benefit(s) does the decision-maker gain from the messaging?
- What benefits does the country or continent gain from the messaging?
- Can the messaging be amplified by allies?
- Anticipate the opponents by expressing a win-win solution.
- Is the messaging best delivered privately/one on one or publicly?

Below is some suggested messaging:

I. Sign the SAATM Solemn Commitment Letter (non SAATM States only)

Key Messaging:

- "XXX State is urged to consider the positive benefits of the SAATM and sign the solemn commitment letter and come onboard, XX State participation is crucial to the overall success of the SAATM."
- "SAATM implementation is key to achieving the aviation potential of XXXX (non-SAATM State). Unlocking full African connectivity will raise productivity, encourage aviation investments and innovation and improve the business operations and efficiency of (national carrier, if any) and other African airlines."
- "The Continental Study on the SAATM provides evidence that if the SAATM is fully implemented, XXXX State will support an additional XX million passenger movements, create over XX,000 jobs and grow annual GDP by $XX million (based on individual country statistics). Overall, every State, including XX State, will benefit from increased economic and social benefits."
- "Years of restrictive government policies across Africa has not helped African airlines or markets grow and prosper, it is time to embrace a new approach. African aviation must unite to grow its market. Europe, US and other continents have done so successfully, so can Africa. United, Africa is an unstoppable force."

II. Amend all BASAs with African States to ensure full compliance with YD provisions

Key Messaging:

- "All SAATM Member States are urged to immediately harmonize all their BASAs with African States with the provisions of the Yamoussoukro Decision Text. The granting of fifth freedom traffic rights should be a minimum condition."
- "African States are partially implementing the YD. These restrictive BASAs between African States cause a knock-on effect that are extremely detrimental to the SAATM, to intra-Africa connectivity and to the holistic development of the African air transport industry. If African aviation doesn't develop, no African airline or market can truly develop."

- "SAATM implementation is key to achieving the aviation potential of XXXX (SAATM State). Unlocking full African connectivity will raise productivity, encourage aviation investments and innovation and improve the business operations and efficiency of (national carrier, if any) and other African airlines."
- "The Continental Study on the SAATM provides evidence that If the SAATM is fully implemented, XXXX State will support an additional XX million passenger movements, create over XX,000 jobs and grow annual GDP by $XX million (based on individual country statistics). Overall, every State, including XX State, will benefit from increased economic and social benefits."

III. Adherence to ICAO and other best practice on Safety (e.g. IOSA)

Key Messaging:

- All States and their Civil Aviation Authorities are urged to adhere to ICAO and other international best practices on Safety. States should intensify their efforts to improve the effectiveness, transparency and accountability when it comes to safety related issues."
- "Safety is the number one priority of the industry. Uniform standards of safety are critical to airline cooperation which is a pillar of SAATM implementation. When States adopt and enforce ICAO and other best practice on Safety, the entire aviation industry will benefit."
- "SAATM implementation is key to achieving the aviation potential of XXXX (SAATM State). Unlocking full African connectivity will raise productivity, encourage aviation investments and innovation and improve the business operations and efficiency of (national carrier, if any) and other African airlines."
- "The Continental Study on the SAATM provides evidence that If the SAATM is fully implemented, XXXX State will support an additional XX million passenger movements, create over XX,000 jobs and grow annual GDP by $XX million (based on individual country statistics). Overall, every State, including XX State, will benefit from increased economic and social benefits."

IV. Fully implement all SAATM Concrete Measures

Key Messaging:

- "All SAATM member States are urged to fully implement the SAATM Concrete Measures and report on their status to the Executing Agency"
- "The full implementation of the SAATM Concrete Measures promotes national coordination and cooperation which is essential to the success of the SAATM."
- "SAATM implementation is key to achieving the aviation potential of XXXX (SAATM State). Unlocking full African connectivity will raise productivity, encourage aviation investments and innovation and improve the business operations and efficiency of (national carrier, if any) and other African airlines."
- "The Continental Study on the SAATM provides evidence that If the SAATM is fully implemented, XXXX State will support an additional XX million passenger movements, create over XX,000 jobs and grow

annual GDP by $XX million (based on individual country statistics). Overall, every State, including XX State, will benefit from increased economic and social benefits."

V. *Key messages on the SAATM Enablers

Key Messaging:

- "It is important to look at aviation holistically because whilst granting the free exercise of traffic rights is very important, the air transport market created must be supported by policies that will accelerate YD and SAATM implementation. If the SAATM is to succeed, there are a number of air transport issues that must be put in place to ensure that SAATM benefits the individual country as it liberalizes its air transport market."
- "African aviation has been constrained by longstanding issues such as poor safety levels, inadequate infrastructure, high taxes and charges, low visa openness and much more. The consequences not addressing these issues negatively affect YD/SAATM implementation and even more critically, they also constrain the State's aviation sector and its economic growth. Positive SAATM enablers are essential for successful aviation sector development."
- "SAATM implementation is key to achieving the aviation potential of XXXX (SAATM State). Unlocking full African connectivity will raise productivity, encourage aviation investments and innovation and improve the business operations and efficiency of (national carrier, if any) and other African airlines."
- "The Continental Study on the SAATM provides evidence that If the SAATM is fully implemented, XXXX State will support an additional XX million passenger movements, create over XX,000 jobs and grow annual GDP by $XX million (based on individual country statistics). Overall, every State, including XX State, will benefit from increased economic and social benefits."

ACTIONS, OPPORTUNITIES AND EVENTS

In identifying events, the available human resources must be considered, and specific and realistic deliverables must be targeted. Budget and other competing events are also a limitation to the successful execution of a communication plan. Events from the aviation calendar have been carefully selected to reach the targeted stakeholders. Coordination with the African Civil Aviation Commission (AFCAC) and the activities planned under the Joint Prioritized Action Plan (JPAP) is also required to avoid a duplication of efforts and activities.

With most of the industry focused on restarting aviation following the devastating effects of the pandemic, the schedule of industry events has been greatly impacted. Pre COVID, some high attendance events on the aeropolitical calendar were as follows:

- Sessions of the Assembly of Heads of State and Government of the African Union (AU)
- SAATM Ministerial Working Group Meetings
- AFCAC Stakeholder Forum on the Implementation of the SAATM Joint Prioritized Action Plan
- Annual General Assembly of African Airlines Association (AFRAA)

- Side meetings and workshops at the ICAO Air Services Negotiation Event
- AFRAA Aviation Stakeholders Conference
- Annual General Assembly of Airline Association of Southern Africa (AASA)
- IATA Regional Aviation Summits
- African Aviation Industry Group (AAIG) Aeropolitical Forums
- Special Summits from other key industry stakeholders – ICAO, AFCFTA, Trade and Tourism sections of AU, UNECA, AfDB, World Bank, AFREXIM, etc.

To mitigate this, special events can be created to compliment the above events and ensure the messaging and engagements are under the control of the AUC:

- Launch event for the Continental SAATM Study
    - Press Conference - AUC, AFCAC, IATA, InterVistas, AFRAA, ICAO, UNECA
    - Press Release – coordinated by all Stakeholders
    - Panel Round Table Dialogue with key SAATM Stakeholders
- RECs Stakeholder events – select national stakeholders (DGs CAAs, Minister of Aviation, Airlines of the different States)
- State SAATM Workshops (priority to non - SAATM States) – webinars/onsite
- Media Interviews
- Magazine publications
- Webinars Series – specific topics highlighting the benefits of the SAATM Study
- Direct engagements with Heads of State – virtual/onsite

To be effective, the above strategy outline should be considered dynamic and subject to review and amendment on an ongoing basis. The effectiveness of the messaging, the targeted stakeholders and the actions should be monitored on a quarterly basis to evaluate the success, and learn from evaluations, and continue to plan-and-act as required.

11.3. High Level Communication Plan

M+1	Type of Event	Target Stakeholders	Advocacy Objective	Advocacy Tools	Stakeholders Required
Week 1	Continental Study Launch - Press Conference - Press Release - Social media blitz (inspirational video)	All SAATM Stakeholders	SAATM benefits awareness	Continental Study Executive Summary Fact Sheet Video Website	Lead: AUC Support: AFCAC, IATA, InterVISTAS, AFRAA, UNECA
Week 2	SAATM themed Panel Discussion (virtual event)	All SAATM Stakeholders	SAATM benefits awareness	Continental Study Executive Summary Fact Sheet Video	Lead: AUC Support: AFCAC, IATA, InterVISTAS, AFRAA, UNECA
Week 3	Media Interview (tv radio, magazine)	All SAATM Stakeholders	SAATM benefits awareness	Continental Study Executive Summary Fact Sheet	AUC
M+2	**Type of Event**	**Target Stakeholders**	**Advocacy Objective**	**Advocacy Tools**	**Stakeholders Required**
Week 1	RECs Engagement - Presentation of Study - Q & A session - Social media blitz (inspirational video)	RECs, National Stakeholders (DGs CAAs, Minister of Aviation, Airlines of the different States	SAATM benefits awareness	Continental Study Executive Summary Fact Sheet Video Website	Lead: AUC Support: IATA
Week 2	State SAATM Workshop - Press Conference - Press Release - Social media blitz (inspirational video)	National Stakeholders (DGs CAAs, Minister of Aviation, Airlines of the different States	Influence Decision Makers in the State	Continental Study Executive Summary Fact Sheet Video Website	Lead: AUC Support: AFCAC, IATA, AFRAA, UNECA
Week 3	Media Interview (tv radio, magazine)	All SAATM Stakeholders	SAATM benefits awareness	Continental Study Executive Summary Fact Sheet	AUC

M+3	Type of Event	Target Stakeholders	Advocacy Objective	Advocacy Tools	Stakeholders Required
	Study on the Benefits of the SAATM and Communication Strategy for SAATM Advocacy			Continental Study Executive Summary	
Week 1	SAATM Airlines Dialogues	African Airlines	Engage with allies/opponents	Fact Sheet Video	Lead: IATA Support: AUC, AFRAA

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APPENDICES

Appendix A – IATA Connectivity Index

IATA air connectivity index

IATA has developed a connectivity indicator to measure the degree of integration of a country into the global air transport network. It is a composite measure reflecting the number and economic importance of the destinations served from a country's major airports and the number of onward connections available from each destination.

Geographically, IATA's air connectivity index enables the reporting of connectivity scores at different levels of aggregation: city, country and region. The index has global coverage and encompasses virtually all countries around the world. It covers more than 3,000 cities globally. The countries covered are grouped into different regions[165] as follows:

1. Africa
2. Asia
3. Europe
4. Latin America
5. Middle East
6. North America

The connectivity indicator is based on the number of available annual seats to each destination between 2014 and 2019. The source of available seat capacity is SRS Analyser, a comprehensive database containing passenger and cargo schedules for more than 900 airlines worldwide. The number of available seats to each destination are then weighted by the size of the destination airport (in terms of number of passengers handled at that airport in each year). The weighting for each destination gives an indication of the economic importance of the destination airport and the number of onward connections it can provide.

For example, Beijing airport, as the world's largest airport, is given a weighting of 1 while Johannesburg airport, which handles 23% of the number of passengers handled by Beijing, is given a weighting of 0.23. Therefore, if an airport has 1,000 seats available to Beijing it is given a weighted total of 1,000. But if it also has 1,000 seats available to Johannesburg, these are given a weighted total of 230. The weighted totals are then summed for all destinations served out of a given airport to determine the connectivity indicator.

Another way to illustrate the impact of destination airport weights is to think of a single flight from Addis Ababa to Beijing or Johannesburg. Other things being equal, a flight from Addis Ababa airport to Beijing would receive a higher connectivity score compared to a flight from Addis Ababa to Johannesburg airport (Figure 7). The difference in destination weights reflects the extent to which destination airports are connected to the rest of the global air transport network.

[165] Regional country groupings were derived using SRS Analyser classification. Asia includes countries in Asia Pacific, Australasia, Central Asia and the Caucasus region. Latin America includes countries in South America, Central America and the Caribbean. North America includes Canada, Mexico and the United States. A complete country list for each region is included in Appendix G.

Figure A1: Destination airport weights for flights out of Geneva

Source: SRS Analyser

Therefore, the connectivity indicator for a given airport can be represented as the sum of destination weighted available seats from the airport to all destination airport:

$$Air\ Connectivity\ Index\ = \sum_{k=1}^{all\ destinations} (Annual\ Outbound\ Seats_k * Destination\ Airport\ Weight_k)$$

Another mathematically equivalent way to write this formula shows that the frequency of service from the origin airport to other destinations is taken into consideration:

$$Air\ Connectivity\ Index\ = \sum_{k=1}^{all\ destinations} (Flight\ Frequency_k * Average\ Available\ Seats\ per\ Flight_{k*} * Destination\ Airport\ Weight_k)$$

As evident from the second formulation, air connectivity increases as the range of destinations increases, the frequency of service increases or larger "hub" airport destinations are served.

In 2018, Beijing airport served almost twice as many destinations as Montreal airport and six times as many destinations as Tirana airport. However, Beijing served a larger number of major airports, also with higher frequencies, giving China significantly greater access to the global air transport network than Canada and Albania. This is reflected in the connectivity indicator, with the value for Beijing about six times greater than for Montreal and 53 times greater than that for Tirana (Table A1).

Table A1: A Measure of Connectivity to the Global Air Transport Network, 2018

	Number of Destination Served	Number of Available Departing Seats per week	Connectivity Indicator 2018
Beijing	255	109,576	412,174
Montreal	151	18,523	69,235
Tirana	45	2,959	7,799

Source: IATA Economics using SRS Analyser data

Appendix B – Additional analysis of intra-Africa passenger flows

Additional analysis of intra-African passenger flows

Table B1. Top 5 domestic passenger flows Africa in terms of passenger flows, 2019

Country	Domestic Passenger Flows 2019
South Africa	12,919,440
Nigeria	5,218,156
Kenya	2,116,409
Ethiopia	2,028,382
Egypt	1,874,016

Source: IATA Economics using data from IATA DDS

Table B2. Top 5 international passenger flows intra-Africa in terms of passenger flows, 2019

Origin Country	Destination Country	International Passenger Flows 2019
Libya	Tunisia	766,168
South Africa	Zimbabwe	750,415
Mauritius	Reunion	495,789
South Africa	Namibia	445,787
South Africa	Zambia	387,786

Source: IATA Economics using data from IATA DDS

Table B3. International passenger flows intra-Africa, 2019

Type of International Passenger Flows	International Passenger Flows 2019	Share of Total International Passenger Flows (2019)
Direct	14,125,494	84.5%
Indirect and connecting in Africa	2,412,322	14.4%
Indirect and connecting outside of Africa	182,873	1.1%
Total	16,720,689	100%

Source: IATA Economics using data from IATA DDS

Indirect flows

Table B4. Indirect international passenger flows intra-Africa, 2019

Continent Journey Connection for Indirect International Passenger flows	Indirect International Passenger flows 2019	Share of Total International Indirect Passenger Flows (2019)
Connecting in Africa	2,412,322	93%
Connecting outside of Africa	182,873	7%
Total	2,595,195	100%

Source: IATA Economics using data from IATA DDS

Table B5. Country Pairs with Highest Share of Indirect Passengers Flows Connecting Outside of Africa

Origin Country	Destination Country	Direct Passengers Flows	Connecting in Africa Passenger flows	Connecting in Europe, ME or Turkey Passenger flows	Share of Connecting Passengers in Europe, ME or Turkey of Total Connecting Passenger Flows	Share of Connecting Passengers in Europe, ME or Turkey of Total
Morocco	South Africa	0	2,333	8,655	79%	79%
Morocco	Kenya	2,604	1,023	3,502	77%	49%
South Africa	Tunisia	0	865	3,301	79%	79%
Algeria	South Africa	0	919	2,702	75%	75%
Kenya	Tunisia	0	121	1,829	94%	94%
Morocco	Mauritius	0	74	1,548	95%	95%
Morocco	Tanzania	0	539	1,155	68%	68%
Mauritius	Morocco	0	0	1,118	100%	100%

Source: IATA Economics using data from IATA DDS

Appendix C: Gravity Model Methodology and Data Sources

Introduction

The impacts of liberalization were estimated using a gravity model that forecasts traffic between any two countries (or groups of countries), and which was developed and calibrated as part of a previous study by the Inter*VISTAS* group.[166] It has since been updated and modified in subsequent studies. For this study, it has been calibrated to 2019 traffic and economic conditions and to match the findings from recent quantitative liberalization studies conducted in Africa (discussed in Chapter 2).

This appendix provides an overview of the workings of the model and the econometric analysis undertaken to estimate the key model parameters.

Estimating the Model Parameters

The model expresses the air traffic between any particular country pair as depending on a vector of geographical, socioeconomic, and regulatory variables. The model considers each country pair as an independent entity; its traffic will not be affected by changes in other country pairs.

Each data point consists of one country pair. The dependent variable consists of the yearly two-way origin-destination traffic between the country pair. The model calculates passenger traffic as a function of several socioeconomic and geographic variables, and the chosen attributes of the relevant bilateral air service agreement.

The model was estimated using cross-sectional data on over 800 country pairs. The cross-sectional analysis assumes that a particular relationship between traffic, the extent of liberalization, and socioeconomic conditions applies to every market. Each country pair will display unique traffic volumes, socioeconomic variables, airline industry conditions, and degrees of liberalization in the air service agreements. Through correcting for variations in economic activity and other extraneous factors, this approach seeks to explain variations in the passenger traffic between different country pairs to variations in their bilateral agreements. In theory, this method should isolate the separate impacts of route definitions, single/multiple designations, pricing controls, the presence or absence of fifth freedom permissions, and other attributes of air service agreements. Through using a very large sample involving all regions of the world, nations in all stages of development, and countries with a wide range of approaches to international aviation, the process should, in theory, yield a robust estimate of the impacts for any arbitrary country pair.

The specification of the gravity model was as follows:

$$Traffic_{AB} = F(GDP_{AB}, ServiceTrade_{AB}, Intervening_{AB}, BASAFactors(0,1)_{AB})$$

Note that this specification was chosen after a large number of alternative specifications were attempted, many with variables that were later rejected. Each of the selected variables are discussed in detail below:

Gross Domestic Product (GDP_{AB})

GDP_{AB} is the product of the GDP of the two countries. Gross Domestic Product (GDP), calculated from the Purchasing Power Parity method, measures the total magnitude of economic activity in any nation. The

[166] The results of that study can be found in the report, "The Economic Impact of Air Service Liberalisation", Inter*VISTAS*-ga², June 2006.

specification assumes that changes in the GDP of each country in the country pair will have identical influences in the level of traffic. The GDP term proved the most important exogenous variable in terms of significance and explanatory power. The data on GDP was sourced from the World Bank World Development Indicators.

$ServiceTrade_{AB}$

Unlike goods, services are consumed at the same time and place as they are produced; they cannot usually be stored in inventory. Service activities include insurance, financial assistance, medical services, management, consulting, etc. Since they usually require a close interaction between the seller and the consumer, the sale of services is an important determinant of the demand for travel. It was not possible to obtain data on services trade data for each potential country pair. The model, therefore, uses a gravity-type relationship between each nation's services trade with all countries to define a country pair propensity. The "Service Flows" term for the country A-B was expressed as:

Exports of Services by Country A x Imports of Services by Country B

+

Exports of Services by Country B x Imports of Services by Country A

Again, the data was sourced from the World Bank.

$Intervening_{AB}$

The traffic between any country pair is anticipated to be less if passengers could choose from other, closer destinations. For example, Australian residents will view New Zealand as easier and cheaper to reach than the United Kingdom. This proximity will correspond to a lower demand among Australians for air travel on the Australia-United Kingdom route. Similarly, individuals and businesses of the United Kingdom may view Canada as a partial substitute for Australia. This would reduce the volume of Australia-destined traffic originating in the United Kingdom.

The passenger model uses an "Intervening Opportunity" quantity as a determinant of country pair traffic. For each country in a country pair, the model calculates the sum of the GDPs of every country that is 10 percent or less distant than the other nation in the country pair. The resulting sum measures the size of closer opportunities. The product of the Intervening Opportunity term for both nations in a country pair proved to be a useful predictor of country pair traffic and displayed the expected negative sign.

Variables Pertaining to the Bilateral Agreements – $BASAFactors(0,1)_{AB}$

$BASAFactors(0,1)_{AB}$ are dummy variables capturing the presence or absence of a specific restriction on the bilateral. For example, if the bilateral allows flights only to named points, then the dummy variable takes the value 1, else if carriers are unrestricted in the airports/cities they can fly to, the dummy variable takes the value 0. The dummy variables also have "modifiers" to reflect the circumstances of the individual bilateral. For example, the *named points* dummy is multiplied by a variable derived from the product of the geographic area of the two countries. This captures the fact that liberalizing this term will have minimal impact on geographically small island nations with only one major airport (e.g., the bilateral for Singapore-Mauritius) than on large countries with multiple airports (e.g., the bilateral for Australia-U.S.). Each of the dummy variables are described below:

- **Permitted Number of Airline Designations**. Bilateral agreements usually specify the number of airlines permitted to fly any route between the two countries. A "0" denotes a dual or multiple designation; a "1" otherwise. This digit is then multiplied by the distance between the two countries. A country pair can only benefit from a multiple designation if one or both countries have more than one airline fit, willing, and

able to operate the route. Furthermore, each such country must be willing to allow its own airlines to compete.

- **Capacity Controls**. Many experts consider capacity controls as particularly inimical to market growth, and a key trait of a restrictive agreement. Sometimes the limits are written directly in the agreements. Lengthy negotiations are often necessary to increase the limits. The variable was a "1" if capacity was restricted by the agreement, and zero otherwise. The dummy variable was multiplied by GDP, reflecting a hypothesis that capacity controls become proportionately more detrimental to competition with larger sized markets.
- **Pricing**. This variable is assigned a "0" if the bilateral allows free pricing without significant government control. It was assigned the value "0.5" if the bilateral included a double-disapproval (a more permissive form of pricing enforcement). A "1" indicates another regime, such as country-of-origin or single disapproval pricing. The resultant quantity was then modified by the product of the per capita GDPs of both countries. This reflected the view that countries with a large per capita GDP would be most likely to generate large volumes of leisure travellers. They would be especially affected by any price rigidities. Furthermore, airlines are most likely to offer incentive fares on routes with considerable leisure traffic. A restrictive pricing regime, which limits their flexibility, would be a proportionately large obstacle to growth in affluent country pairs.
- **Fifth Freedom Rights**. A "1" indicates the absence of any fifth freedom rights in the bilateral. A "0" depicts an agreement with such provisions.
- **Named Points**. Some bilateral agreements limit services to a very few rigidly defined destinations; others, following a more liberal approach, allow services to any operationally feasible combination. In many situations, bilateral agreements will stipulate a fixed number of "roving points," for which each nation can choose the precise destinations at a later date. A very flexible definition of permissible routes is most conducive to competition when it involves nations with large areas and many potential destinations. This variable was assigned a value of zero for country pairs with broad route definitions. Those observations with specific point restrictions were assigned a value equal to the product of variables representing the area of the country.

The estimation process used an ordinary least squares algorithm on a double-log specification. This reflects the assumption that many of the processes being modelled are multiplicative. For example, a restrictive bilateral would cause a greater absolute loss of traffic in a large market than in a small one. A general least squares procedure, using the GDP variable as a weighting factor, produced the estimates shown in the table on the following page.

The regression provided a reasonable "fit" (Adjusted R-Squared of 0.77) and the signs are consistent with expectations. The coefficients on the bilateral related variables are all negative, providing evidence that the constraints posed by BASAs constrain the growth of traffic. These results therefore support the hypothesis that restrictive bilateral agreements constrain traffic development. They lead to the rejection of the null hypothesis — that restrictive bilateral agreements have little impact on traffic.

Variable	Coefficient	Standard Error	T Statistic
Intercept	-0.6154	0.1689	-3.64
Economic Variables:			
GDP_{AB}	0.2158	0.02356	9.16
$ServiceTrade_{AB}$	0.1103	0.03871	2.85
$Intervening_{AB}$	-0.0389	0.00295	-13.23
$BASAFactors(0,1)_{AB}$:			
Price Determination	-0.32161	0.05471	-5.88
Capacity Restriction	-0.04845	0.01305	-3.71
Single Disapproval Pricing	-0.02569	0.00988	-2.60
Fifth Freedoms	-0.04126	0.01178	-3.50
Authorised Points	-0.06671	0.03035	-2.20
Statistical Fit:			
R-Squared	0.7796		
R-Squared Adjusted	0.7714		

Using the Model to Estimate the Traffic Impacts of Liberalization

The impacts of liberalization were estimated by specifying changes to the terms of the bilateral, e.g., the BASAFactors dummies were switched from 1 to zero, where relevant, on each bilateral agreement. The gravity model then calculated the growth in international traffic stimulated by this change.

In estimating the traffic, the model takes account of the fact that liberalization is a necessary but not a sufficient condition for traffic growth. No new services will result if there is no underlying demand to support them. The model therefore examines the air services already operating between each country pair (the model contains up-to-date summary information on services between the study countries from airline schedule data). If any such flights already operate, it is assumed that capacity can expand to accommodate demand. If no such flights exist, the model algorithm determines the aircraft most appropriate for a route of that length. If the traffic available is insufficient to support a reasonable level of service, the model assumes that no direct service will arise. The model then determines whether fifth freedom services can be supported. If so, it then assumes the traffic will operated on the fifth freedom service, reducing the estimated traffic due to the undesirability of the more indirect service.

Economic Impact Parameters

This section describes the development of the economic parameters (employment, GDP, etc.) that are used in the model to estimate the economic impact of liberalization. The parameters used a combination of generalized findings and localized data.

Aviation. Estimates for the direct economic impact of aviation for each of the African Union countries is based on existing studies containing information on airport and other aviation employment and GDP contributions in recent years. For those countries where no employment or economic impact information could be found, using information from the countries from which data was collected and analysis is based on work load units[167] and employment. The aviation sector ratios and economic impact multipliers were estimated based on of the following industry statistical publications and reports and government data, including:

- The Air Transport Action Group – Aviation Benefits Beyond Borders (2020).[168]
- Employment and GDP data of each country from the World Bank.[169]
- Passenger and cargo traffic data from Airport Council International's Annual World Airport Traffic Report (2020).[170]
- Additional employment and GDP data from the World Bank World Development Indicators.
- Employment data by economic sector from the International Labour Organization.[171]

Tourism. Tourism related expenditures, employment, GDP, and multipliers were based primarily on the following data:

- World Travel & Tourism Council (WTTC), Economic Impact Country Reports. [172]
- Travel arrivals from the World Bank.[173]
- U.N. World Tourism Organization (UNWTO) Tourism Data Dashboard.[174]

In order to determine the economic impact of international tourists arriving at individual countries by air transportation, various tourism ratios were developed including:

- **Average expenditure per international tourist visit** — international tourist expenditure data was sourced from WTTC and UNWTO. The expenditure data was based on all international visitors but excluding domestic tourism.
- **Employment per $1 million of tourist expenditure** — total tourism related employment was sourced from the WTTC.

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[167] Work Load Units are a commonly-used standardised measure of traffic at airports, which combines passenger and cargo traffic. One (1) traffic unit equals one passenger or 100kgs of cargo.
[168] https://www.atag.org/our-publications/latest-publications.html
[169] https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD (GDP per capita data for the Saharawi Arab Democratic Republic was taken from the CIA World Factbook and employment data for Seychelles was taken from Seychelles Bureau of National Statistics.)
[170] https://store.aci.aero/product/annual-world-airport-traffic-report-2020/
[171] https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm.
[172] https://wttc.org/Research/Economic-Impact
[173] https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD
[174] https://www.unwto.org/unwto-tourism-dashboard

Catalytic Impacts. The approach taken to estimate the catalytic impacts resulting from liberalization was to use generalised parameters drawn from statistical analysis of historical data. This analysis seeks to determine the contribution of air transport to economic growth by examining the relationship between these factors over time or compared between different countries (or both). The analysis attempts to control for other factors that also contribute to economic growth (education spending, government policies, investment, research and development spending, etc.), in order to isolate the impact of air transport.

The analysis estimates the GDP per capita (and from that, national GDP) that has been contributed by the growth in connectivity. The connectivity parameter was taken from a study undertaken by Inter*VISTAS* on behalf of IATA.[175] . It was selected because it is one of few studies that are based on global data (including data on African countries) – most studies have used U.S. data. It also provides a parameter that specifically addresses productivity, rather than other aspects of aviation economic impacts such as airport activity or tourism.

The parameter from that study found that a 1% increase in a nation's air connectivity increased the nation's productivity (measured in terms of GDP per hour or GDP per worker) in each year by 0.0068%. While the outcome from the parameter is expressed in terms of GDP per hour or worker, it captures the aggregate net effect of a range of catalytic impacts, including trade, investment, business location, etc., which manifest themselves as greater GDP per worker.[176] For example, greater trade allows businesses to benefit from economies of scale as they sell to a larger market. Investment decisions (expanding operations, developing new operations, introducing new technologies) will also have the effect of improving the value-added produced by each worker.

The forecasts of increased passenger traffic were used as a proxy for connectivity. This assumption is likely a conservative one as, historically, the connectivity index has grown at a slightly faster rate than passenger traffic. The connectivity parameter was applied to the percentage growth in traffic to estimate the total impact on GDP. The GDP attributable to the catalytic impacts of liberalization stimulates spending by businesses and individuals in the economy and so can be translated into employment impacts.

Estimating Trade Value

The increase in trade *in goods* between the study countries resulting from liberalization was estimated as follows:

- The current level of trade between the study countries was determined. Data on the total value of goods traded between the study countries was obtained from the UN COMTRADE database, which provides international merchandise trade statistics for 140 countries from 1962 to the present.[177] The database also contains data on bilateral trade broken down by commodity.[178]
- Not all goods are likely to be transported by air. For example, commodities such as oil and minerals are likely to be trucked or moved by ship. Commodity groups that could be transported by air were identified and tabulated. These commodities were:
  - Fish, crustaceans, molluscs & other aquatic invertebrate
  - Dairy products, eggs, honey, edible animal products

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[175] Inter*VISTAS* Consulting Inc., "Measuring the Economic Rate of Return on Investment in Aviation", December 2006.
[176] The original analysis that produced the connectivity parameter did not include any variables related to trade or business location, therefore air connectivity contribution to these effects is captured by the coefficient on GDP per hour.
[177] The database is available here: http://comtrade.un.org/.
[178] The most recent data is for 2019 for most countries. The trade values from previous years were converted to 2019 prices by adjusting for inflation.

- Live trees, plants, bulbs, roots, cut flowers, etc.
- Edible vegetables and certain roots and tubers
- Edible fruit, nuts, peel of citrus fruit, melons
- Pharmaceutical products
- Photographic or cinematographic goods
- Electrical, electronic equipment
- Optical, photo, technical, medical and other apparatus
- Musical instruments, parts and accessories
- Works of art, collectors pieces and antiques

- It was assumed that half of these commodity flows were actually shipped by air (the rest were shipped by other modes).
- The increase in trade was estimated based on the traffic growth forecast from liberalization. This involved estimating the bellyhold capacity of the additional passenger air services stimulated by liberalization.

This provided an estimate of the percentage cargo capacity growth that would result from liberalization, which was applied to the COMTRADE trade figures to estimate trade growth.

Appendix D: Literature Review

The following provides a summary of each of the significant papers reviewed by InterVISTAS Consulting during the study. An overall summary of these paper's findings in provided in Chapter 2.

Impact of Liberalization on Aviation Generally

Title	**The Impact of Air Transport Market Liberalization: Evidence from the EU's External Aviation Policy**
Author(s)	Abate, M., & Christidis, P.
Publication/Year	2020, *Economics of Transportation*, vol 22, 1-14
Description	Following the decision of the European Court of Justice in 2002, which overruled its member countries' Bilateral Air Services Agreements (BASAs), the EU has been negotiating Air Services Agreements with countries within the framework of its External Aviation policy. This paper therefore explores whether routes governed by such policies have lower fares, higher service quality, and load factors compared to those governed by standard BASAs.
Methodology and Data	The researchers analysed traffic flows over a 14-year period between 28 EU countries and 27 external partners over 4 continents, each of which has varying degrees of liberalization agreements with the EU.
Key Findings	Results from the paper indicate that: • These new service agreements lead to a reduction in fares by approximately 6% - 23%; • Have increased passenger traffic flows by 27%; and • Increase capacity utilization levels.
Coverage	A selection of European Union, Africa, South America, North America, and Middle East countries.

Title	**Air Transport Liberalization and Its Impacts on Airline Competition and Air Passenger Traffic**
Author(s)	Fu,X., Oum, T., & Zhang, A.
Publication/Year	2010, *Transportation Journal,* vol 10, 24-41
Description	Study examines the impacts of air transportation liberalization policies on economic growth, traffic volumes, and traffic flow patterns, in addition to the mechanisms leading to such changes.
Methodology and Data	Paper is mostly qualitative in nature, reviewing the results of previous literature on the subject.
Key Findings	Results from the paper indicate that: • Liberalization has led to substantial economic and traffic growth; • Liberalization allows for airlines to optimize their networks within and across continental markets, resulting in route changes; and • There is a two-way relationship between the expansion of LCCs into the market and increased air service liberalization.
Coverage	Select markets across various regions including the Americas, Asia-Pacific, East Asia, etc.

Title	**Air Transport Policy and Its Impacts on Passenger Traffic and Tourism Flows**
Author(s)	Zhang, Y., & Findlay, C.
Publication/Year	2014, *Journal of Air Transport Management,* vol 34, 42-48
Description	Paper attempts to establish the relationship between people movement and liberalization policies in the Australia-Singapore market.
Methodology and Data	Using policy indices to quantify the restrictiveness of the aviation regimes in the Asia-Pacific region, the authors attempt to establish the relationship between passenger demand level and liberalization policies in air transport
Key Findings	Results from the paper indicate that more restrictive air liberalization policies have stunted passenger traffic, in addition to causing additional negative impacts on bilateral tourist flows.
Coverage	Asia Pacific, with an emphasis on Singapore and Australia.

Title	EU Air Transport Liberalization: Process, Impacts and Future Considerations
Author(s)	Guillaume Burghouwt, Pablo Mendes De Leon and Jap De Witt
Publication/Year	International Transport Forum, Discussion Paper No. 2015-04, January 2015
Description	The authors review the history and regulative process leading to the creation of the liberalized single aviation market in the EU. They discuss the changes that have occurred in the industry and the overall impact it has had on the industry (including airports) and its customers. Changes to the industry include the emergence of low-cost carriers and how that has changed the market. They also discuss the impacts of the single aviation market on external aviation policy.
Methodology and Data	Qualitative analysis of liberalization in the European Union. Reviews the process of creating the single aviation market, the impacts liberalization has had on the aviation industry and its customers as well as potential paths that the industry could face based on consolidation, congestion, and competitive landscape.
Key Findings	• In the early years of liberalization (the early to mid-1990s), many of the member states' flag carriers performed well, expanding their networks, moving to a hub-and-spoke system, and profiting from increased market share. Some carriers did not prosper, requiring state aid (which the commission eventually banned for anti-competitive reasons). • As low-cost carriers began to emerge and grow quickly (gaining market share), the market became more competitive for the flag carriers, as yields were declining and growth rates stalled. • There was consolidation in the market as mergers began to take place for some of the legacy carriers as well as bankruptcies. • Although there was a mixture of outcomes for the airlines, consumers benefited from liberalization through lower fares and increased routes and frequencies. • In the future, there may be issues of overcapacity as some low-cost carriers continue to grow. • The legacy carriers will face stronger competition from both Gulf carriers and low-cost carriers, which may lead to additional consolidation (bankruptcies are possible). Issues around fair competition will be important for EU external aviation relations (when signing ASAs).
Coverage	Europe.

Title	**Estimating the Gains from Liberalizing Services Trade: The Case of Passenger Aviation**
Author(s)	Anca D. Cristea, David Hummels and Brian Roberson
Publication/Year	Working Paper, March 2014 http://pages.uoregon.edu/cristea/Research_files/osa.pdf
Description	The United States has taken a strong stance on liberalization over the past 22 years with the signing of over 100 open skies air service agreements. The authors aim to study the effects of liberalization on consumer welfare and market structure, as airlines adjust their networks and prices in the wake of liberalization.
Methodology and Data	Two main data sources are used for both market structure and traffic figures on international travel from the United States. The data used is quarterly data from 1993-2008. The first dataset is the DB1B Origin Destination Passenger Survey, which is a 10% sample of airline tickets with at least one end-point being in the United States. The dataset contains at the ticket level complete itineraries (airports, carriers, fares, distance, etc.). The second dataset is the T100 International Segment dataset, which includes capacity and traffic data for all non-stop international flights. This dataset does not include fare information and only includes the segment of a flight leaving the United States (does not represent O/D travel). To measure the effects of liberalization on growth in passengers and traffic, a difference–in-difference methodology is used. To measure the price and quality effects, instrumental variable estimation is used.
Key Findings	Regression results show: • After 5 years, countries that sign an open skies agreement with the United States have an 18% higher growth in traffic compared to countries that do not sign. ○ Part of the growth is based on the introduction of new routes • For the network, carriers will both enter and exit hub airports, but this will spread out capacity across routes. • Prices decrease after signing an open skies agreement (approximately 2%), but the magnitude varies based on route characteristics. • There is an increase in the number of gateway exit cities, on average. Customers flying from the U.S. and transiting through a country with an open skies agreement, onward to a third country without an open skies agreement will also benefit from decreased prices and increased quantity (quality) of route options.
Coverage	United States International Routes.

Title	**Regulation, Market Structure and Performance in Air Passenger Transportation**
Author(s)	Gonenc, R. and Nicoletti, G.
Publication/Year	2001, *OECD Economics Department Working Papers, No. 254*.
Description	Investigated the impact of liberalization on OECD countries by analysing the implications of airline competition on air fares on 100 major international routes between 27 countries between 1996 and 1997. The study took into consideration how liberalization may not only increase connectivity, but also liberalize entry into a market in the presence of a highly dominant carrier.
Methodology and Data	Cross-sectional OLS model estimating potential fares and occupancy rates (i.e. load factors) on the route level. Data covers 100 international routes with additional analysis conducted to quantify the level of competition, liberalization, ownership, and market efficiencies.
Key Findings	• On liberalized northern European routes, business fares were between 30-40% lower than OECD average. • Where routes were restricted by existing air service agreements, government control of route carriers and infrastructure (e.g. slots or access) impediments, fares were more than 20% higher on some Atlantic and Europe-Asia routes than their predicted level. • Industry and route efficiency is sensitive to actual competition pressures suggesting that potential entry or liberalization of barriers to competition has a disciplining role on prices. However, there is evidence to indicate that fares react to changes in regulation independently from changes to market structure.
Coverage	Global, OECD nations.

Title	**European Experience of Air Transport Liberalization**
Author(s)	European Commission
Publication/Year	February 2003
Description	Summary research of the impact of liberalization of the EU air market (the single aviation market).
Methodology and Data	Analysis of fare and traffic data between 1992 and 2000.
Key Findings	• Between 1992 and 2000, 144 new airlines entered the market, of which 64 were still operating in 2000. • The total number of intra-EU city-pairs increased 74%, while the number of domestic city-pairs increased 12% between 1992 and 2000. • The number of intra-EU routes served by more than two carriers increased by 256%, • In real terms (i.e., after adjusting for inflation), discount economy fares declined 34% between 1992 and 2000. • Total seat capacity on intra-EU routes increased 105%.
Coverage	European Union

Title	The Effect of Liberalization on Aviation Employment
Author(s)	UK Civil Aviation Authority
Publication/Year	16 March 2004
Description	A study to examine the impacts of liberalization of the EU market on employment in the aviation sector. The research was motivated by fears of potential job loss from liberalization between the EU and the U.S.
Methodology and Data	Review of employment data in Europe from 1992 to 2001. No econometric computations, just data comparisons (i.e., growth rates).
Key Findings	• Between 1991 and 2001 (i.e., before and after liberalization) employment in the aviation sector had increased by 38% in the UK. • Similar results were found across Western Europe with employment increasing by 6-84%, except in a few countries where the national carrier had collapsed or been restructured as a result of government policy (e.g., Switzerland, Belgium, Greece)
Coverage	Europe.

Title	The Impact of International Air Transport Liberalization on Employment
Author(s)	NERA Economic Consulting, for IATA
Publication/Year	2008
Description	A study to analyse the impacts of liberalization on employment in the United States and Europe. Study looked at two areas of liberalization, ownership and control restrictions and market liberalization (i.e., new routes). The authors also looked at employment effects in other industries as a comparison.
Methodology and Data	The authors use ICAO Traffic Forecasts and 2007 employment data to construct forecasts of employment growth. They then use price elasticities from IATA to compute potential impacts.
Key Findings	• Employment in the U.S. aviation industry increased substantially following the liberalization of its domestic market in 1978. Employment rose by 22% between 1975 and 1985 (prior to 1975, aviation employment had been declining), and then rose by a further 51% between 1985 and 1993. • In Europe, employment in the 15 EU member states that liberalized in the 1990s grew by 6% between 1997 and 2007, despite a significant traffic downturn in 2001 (due to recessionary effects and the impact of the 9/11 terrorist attack).
Coverage	United States and Europe.

Title	The European and Southeast Asian Single Aviation Markets
Author(s)	Dexter Lee
Publication/Year	Background Brief No. 15, The EU Centre in Singapore, July 2015
Description	This paper gives an overview of the policy changes to the aviation industry in the European Union with the emergence of the single aviation market. It also reviews the Association of Southeast Asian Nations (ASEAN) in its pursuit of a single aviation market, reviewing policies in place, and progress made (and not made) at market integration.
Methodology and Data	Qualitative analysis focusing on the historical regulations, new policies, and comparative analysis of the two aviation markets.

Key Findings	• The groundwork for aviation liberalization in Europe began in the late 1950's but did not gain any momentum until the early 1980's, after deregulation in the United States market.
	• The majority of liberalization took place between 1987 and 1992, with a series of three packages, all introducing different areas of liberalization.
	  ○ Reduced fare restrictions
	  ○ 3rd, 4th and 5th freedoms granted; fare and capacity restrictions greatly reduced
	  ○ Community carriers introduced (common licensing); almost full pricing freedom; cabotage rights for community license carriers
	• The single aviation market meant that member states were no longer allowed to provide state aid to its flag carriers (as this could distort the market).
	• The regulations behind the single aviation market also allowed for carriers to make decisions based on commercial outcomes, without government interference, reducing the issue of protectionism.
	• Liberalization aided the rapid growth of low-cost carriers in Europe.
	• Liberalization provided consumers lower prices, more travel options and stimulated tourism in the European Union.
	• Other aviation industries have benefited, including small and medium airports, ground handling and ANSPs.
	• In the ASEAN market, the single aviation market outline is not quite as liberal as the EU model and has not had as much success.
	• The ASEAN Single Aviation Market (ASAM) agreement allows for 3rd, 4th, and 5th freedom rights and lessened ownership restrictions.
	• Some member countries have slowed the progress of ASAM as they have refused to ratify the agreements.
	• Unlike the European Commission (which can set policies) the ASEAN Secretariat cannot control the member countries, which continue to act separately in terms of bilateral agreements with 3rd countries.
	• ASEAN airlines have benefited from the partial adoption of ASAM, particularly low-cost carriers.

Coverage	European Union, ASEAN.

Title	**Opening the Skies: Put Free Trade in Airline Services on the Transatlantic Trade Agenda**
Author(s)	Kenneth Button
Publication/Year	*Policy Analysis*, No. 757, CATO Institute, September 2014
Description	Qualitative review of the Transatlantic Trade and Investment Partnership (TTIP) between the European Union and the United States and the proposition of including commercial aviation, specifically including domestic air transportation services and further relaxed ownership laws.
Methodology and Data	Qualitative analysis of the merits of including commercial aviation in the TTIP and potential benefits.

Key Findings	• Restrictions on cabotage to shelter U.S. carriers from foreign carrier competition, which creates incentives that lead to inefficiencies.
	• Deregulation and liberalization have created large benefits in both Europe and the United States, for both the industry (though not for all members) and consumers.
	• Deregulation and reforms in the United States have left a gap for service where neither low-cost nor legacy carriers operate.
	• By not allowing cabotage, the author asserts there are benefits from competition being suppressed:
	  ○ Competition is generally beneficial to consumers (firms tend to respond better to consumer product demand)
	  ○ Opening domestic markets would help reduce the issue of market and pricing dominance, reducing the regulatory burden associated with this.
	  ○ Foreign investment has been historically beneficial to American firms.
	• The author also notes that current U.S. airlines and labour unions have lobbied against cabotage, successfully thus far.

Coverage	United States and Europe; Transatlantic

Title	The Economic Impact of Air Service Liberalization
Author(s)	Inter*VISTAS*-ga2
Publication/Year	June 2006
Description	Examined the impacts of liberalization were estimated using a gravity model that forecasts traffic between any two countries (or groups of countries). Also examined case studies of liberalization around the world.
Methodology and Data	The analysis involved cross-sectional data on over 800 country pairs. The cross-sectional analysis assumes that traffic between the two countries was a function of the economic conditions of the two countries, trade between the countries, distance, and socioeconomic conditions and the restrictions of the air service agreement.
Key Findings	The analysis found that traffic growth subsequent to liberalization of air services agreements between countries typically averaged between 12% and 35%, significantly greater than during years preceding liberalization. In a number of situations, growth exceeded 50%, and in some cases reached almost 100% of the pre-liberalization rates.
Coverage	Global.

Title	Modelling and Testing the Effect of Market Structure on Price: The Case of International Air Travel
Author(s)	Dresner, M. and Tretheway, M.
Publication/Year	1992, *Journal of Transport Economics and Policy,* 26(2) 171-184
Description	With the introduction of the first liberal bilateral for the United States in 1978, the United States (and its bilateral partner, the Netherlands) began a movement towards more liberal bilateral agreements between nations. By 1982, the United States had more than 20 liberal agreements in place. The authors look to assess whether or not liberal bilateral agreements were able to successfully increase price competition on international flights from the United States.
Methodology and Data	Two-stage Least Squares Model. The data used was panel data from 1976 to 1981 on 51 non-directional North Atlantic routes. Data was on both the discount fares and full-fares available for each route.
Key Findings	• Liberalization increased competition in the market, which ultimately led to some air fare reductions. • The liberalized policy of the U.S. was successful as discount fares were reduced up to 35% on competitive routes. • No evidence of an effect on full-fares was found. • Welfare gains from liberalization may have been up to $325 million in 1981, approximately $45 per passenger.
Coverage	Northern Atlantic Routes.

Title	**Liberalization of Air Transport: Summary – Policy Insights and Recommendations**
Author(s)	International Transport Forum
Publication/Year	ITF/OECD Research Report, May 2015
Description	This report summarises the current status of liberalization in air transportation globally. It provides background on some of the current impediments to implementing full liberalization, including ownership and control restrictions and fair competition.
Methodology and Data	Qualitative overview of liberalization in the air transportation industry globally. Reviews the state of regulation/deregulation, ASAs, connectivity, environmental impacts, markets, ownership, and competition.

Key Findings	• Deregulation of the air transport industry is still relevant and an ongoing process. The ASEAN single aviation market is an example of deregulation to still take place, among many other countries.
	• China, being one of the largest potential growth markets, is being watched to see how they choose to deal with air service agreements, and whether or not they begin to have more liberal agreements put in place.
	• There is general consensus that liberalization has been beneficial in terms of lower prices, higher demand, improved connectivity and wider economic benefits through trade and tourism.
	  ○ There are large gains from liberalization when it allows for growth of low-cost carriers.
	• While direct connectivity may fall in some countries, for the consumer this may be okay (increased indirect connectivity paired with lower prices may leave the consumer better off).
	  ○ Changes in connectivity reflect carriers adjusting their networks, not necessarily directly from liberalization.
	• Environmental issues from aviation are starting to be included in air service agreements, as the increased traffic leads to increased pollution.
	• Many countries are starting to form aviation blocks, acting as one area for liberalization. This includes the EU, ASEAN, and Africa with the Yamoussoukro Decision.
	• Ownership and control restrictions need to be reviewed as there are gains from removing these restrictions. It will allow capital to flow to airlines for growth as in other industries.
	• Fair competition in the industry is a major topic of discussion. The authors note that the discussion should not include competitive advantages from geography though, and rather there needs to be a clear message from ICAO as to what are acceptable level of subsidies.

Coverage	Global.

Title	Open Skies Over the Middle East
Author(s)	Anca Cristea, Russell Hillberry and Aaditya Mattoo
Publication/Year	World Bank Policy Research Working Papers, April 2015, http://pages.uoregon.edu/cristea/Research_files/osa_wb.pdf
Description	The authors aim to estimate the benefits from a more liberal air service agreement between Turkey and the Arab countries that surround it (those that are part of the Intra-Arab Freedom of the Air Programme). They begin by estimating generally the impact of ASAs, both bilateral and plurilateral. They then simulate the potential benefits from the liberalization of the ASAs between Turkey and the other Arab countries that surround it.
Methodology and Data	The passenger data is the on-flight origin destination dataset from ICAO, which covers scheduled international flight segments. The data is for the year 2010. To measure liberalization, the authors use the Air Liberalization Index, based on the WTO database. The authors also use control variables such as GDP, distance, and route specific characteristic variables. The regression analysis is based on a gravity model using Ordinary Least Squares estimation. They use data on both the country-pair and city-pair level, looking at both traffic volumes and number of markets with direct service.

Key Findings	• Based on country-pair level regressions, there is a positive and significant effect on passenger traffic from liberalization.
	  ○ The regression results do not show a significant difference from the impact of a bilateral agreement versus a plurilateral agreement.
	  ○ Had a liberal policy been in place at the time, there is potential for up to 30% more traffic between Turkey and its neighbours.
	• Based on the city-pair level regressions, there is a positive and significant effect on passenger traffic from liberalization on routes that are already in place.
	• If the agreement between the Arab countries was fully liberalized (similar to the UK), there is potential for traffic to increase up to 30%.
	• Adding Turkey to the agreement between the Arab states would also have a positive impact on passenger traffic and increased city-pair options.

Coverage	Middle East.

Impacts of Air Service Liberalization in Africa

Title	**The Role of Air Transport in Employment Creation and the Inclusive Growth in the Global South: The Case of South Africa**
Author(s)	Njoya, E., & Nikitas, A.
Publication/Year	2020, *Journal of Transport Geography,* vol 85, 1-15
Description	This paper investigates the claim that air transport development is a key driver of economic growth and poverty reduction in both emerging and developing economies, using South Africa as an example.
Methodology and Data	To assess the impacts of air transportation, this paper employs the use of both a social account matrix (SAM) and computational general equilibrium (CGE) framework.
Key Findings	• Results from the paper indicate that: Air transportation has a significant impact on a number of economic accounts, including output, income levels, and employment levels, etc.; • Gains and benefits from air transport vary across income distributions, where the biggest winner are households within the highest income decile, along with those who are considered “highly” skilled workers; • Due to significant and substantial air transport polarization within the country, where there is a large dominance of routes to core cities and airports in places such as Johannesburg, Cape Town and Durban, such developments could generate significant gap in income inequality levels; and • The major benefits of air service liberalization in South Africa lies primarily within its backward linkage effects, and more specifically, the positive benefits it creates for other sectors throughout the economy.
Coverage	South Africa.

Title	**Liberalization and the Spatio – Temporal Patterns of Air Transportation in West Africa**
Author(s)	Oluwakoya, A.
Publication/Year	2018, *PhD Thesis*, 1-220
Description	Liberalization policies have influenced global air transport significantly. In Africa, through the Yamoussoukro Decision, the liberalization process was aimed at removing air travel restrictions and setbacks to regional flows, and improving passenger, cargo, and aircraft movements, etc. However, since the partial implementation of this policy, there has been limited literature analysing the impact on the spatial structure of passenger flows from Nigeria to other West African countries. As a result, this paper attempts to explain changes in passenger flows between pre and post liberalization-eras.
Methodology and Data	Data was collected primarily through survey design, where a structured questionnaire was administered to approximately 428 participants. Information regarding each respondents' socio-economic and air travel characteristics was gathered. Data on passenger and aircraft flows was collected from the Federal Airport Authority of Nigeria, Nigerian Civil Aviation Authority, and the ECOWAS Commission.
Key Findings	Results from the paper indicate that: • There is a statistically significant relationship for total volume of air passengers and aircraft movements between pre- and post-liberalization-eras in Nigeria. In this case, the effect is slightly larger for passenger movements than it is for aircraft movements; • Passenger traffic flows increased by approximately 24%-30% as a result of implementing liberalization policies; • Aircraft movements increased in excess of 5,000 flights over the sample as a result of such liberalization polices; • There is a need to increase infrastructure capacity, strengthen regional policy framework and connectivity at the sub-regional level; • Understanding the level of flight frequencies by air passengers in both the pre-liberalization and post-liberalization eras is critical to assessing the impact of policy intervention of liberalization.
Coverage	Nigeria and select West Africa countries.

Title	**Effects of Air Transport Market Liberalization in the East African Community (EAC)**
Author(s)	Megersa, A., & Kincaid, I.
Publication/Year	2018, *Journal of Transport Economics and Policy,* 52(4), 427-445
Description	Using a unique data set collected for the EAC (Burundi, Kenya, Rwanda, Tanzania, and Uganda), this paper investigates how liberalization has affected fares and service quality, and how further liberalization may affect the aviation sector and benefit regional economies.
Methodology and Data	The empirical analysis in this paper was based on panel data of traffic flows between the five EAC study countries plus Ethiopia and other countries in Africa (Sudan, Eritrea, Somalia, DC Congo, Mozambique, Zambia, South Africa, Nigeria, Egypt, Morocco, and Angola), covering the period 2005 to 2014. Traffic and fare data was sourced from ticket booked data and combined with information on the Bilateral Air Service Agreements (BASAs) collected by survey from the Civil Aviation Authorities and Ministries of Transportation.
Key Findings	Results from the paper indicated that: Liberalization leads to lower fares and higher frequencies, which in turn stimulates passenger demand; Fully liberalizing restricted routes reduces average fares by 9% and increases frequencies by 41%; Modelling analysis suggests that further liberalization between the five EAC countries would increase traffic by 15% and 52% in each of the countries, and by 29% for total traffic between the EAC countries. Partial liberalization is not effective in achieving equivalent impacts.
Coverage	Burundi, Kenya, Rwanda, Tanzania, and Uganda.

Title	**Understanding the Impact of Liberalization in the EU-Africa Aviation Market**
Author(s)	Njoya, E., Christidis, P., & Nikitas, A.
Publication/Year	2018, *Journal of Transport Geography,* vol 71, 161-171
Description	Economic implications of regulatory changes in air transport liberalization between various markets in the EU and Africa are highlighted. Specific variables under investigation include the impact of regulatory changes on air fare and service frequency.
Methodology and Data	The authors explore the economic benefits of air liberalization using a two-stage least squares approach. Data used in the analysis was based on country-pair passenger figures over a 15-year period, from 2002 to 2016. 28 African and 11 European countries were included in the analysis. Data was collected from a variety of sources including the World Bank, World Trade Organization Air Service Agreement Predictor, and the Global Conflict Risk Index, etc.
Key Findings	Results from the paper indicate that: • EU-African routes that experienced liberalization between 2002 to 2016 had on average 14% lower fares; • EU-African liberalized routes over the same period had a 28% increased in departure frequencies; and • The presence of low-cost carriers within select markets further reduced fares by an additional 31%.
Coverage	Select European Union and African countries.

Title	**The Air Liberalization Index as a tool in measuring the impact of South Africa's aviation policy in Africa on air passenger traffic flows**
Author(s)	Surovitskikh, S., & Lubbe, B
Publication/Year	2014, *Journal of Air Transport Management*, vol 42, 159-166
Description	Study employs the use of the Air Liberalization Index ("ALI"), first developed by the World Trade Organization ("WTO"), to measure the impact of various market access features on passenger traffic flows in South Africa. The ALI categorizes different provisions of BASAs and assesses them according to a unique scoring system. Specifically, the ALI provides a simple quantification of the air transport regulatory system in place. Components of the ALI include the following provisions, grant of rights, designation, withholding or ownership, capacity clauses, tariff approval, statistics, and cooperative arrangements. Passenger flows from five specific transportation markets are examined, including intra-Africa, the SADC, East Africa, West Africa, and North Africa.
Methodology and Data	A fixed one-way panel regression model is fitted with data over a 11-year period (2000 to 2010). The results are significant in three markets, intra-African, the SADC and East African and provide insights into the relationship between air passenger traffic flows and aviation policy in the South Africa.
Key Findings	Results from the paper indicate that: • For the SADC, Intra-African, and East African markets, changes in capacity provisions have a uniform impact on passenger trade flows. In this case, over the 11-years examined, a unit increase in capacity provision led to an increase in passenger flows between 5%-13%; • A unit increase in the cooperative arrangement provision increased passenger traffic flows in the Intra-African and SADC market by 21%-36%; • Changes in tariff approval provisions, primarily in the South African-SADC market, led to a decrease in passenger traffic flows between 5%-6%; and • Changes in grant of rights increased passenger traffic flows between 4%-5% in the Intra-African and SADC markets.
Coverage	South Africa.

Title	Economic Effects of Air Transport Liberalization in Africa
Author(s)	Abate, M.
Publication/Year	2016, *Transportation Research,* vol 37, 327-337
Description	This paper examines the impact of air liberalization in Africa through two primary supply chain variables, which includes fare prices and service quality, where the latter is measures through departure frequencies.
Methodology and Data	Paper employs the use of a standard 2-stage least squares approach, where fare rates and passenger traffic levels are used as the dependent variables. Control variables in the model include income, population levels, geographical distance, etc. The model is fit with data based on passenger flows between 20 African city-pair routes to and from Addis Ababa Airport over a 5-year period. The data covers more than 75% of the air links between Addis and other African cities included in the study. Passenger data includes those who have travelled from other countries such as Burundi, Chad, Congo, Egypt, Ghana, etc.
Key Findings	Results from the paper suggest that: • Routes which experience some level of liberalization experienced a 40% increase in departure frequency when compared to routes governed by more restrictive measures; • The author finds no evidence of fare reducing effects; and • The analysis did not reveal the presence of market dominance over the 20 routes analysed.
Coverage	Ethiopia and other select African countries.

Title	**The Impact of Air Service Agreement Liberalization: The Case of Nigeria**
Author(s)	Ismaila, D., Warnock-Smith, D., & Hubbard, N.
Publication/Year	2014, *Journal of Air Transport Management,* Vol 37, 69-75.
Description	This study analyses the progress of Nigeria's air transport industry in the wake of liberalization stemming from the Yamoussoukro Decision including liberalizing traffic rights with African nations, an Open Skies agreement with the U.S. and easing of market access regulations with several other countries. The econometric analysis involved using the WTO-standard classification for liberalization progress on each of the country-pairs in the sample. Following the formulation and estimation of an econometric model, potential gains to international traffic were forecast if the level of liberalization was increased on a country-pair *ceteris paribus*.
Methodology and Data	Cross-sectional econometric model of 112 country-pairs of passenger traffic to/from Nigeria including predictors for air service liberalization over the sample period 2009-2010. Traffic, fares and route distances data sourced from IATA PaxIS. Traffic is origin-destination passengers.
Key Findings	• Liberalization effects in the econometric model were found to be statistically significant and of the correct sign indicating a positive effect on international traffic to/from Nigeria. • Removing ownership and control restrictions on any Nigerian international route could stimulate passenger traffic by approximately 33%. This finding is in line with a 2006 estimate by the WTO. • Potential increases to trans-continental traffic from Nigeria, should full YD recommendations be implemented, range from 35% to 137% per country based on existing air service agreements. The largest traffic increases could be obtained from liberalizing the most restrictive agreements to YD standards.
Coverage	Nigeria.

Title	**The Future of African Civil Aviation**
Author(s)	Abeyrante, Ruwantissia I. R.
Publication/Year	1998, *Journal of Air Transportation World Wide*, 3(2), 30-48.
Description	This paper, published following the 1998 meeting of the African Civil Aviation Commission but prior to the Yamoussoukro Decision, focuses on three key points for the furthering of Africa's aviation industry: the need for new aircraft in the fleets of African airlines, market access and liberalization, and aviation safety. The author draws on the experiences of other nations in these areas and makes recommendations for action by African nations to help improve the continental aviation industry.
Methodology and Data	Qualitative analysis focused on policy recommendations, legal research, and trends/forecasts for air traffic.
Key Findings	African airlines should modernize their fleets if they are to compete with European, Asian, and American carriers for trans-continental access to these markets. Cautions that, in the growing trend of carrier mergers and airline alliances, African carriers may be unable to fairly find opportunity to participate in international air transportation. That ICAO member states consider a number of preferential treatment provisions for carriers of developing nations to assist them in entering the international market and expanding until they have the capacity to fairly compete and operate (e.g. flexibility with regard to ASA provisions, liberalization on a trial basis, preferential aircraft leasing agreements). Developing countries could be released from the obligation for airlines to be primarily nationally owned and controlled, suggesting that developing countries should allow for expanded right of establishment to give their nations the benefit of reliable air transportation services until such time as a home-grown carrier may be sustainable. Safety and modernization must be a priority of African airlines to ensure that they conform with ICAO standards.
Coverage	Africa.

Title	**Background to the Experiences of Liberalization in Africa**
Author(s)	International Civil Aviation Authority
Publication/Year	March, 2003
Description	Memorandum from ICAO summarizing the experiences of African states on liberalization of the air transport industry four years following the Yamoussoukro Decision. Reporting states indicated that liberalization has had a positive impact on expanding the size of their aviation industry, enhanced consumer choices, and greater economic benefit from private sector investment and job creation. Input from the states also identified a number of areas in which progress remains to be made and concerns for the evolution of the African air transport industry.
Methodology and Data	Qualitative input from African states. No data or empirical analysis.
Key Findings	The memorandum highlighted the following issues requiring closer attention to achieve more complete success of the liberalization policy: The pace of liberalization has been varied across African states and regions and in many locations still lags far behind global standards. African airlines face difficulties accessing global markets due to slot congestion at many international airports outside of the Global continent. Agreements between African and foreign airlines have also led to situations where African carriers must 'hand over' passengers to their foreign partners, further impeding access to global markets by African airlines. While competition was seen to have generally increased, there are concerns that Africa's major airlines, as well as major foreign carriers, are exerting their market dominance in a way that is not in the interest of users and medium and small airlines. Infrastructure financing and safety remain a concern. Liberalization has allowed for greater market entry by new African airlines but inadequacies in operational and infrastructure safety must be addressed. Regulations and a structured dispute settlement system were seen as lacking at the time of publication.
Coverage	Africa.

Title	Open Skies for Africa: Implementing the Yamoussoukro Decision
Author(s)	Schlumberger, Charles E.
Publication/Year	2010, *The International Bank for Reconstruction and Development/The World Bank*.
Description	Schlumberger's work reviews the implementation and progress of liberalization in the African air transport industry in the decade following the adoption of the Yamoussoukro Decision.
Methodology and Data	Quantitative analysis of airline schedule and fleet data from 2001, 2004, and 2007. The analysis was centred on assessing the progress and impacts of post-Yamoussoukro liberalization on the African air transportation industry. The work comprehensively covers the background and path to liberalization in Africa, its implementation in Africa's regions, the impacts on traffic, and the economic aspects of liberalizing air traffic.
Key Findings	The liberalization of traffic rights and privatization of some carriers has led to the consolidation of networks, as low-density and unprofitable routes have been phased out in favour of routes to and from the main hubs (mostly evident in East Africa) With the development of 5th freedom traffic in regions without a strong local carrier, some dominant carriers have entered the market at lower cost, adding to service levels and putting pressure on regional carriers to reduce fares. On a regional basis, only West and Central Africa have fully achieved liberalization. These regions have seen a large turnover in carriers and no strong local carrier has emerged in the region, with much of the service coming from 5th freedom traffic from other African carriers. Lowering the cost of air transport to make it more accessible will drive further economic benefits within the aviation industry and wider benefits across the continent. Subsidies to non-competitive or unviable carriers in the poorest countries are a strong argument for liberalization as those funds may be more wisely used to support a nation's economic growth. Full liberalization of air services would facilitate connectivity to remote countries and regions to international trade, opening up new opportunities for economic growth.
Coverage	Africa.

Title	**Africa's Infrastructure: A Time for Transformation** **Chapter 13 Airports and Air Transport: The Sky's the Limit**
Author(s)	Bofinger, Heinrich and Gwilliam, Kenneth (eds. Foster, Vivien and Briceño-Garmendia, Cecilia)
Publication/Year	2010, The World Bank.
Description	A wide-ranging work, the book is a comprehensive study of Africa's infrastructure. The analysis focuses on nearly all major aspects of infrastructure development and governance, from public utilities to transportation. Chapter 13 focuses on airport and aviation infrastructure and assesses the historical and current levels of air traffic, physical infrastructure, safety, government regulation and policy within African nations and across the continent.
Methodology and Data	Quantitative analysis of airline seat capacity and fleet data, 1997-2010. Data sourced from the World Bank with estimated traffic levels sourced from Seabury's Airline Data Group.
Key Findings	The authors make two primary recommendations. First, African states must complete the recommendations of the Yamoussoukro Decision to liberalize international intra-Africa air travel and remove or reduce protectionist policies relating to air carriers. Second, air safety must be increased through better training, safety administration, and regulatory oversight. Intra-African international seat capacity is highly concentrated into a handful of carriers, highlighting the relative scarcity of capacity on many international African routes and the relative lack of competition for international transport within the continent. Air travel within Africa remains considerably more expensive per flown mile than intercontinental travel. By international standards, aeronautical fees are high in Africa, partly because of the absence of non-aeronautical revenues from airport concessions. As of 2010, approximately two-thirds of air transport service within Africa had been liberalized. Liberalization levels vary by region with certain states remaining holdouts or retaining restrictive ASA provisions for other African states while liberalizing agreements with European, Asian, and North American states. Physical and air navigation infrastructure in sub-Saharan Africa is generally adequate, but lags behind the infrastructure found in North African airports. Operational capacity constraints and terminal capacity constraints are few and limited to the handful of major hub airports in East and Southern Africa.
Coverage	Africa, sub-Saharan Africa.

Title	**An Assessment of African Open Skies**
Author(s)	Kuuchi, Raphael
Publication/Year	2013, African Airlines Association.
Description	The author, Director of Commercial/Corporate & Industry Affairs for the African Airlines Association, developed a position paper on the current state of liberalization in Africa. Kuuchi notes that, despite the slow pace of liberalization, the aviation industry contributes nearly US$ 70bn in GDP to Africa and supports 6.7 million jobs. He calls for African nations to push forward with liberalization initiatives and to implement the Yamoussoukro Decision (YD) to further aid the economic and social growth of the African continent.
Methodology and Data	Policy analysis of the status of liberalization efforts in Africa.
Key Findings	The author asserts that: The lack of full liberalization is being partly driven by the governments of a number of African nations, determined to retain protectionist policies to benefit their national carriers. The lack of a mechanism to form and jointly own a carrier (across countries) impedes the process of liberalization. While some African states remain rigid in their adherence to restrictive ASAs, many are more liberal in their relations with other non-African nations. This is especially true in West/Central Africa, where intra-African travel remains difficult but trans-continental travel (particularly on European and Middle Eastern airlines) has become much easier due to ASA liberalization. The more advanced state of liberalization with non-African nations has created an un-level playing field. Restrictive intra-Africa ASAs hinder the development of the African aviation industry while foreign carriers transport more than 80% of intercontinental traffic to/from Africa. While physical aviation infrastructure in Africa has improved, numerous non-physical barriers remain that slow the development of the air transport industry, e.g. visa requirements, cumbersome immigrations/customs, high taxes, fees, and charges levied on airlines and passengers. The African Union and the Regional Economic Communities (RECs) must mobilize their resources to execute their mandates of the YD. Individual states and RECs should not wait to enact liberalization until other countries or RECs have done so.
Coverage	Africa.

Title	**Opportunities and Challenges for LCC Development: The Case of East Africa**
Author(s)	Schlumberger, Charles E. and Weisskopf, Nora
Publication/Year	2014, in *Ready for Takeoff? The Potential for Low-Cost Carriers in Developing Countries*, 95-168.
Description	The chapter provided an overview of the aviation industry in the East African Community and assessed the opportunities and barriers to LCC airlines entering the market in this African region. The focus of the author's analysis was on domestic and intra-regional markets. While the region has only seen one true LCC entry (Fly540, later renamed Fastjet) the authors contend that there is potential in this region for additional LCC entry, but many barriers in both the market and infrastructure remain.
Methodology and Data	Qualitative analysis of airline schedule and fleet data, sourced from OAG, 2009-2012. Analysis centred describing trends and market composition.
Key Findings	The air transport market in EAC nations appears to still be in the early stages of development. While economic growth is occurring in these states, income inequality is still very high dampening potential demand for air transport and for LCCs despite the presence of tourism opportunities and rising urbanization. The majority of intra-regional routes are dominated by a single carrier, with less than half being contested by two or more carriers. Aeronautical fees remain high in the region, but the burden has been placed primarily on passengers hindering the entry and growth of potential LCCs. Aviation infrastructure, from airside facilities to air navigation services, remains poor.
Coverage	East Africa.

Title	African Decolonisation and Air Transportation
Author(s)	Button, K., Martini, G., and Scotti, D.
Publication/Year	*2015, Journal of Transport Economics and Policy, 49(4) 626-639*
Description	This research examines how the lingering effects of historical colonisation have formed the current geographical distribution of air transportation growth in the region. Air service patterns, also shaped by colonisation, are observed and reported on. The study includes countries located south of the Sahara and focuses on the air-services trade between those countries.
Methodology and Data	The data sourced for this study is from the Official Airline Guide (OAG) for the period between 1998 and 2011. It includes information on seats and does not consider demand for air services. The model, which aims to pinpoint the major determinants of the sub-Saharan aviation network throughout 1998 to 2011, is estimated by using the least squares dummy variable (LSDV) econometric methods. The model uses a number of different variables such as distance between airports, former British/French colonies, landlocked countries, observation year and whether or not the origin-destination pair in the data is a signatory of the Yamoussoukro Air Liberalization Agreement.
Key Findings	There is indication that the growth of African air transportation is growing, undoubtedly helped by a reduction in civil war and growing economies in the region. There exist positive residual effects of colonialism on airline network development. Contrary to previous research of African colonialism, being a former French colony proves more advantageous compared to a former British colony, in particular with regards to intra-block flights. In each of the study's four models, the Yamoussoukro coefficient previously mentioned was estimated as being negative (with varying levels of significance), suggesting that signatory countries of *The Decision* have experienced a negative impact on capacity.
Coverage	Sub-Saharan Africa.

Title	**Africa's single aviation market: The progress so far**
Author(s)	Eric Tchouamou Njoya
Publication/Year	May, 2015
Description	This paper, qualitative in nature, reviews some of the relatively recent developments in the African aviation sector and their role in the overall implementation of YD. There is some level of focus placed on the distribution of 5th freedom rights, as well as the obstacles facing the EAC that are preventing full buy-in of multilateral open skies.
Methodology and Data	This is a policy analysis, supported in part by weighted air liberalization index data prepared by the WTO Secretary.
Key Findings	Njoya observes some of the benefits enjoyed by countries in which YD has been implemented: • Increase in frequencies, air traffic and aircraft movements; • Competition leading to an improvement in quality of service; • Increase in private sector interest of air transport sector through capital investment or airline creation; • Increase in African carrier alliances; and, • Higher foreign direct investment; Njoya reiterates that YD buy-in has been particularly slow, with individual countries and sub-regions taking the lead on its uptake. Some of this hesitancy is because of pressure felt by airlines on post-liberalization costs due to the increased competition. The paper concludes by suggesting the formation of regional airline groupings could serve as one option of overcoming the challenge of integration in Africa.
Coverage	Africa.

Title	**African Airlines in the Era of Liberalization**
Author(s)	Chingosho, Elijah
Publication/Year	2009, Amazon Digital Services LLC
Description	Dr. Elijah Chingosho, Secretary General and CEO of the African Airlines Association, authored a book on reviewing the progressive liberalization taking place throughout the African airline industry. The book covers a wide range of topics including a review of the African airlines (as of 2009), some of the liberalization programmes and carrier responses, information on airline alliances and consolidation, legal and regulatory issues, financing, actions to be taken by carriers and a forward-looking summary of the African aviation industry.
Methodology and Data	The book draws on an expansive set of data sources from publicly available databases such as aircraft manufacturer forecasts, Wikipedia, tourism reports, industry associations including IATA and ICAO, U.S. Bureau statistics, African carrier websites and a number of academic papers.
Key Findings	The author argues that: • The African aviation industry must restructure through joint ventures, consolidations, acquisitions, and other means of forming large industry units to achieve economies of scale. • More focus must be placed on serving fewer markets at a higher frequency instead of a large number of markets at a low frequency. A continued challenge is the aging fleet of many carriers resulting in poor aircraft utilization and unreliable services. • African airlines do realize the benefits and advantages of consolidation, as evidenced by the acquisition of stakes by larger operating businesses of smaller airlines in the region. • Regulatory challenges such as visa requirements, punitive regulations on denied boarding compensation in the EU, unfair EU competition rules, and the lack of Africa to speak as one entity with larger regional bodies such as the EU. • Poor liquidity amongst African airlines and undercapitalization pose a challenge when looking for debt financing as a means to replace and/or upgrade ageing fleets. • Commitment from all players in the EAC is necessary to realize the full benefits of YD.
Coverage	Africa.

Title	**Transforming Intra-African Air Connectivity: The Economic Benefits of Implementing the Yamoussoukro Decision**
Author(s)	Inter*VISTAS*
Publication/Year	2014
Description	This study examines the impacts of liberalizing intra-African air markets. Analysis includes modelling the transmission mechanisms by which liberalization leads to greater air connectivity, thereby resulting in wider economic benefits and increased air traffic volumes.
Methodology and Data	The methodology employed by this paper assumes that all 12 study countries sign "open skies" bilateral agreements in accordance with YD. A gravity model, the foundation of which includes the economic characteristics of countries, forecasts traffic between any pair of countries. The economic characteristics include variables such as GDP and trade sources from both public and subscription databases. Actual impacts of liberalization are estimated by specifying changes to the term of the bilateral (through the use of a dummy variable), after which the gravity model calculates forecast growth of international traffic.
Key Findings	Findings of this paper include: • Increased air service levels and lower fares, leading to higher traffic volumes, increased tourism, trade, and investment, as well as improved productivity, employment, and economic growth. • Specifically, increases in passenger traffic in a number of EAC countries were calculated: Ethiopia (56%), Kenya (60%), and Uganda (115%). • Benefits born by passengers include fare savings of 25-35%, improved connectivity, time savings due to new routes and greater frequencies, and greater convenience. • Overall economic benefits of liberalization to the 12 study countries includes passenger growth of up to 4.9 million, consumer benefits of over USD $1 billion, over 155,000 generated jobs and an increase in GDP of USD $1.3 billion.
Coverage	Algeria, Tunisia, Egypt, Senegal, Nigeria, Ethiopia, Ghana, Uganda, Kenya, Angola, Namibia, South Africa.

Title	**Clear Skies Over Southern Africa**
Author(s)	Myburgh, Andrew; Sheik, Fathima; Fiandeiro, Fatima; and James Hodge of Genesis Analytics.
Publication/Year	*ComMark Trust*, 2006.
Description	The report uses a combination of case studies and econometric analysis to assess the impact of air service liberalization within the South African Development Community consisting of 15 member states. The authors assessment of the impacts of liberalization up to 2006 drives their thesis that continued liberalization will allow for greater economic growth in the SADC, especially with respect to foreign tourism. The authors also consider the potential negative economic impacts on state-subsidized national airlines which, the authors contend, have protected their home carrier's markets by retaining restrictive bilateral air service agreements and maintaining artificially high fares.
Methodology and Data	Two pieces of econometric analysis were conducted on the SADC market: Cross-sectional econometric analysis of fare data on 56 routes between six countries. Analysis included both two stage least squares and ordinary OLS and used a dummy variable for 'Open Skies' to indicate the presence of a liberalized bilateral agreement. Fixed effects panel regression model of passenger volumes on 16 routes from Johannesburg between 1998 and 2004, including dummy variables for liberalized bilateral agreements and capacity increases in bilateral agreements. Additional case studies were conducted on specific markets in the SADC reviewing fares, capacities, frequencies, and operating carriers.
Key Findings	Econometric analysis of air fares on 56 routes in the SADC showed that fares were, on average, 18% lower on liberalized routes than non-liberalized routes. The presence of a low-cost carrier on a given route reduced fares by an average of 40%. Econometric analysis of passenger volumes on SADC routes from Johannesburg found that liberalized agreements induced a 23% increase in passenger traffic and that increases to allowable capacity in bilateral agreements increased volumes by 12%, on average. Full liberalization of the SADC countries' aviation markets could allow for: 500,000 incremental foreign tourists a year spending more than US$ 500 million, potentially increasing SADC's regional GDP by one half percent. Additional tourist visits and the expansion of the aviation industry could generate 35,000 jobs in the travel and tourism industries, and a further 37,000 jobs in the wider SADC economy. The authors assert that the positive liberalization impact on the SADC economy from increased passenger volumes would outweigh the negative economic impacts on currently protected air carriers. They point to the orders of magnitude difference between direct employment by national airlines and employment generated by the tourism and hospitality industry by visitors arriving by air as evidence that losses to national airlines would be vastly outweighed by increased employment in the much larger tourism industry.
Coverage	South African Development Community

Title	**The Contribution of Air Transport to Sustainable Development in Africa**
Author(s)	Oxford Economic Forecasting
Publication/Year	*Air Transport Action Group*, 2003
Description	This wide-ranging policy report, produced for the Air Transport Action Group, assess the contribution and economic impact of the air transport industry to Africa's economy. The authors assert that the aviation industry has a vital role to play in the sustainable development of African economies. They argue that improved air access both within African nations and between Africa and the world will help raise living standards and alleviate poverty in Africa by lowering transport costs, supporting more rapid and stable economic growth, and improving personal mobility. The authors' industry analysis focuses closely on the linkage between aviation and tourism, and in particular nature tourism. They identify the growth of nature tourism to be particularly beneficial to the growth of a sustainable economy in Africa, both through an increase by foreign tourists and the continued preservation of protected natural areas.
Methodology and Data	Quantitative analysis of Africa's aviation industry and its relation to the overall economy, with a particular focus on the relationship between aviation, tourism, and nature tourism. Qualitative analysis focuses on current government policy and surveys of agents in the African air transportation industry.
Key Findings	There is significant potential to boost the African economy by increasing the size and scope of the African air transport industry, with particular respect to facilitating growth in the tourism and nature tourism industries. To do so, the Yamoussoukro Decision should be fully implemented and governments should refrain from extracting excessive fees and taxes from the aviation industry which would ultimately hinder growth of the industry and the African economy as a whole. Improvement to Africa's air transportation industry has the potential to produce many positive impacts on the African economy, from reduced poverty, increased mobility, and furthering business investment and investor confidence in the continent. Infrastructure and safety deficits must be addressed for air transport to grow and to attract foreign visitors. Transportation costs, especially air fares, in Africa are well above global norms, making the continent an expensive place to travel. This reduces both foreign tourism as well as intra-African and African domestic air travel, which place additional burdens on personal mobility within the continent. To fully realize the potential poverty alleviation effects from an expanded air transport and tourism industries, local communities must be involved by emphasising education and employment opportunities. Governments must play a role in encouraging the private sector to adopt poverty reduction strategies. Tourism and nature tourism are industries in which experiences within Africa have shown this type of cooperation to be beneficial.
Coverage	Africa.

Aviation and Liberalization Impacts on the Wider Economy

Title	**Effects of Enhanced Air Connectivity on the Kenyan Tourism Industry and Their Likely Welfare Implications**
Author(s)	Njoya, E., Semeyutin, A., & Hubbard, N.
Publication/Year	2020, *Tourism Management,* vol 78, 1-15
Description	Paper investigates the relationship between air connectivity, tourism benefits and welfare. Demonstrates avenues of tourism expansion and their welfare implications using both partial and general equilibrium models. Effects of air connectivity improvements are explored between Kenya, Italy, Germany, and Canada.
Methodology and Data	Paper employs the use of both a partial and general equilibrium model to understand the relationship between air connectivity and welfare gains. Outcomes examined include impacts of air connectivity on household income levels, real GDP levels, and overall household welfare
Key Findings	Results from the paper suggest that: • Increased tourism spending brought about by improved air connectivity can be expected to increase consumer welfare; • Air connectivity improvements between Kenya and Italy would generate a percentage change in Kenyan household welfare from 2%%-33%, real GDP levels from 6%-24%, and household income from 1%-15%; • Air connectivity improvements between Kenya and Canada would generate a percentage change in Kenyan household welfare from 10%-59%, GDP from 2%-11%, and household income from 1%-6%; • Air connectivity improvements between Kenya and Germany would generate a percentage change in Kenyan household welfare from 25%-95%, GDP from 4% -24%, and household income from 1%-6%; • Welfare and income effects are shown to be disproportional between rural and urban households in Kenya, where the latter is expected to experience larger benefits when compared to the former. Moreover, households in the top income decile are expected to receive the largest welfare gains; and • Policies that address air connectivity gaps in Kenya would benefit the tourism sector, which in turn would tickle down to the household level.
Coverage	Kenya.

Title	**Economic impacts of the ASEAN single aviation market: focus on Cambodia, Laos, Myanmar, The Philippines, and Vietnam**
Author(s)	Laplace, I., Lenoir, N., & Roucolle, C.
Publication/Year	2019, *Asia Pacific Business Review,* 25(5), 656-682
Description	Over the last several decades, the Association of South East Asian Nations (“ASEAN”) has decided to move towards a more liberalized air transport market through multilateral agreements. In this paper, the authors attempt to estimate the economic and socio-economic benefits of such agreements, focusing specifically on welfare implications.
Methodology and Data	An econometric model was developed to quantify the economic and socio-economic impacts of air transport liberalization for select ASEAN countries. The model was estimated based in observed data from 2004–2013, covering the Cambodia, Laos, Myanmar, the Philippines, and Vietnam aviation markets.

Key Findings	The results from the paper indicate that: • Liberalizing up to the 5th freedom right is expected to increase national GDP year-over-year from 1 % - 6%. The largest benefactor is the Philippines, while Cambodia is expected to benefit the least of all countries; • These impacts largely depend on tourism development expectations, and how large a contributor the sector is to each country general economy; • Regarding partner states involved in multilateral agreements, ASEAN airlines face possible competition distortions; and • Impacts of liberalization also depend highly on the socio-economic characteristics of the region.
Coverage	Cambodia, Vietnam, Philippines, Laos, Myanmar.

Title	**The Link Between Air Services Liberalization and Canadian Trade**
Author(s)	David Boileau and Mykyta Vesselovsky
Publication/Year	Global Affairs Canada, Government of Canada, 2013
Description	This paper aims to measure the link between liberalized air service agreements and Canadian trade. Looking at whether the effects of signing new ASAs is different than further liberalizing ASAs already in place, and how this effects trade flow of merchandise and services to/from Canada. Past research has found a positive relationship between liberalization and increased cargo and passenger traffic, among other benefits.
Methodology and Data	Quantitative analysis of the effects of liberalizing air service agreements (ASAs). The analysis uses data on total trade between Canada and its trade partners (annual data from 1998-2008) and regresses it against variables including GDP, distance, indicator variables and variables which represent the ASA between Canada and its trade partner. The ASA variables were created based on research on the bilateral agreements available and the World Trade Organization's QUASAR methodology, which gives a weighting to specific areas of an ASA (i.e., how liberal the capacity clause is). Regression analysis was done using a gravity model, using Ordinary Least Squares, Poisson Pseudo-Maximum likelihood, and a demeaned GDP estimator method. Regressions were run separating merchandise and services trade, as well as commercial services.
Key Findings	Results from the paper indicate that: • A new ASA leads to 53% more merchandise trade and at least double the value of services trade. • If an ASA is already in place, the results for merchandise trade do not find a significant effect of further liberalizing the existing ASA. There is a positive and significant effect of further liberalizing an ASA on services trade though, • There is a positive and significant relationship between both the presence of and further liberalization of an ASA on commercial services trade as well. Signing an ASA increases commercial services trade by a factor of 2.7, while further liberalization of an existing ASA increases commercial services trade by roughly 27% for each 5-point increase in the weighted ASA measure; and • The results show the movement of Canada towards signing more liberal ASAs is a positive choice.
Coverage	Canada

Title	**Aviation, Tourism and Poverty Relief in Kenya: A Dynamic Computable General Equilibrium Model**
Author(s)	Njoya, E.
Publication/Year	2016, *PhD Thesis*, 1-301
UN SDG of Interest	Poverty Reduction
Description	This paper explores the link between air service liberalization, increased tourism demand, and poverty reduction in Kenya.
Methodology and Data	This research uses a dynamic micro-simulation Computable General Equilibrium (CGE) model to explore the link between tourism expansion, as a result of improvements in air liberalization, and poverty reduction as reflected in the income distribution among household groups in Kenya. The CGE model comprises nineteen sectors, twenty household groups and five factors of production. The construction of the micro household module relies on datasets from the Kenya Integrated Household Budget Survey ("KIHBS") for the years 2005 and 2006. The KIHBS is based on a representative sample of 13,430 households.
Key Findings	Results from the paper indicate that: • Tourism growth and the resulting economic growth principally trickle down to the poor through increases in labour demand and income; • Poverty indices decline in the wake of the positive tourism shock, suggesting that tourism has the potential to reduce poverty; • In the case of Kenya for 2005/2006, tourism expenditures led to a decrease in the number of individuals below the poverty line by approximately .11%-.13% for urban households and .04%-.09% for rural households; • Tourism expenditures as a result of air liberalization also improve issues of wage inequality, where it was shown to shorten wage gaps amongst urban households by .53%-.61% and .25%-.42% for rural households; and • There are heterogenous effects, where air liberalization policies are shown to favour urban households over rural, in addition to high-skilled versus low-skilled labour.
Coverage	Kenya.

Title	**Air Access liberalization, market promotion and tourism development**
Author(s)	Seetanah, B., Sannasee, R., & Teeroovengadum, V.
Publication/Year	2017, *International Journal of Tourism Research,* 21(1), 76-86
Description	Paper assesses the impact of air access liberalization on tourism development for Mauritius and secondly goes on to analyse the dual impact of the interplay between air access liberalization and marketing promotion efforts. Using dynamic time series analysis, namely an Autoregressive Distributed Lag (ARDL) framework over the period 1970 to 2015, the results reveal that air access liberalization is an important element for tourism development. The findings also interestingly point to the positive and significant impact of the interplay between air access liberalization and marketing promotion efforts in attracting tourist.
Methodology and Data	Paper employs the use of dynamic time series analysis, specifically an Autoregressive Distributed Lag (ARDL) framework over the period 1970 to 2015.
Key Findings	The results from the paper indicate that: • Air access liberalization is an important element for tourism development; • There are significant impacts between air access liberalization and marketing promotion efforts in attracting tourist; and • The sensitivity of increased tourism as a result of great air access liberalization falls between 0.22% and 0.32%.
Coverage	Mauritius.

Title	**An Analysis of the tourism and wider economic impacts of price-reducing reforms in air transport services in Egypt**
Author(s)	Njoya, E.
Publication/Year	2020, *Research in Transportation Economics*, vol 79, 1-37
Description	The Egyptian air transport industry is subject to a range of restrictions and charges, which combine to reduce the country's air connectivity and competitiveness. This paper assesses the links between air transport policies and tourism and wider economic benefits.
Methodology and Data	An air transport-focused CGE model was developed to study the effects on the Egyptian economy of price-reducing reforms to air transport services.
Key Findings	Results from the paper indicate that: • Direct impacts of such reforms are negative for some agents; • The economy-wide benefits outweigh the costs incurred by the reforming sector; • Egypt would benefit from pursuing the reform of the air transport industry; • Depending on the scenario in question, results from the CGE model suggest that there would be a reduction of .8%-1.9% in air fares; • Depending on the scenario in question, results from the CGE model suggest that there would be an increase in domestic output between 0%-7.1%; • Depending on the scenario in question, results from the CGE model suggest that there would be an increase in exports between 1.5%-6.4%; and • Depending on the scenario in question, results from the CGE model suggest that there would be an increase in investment levels between 1.1%-4.2%;
Coverage	Egypt.

Title	**Open Skies: Estimating Travelers' Benefits from Free Trade in Airline Services**
Author(s)	Winston, C. and Yan, J.
Publication/Year	*2015, American Economic Journal: Economic Policy, 7(2) 370-414*
Description	The U.S. negotiation of open skies bilateral agreements has led to the deregulation of airline competition on international routes. However, a research gap exists concerning the potential benefits to the welfare of travellers should additional agreements be reached between the U.S. and other countries.
Methodology and Data	The data used includes monthly summaries of passenger travel during between 2005 and 2009. Data includes origin-destination pairs, average fares plus taxes for five fare classes, number of passengers, number of non-stop and connecting flights, and the associated carriers. Parameters for the resulting model are produced using the Generalized Method of Moments (GMM).
Key Findings	• Open sky agreements on U.S. international routes have generated at least US$ 4 billion in annual gains to travelers. • Travelers would gain an additional US$ 4 billion if the U.S. negotiated agreements with other countries that have significant international traffic. • Resulting increase in passenger demand and flights should increase employment in the U.S. airline industry, although competition on U.S. international routes may cause wages to drop.
Coverage	U.S. International Routes.

Title	**Airline Traffic and Urban Economic Development**
Author(s)	Jan K. Brueckner
Publication/Year	*Urban Studies,* Vol. 40 No.8, 1455-1469, July 2003
Description	This paper provides new evidence linking airline traffic and employment in U.S. metropolitan areas. There have been only a few research studies to date in this area. The author attempts to improve further on these prior studies, using empirical evidence on the link between airline traffic and economic development. It is noted that the level of airline traffic is assumed to effect metro-area employment in the same year rather than over subsequent years.
Methodology and Data	Econometric analysis was conducted to estimate the relationship between airline traffic and employment. Data from a sample of 91 U.S. metropolitan areas was used in the analysis. Analysis is controlled for reverse causality between employment and traffic.
Key Findings	This evidence confirms that good airline service is an important factor in urban economic development. A 10% increase in passenger enplanements will lead to an approximate 1% increase in employment in service-related industries. There is no effect, however, on manufacturing and other goods-related employment. Based on these findings, the author validates the claim that the expansion of Chicago O'Hare airport is a powerful economic development tool.
Coverage	United States.

Title	Airline Network Benefits
Author(s)	IATA
Publication/Year	Economic Briefing No. 3, 2006
Description	The purpose of the study was to analyse the wider economic benefits of air transportation. This was done through a survey of businesses from different countries and industries. The aim was to show evidence of wider economic benefits (economic development and growth).
Methodology and Data	Survey based research from 625 businesses across 5 different countries. Survey was focused on impact of air transportation on their industries. The businesses surveyed were from the following countries: China, Chile, United States, Czech Republic, and France.
Key Findings	• The survey found that 25% of their sales were dependent on good air transport links. This percentage rose to 40% for High Tech companies. • In regards to access to effective air transport links, 63% of firms stated that it was vital or very important to investment decisions, while a further 24% said it was somewhat important. • On average, 18% of firms reported that the lack of good air transport links had affected their past investment decisions, while 30% of Chinese firms reported that they had changed investment decisions because of constraints on air services.
Coverage	Select countries – global.

Title	**Measuring the Economic Rate of Return on Investment in Aviation**
Author(s)	Inter*VISTAS* Consulting Inc.
Publication/Year	2006
Description	Inter*VISTAS* Consulting Inc. was commissioned by the International Air Transport Association (IATA) to develop a detailed statistical analysis of the relationship between a country's connectivity to the global air transport network and its level of productivity. The analysis encompasses a wide range of 48 countries – including both developed and developing economies – and across a ten-year period, 1996 to 2005. The results are applied to specific investment examples to show the significant wider economic returns that can be created through the development of aviation infrastructure. The analysis shows that a positive relationship exists between productivity (in particular, labour productivity) and aviation connectivity (such as, economic importance of destinations, frequency of service, and number of onward connections available), wherein countries with higher levels of productivity have higher levels of connectivity on average. An econometric analysis verifies that the relationship between connectivity and productivity is significant. A 10% increase in national connectivity resulted in a 0.07% increase in national productivity. Furthermore, the estimated economic rate of return on aviation investments ranges from 16% to 59%. This indicates that substantial economic benefits are generated when aviation investment results in an increase in connectivity.
Methodology and Data	A detailed statistical analysis of the relationship between a country's connectivity to the global air transport network and its level of productivity is conducted, encompassing a wide range of 48 countries – including both developed and developing economies – and across a ten-year period, 1996 to 2005.
Key Findings	• A positive and significant relationship exists between productivity (in particular, labour productivity) and aviation connectivity (such as, economic importance of destinations, frequency of service, and number of onward connections available), wherein countries with higher levels of productivity have higher levels of connectivity on average. • A 10% increase in national connectivity resulted in a 0.07% increase in national productivity. The estimated economic rate of return on aviation investments ranges from 16% to 59%. • Thus, the increase in connectivity created by aviation investments generates substantial economic benefits.
Coverage	Global.

Title	**Analysis of the interaction between air transportation and economic activity: a worldwide perspective**
Author(s)	Ishutkina M.A. and Hasnman R.J.
Publication/Year	PhD thesis, Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, 2009
Description	This study analyses the interaction between air transportation and economic activity on a worldwide basis. The study uses a feedback model, literature reviews, aggregate data, and case study analyses. The authors concluded that a feedback relationship between air transport and economic activity exists. Air transportation provides employment and supports economic activities which are dependent on the availability of air transportation services. In turn, economic activity drives the demand for air transportation services
Methodology and Data	Using a feedback model, aggregate and individual country-level data was analysed in terms of the relationship between air transportation passengers and GDP. The data was for 139 countries over a time period of 30 years (1975 and 2005)
Key Findings	• In the majority of the countries with positive growth rates, significant changes were observed. • For the air transportation supply side, changes in the regulatory framework and infrastructure capability, and on the air transportation demand side, changes such as economic liberalization reforms and supporting infrastructure investment led to positive growth rates.
Coverage	Global.

Title	The Catalytic Effect of the Accessibility to Air Cargo Services
Author(s)	Cech, P.
Publication/Year	TIACA Graduate Research Paper Competition (2004)
Methodology	The author used a cross-section statistical comparison method to investigate how air cargo services affect local economies, including: 1) the attractiveness of an area for the creation of new jobs and retention of existing jobs (measured by employment), 2) the impact on economic growth (measured by earnings) and 3) the impact on added value created by employees and subsequent improvement of efficiency and competitiveness (measured by earnings per employee). The author grouped 125 U.S. counties with similar population sizes into seven groups depending on the number of airports to which they were connected, the volume of cargo handled and the frequency of flight service.
Key Findings	The author concluded that there is a positive catalytic effect related to accessibility to air cargo services. More specifically, the catalytic effect can lead to an increase in the number of jobs and increased employee earnings. The transportation sector is most influenced by the accessibility of air cargo services. However, construction, retail and wholesale trade industries were also positively influenced.
Coverage	United States.

Title	Business Travel as an Input to International Trade
Author(s)	Poole, J.
Publication/Year	UC Santa Cruz Working Paper (2010)
Methodology	Econometric analysis of U.S. trade and travel data from 1993 to 2013.
Key Findings	A 10% increase in business travel to the U.S. by non-residents led to a 1.2% increase in the volume of exports from the U.S. and 0.3% increase in export margins. The effect was strongest for travel from non-English speaking countries, suggesting that business travel help overcome language barriers in trade relationships.
Coverage	United States.

Title	Econometric Analysis to Develop Evidence on the Links Between Aviation and the Economy
Author(s)	PWC
Publication/Year	Report for the UK Airports Commission, December 2013
Methodology	PWC examined the relationship between the UK's international air seat capacity and international trade. Controlling for other factors affecting trade, the analysis found that increases in seat capacity were associated with increases in both the export and import of goods and of services.
Key Findings	A 10% increase in seat capacity increased the UK's goods exports by 3.3% and its goods imports by 1.7%; the same seat capacity increase was associated with a 6.6% increase in service imports and a 2.5% increase in service exports.
Coverage	United Kingdom.

Title	Getting There Fast: Globalization, Intercontinental Flights and Location of Headquarters
Author(s)	Bel, G. and Fageda, X.
Publication/Year	Journal of Economic Geography, Vol. 8, No. 4, 2008.
Methodology	2008 analysed the relationship between international air service and the location of large firm's headquarters across major European urban areas.
Key Findings	The research found that the supply of non-stop intercontinental flights was a significant factor in determining the location of headquarters (along with other economic, business, labour, and tax factors). Empirical research indicated that a 10% increase in supply of intercontinental air service was associated with a 4% increase in the number of large firm headquarters located in the corresponding urban area.
Coverage	Europe.

Title	Air Passenger Linkages and Employment Growth in U.S. Metropolitan Areas
Author(s)	Irwin, M. and Kasarda, J.
Publication/Year	American Sociological Review, Vol. 56, No. 4, August 1991.
Methodology	Examined the relationship between the structure of airline networks and employment growth at 104 metropolitan areas in the United States using data for a 30-year period.
Key Findings	Expansion of the airline network serving a region had a significant positive impact on employment in that region, particularly in service sector employment. In addition, the analysis found changes in the airline network position was a cause rather than a consequence of this employment growth. The paper concludes that the reorganisation of the airline network has been a critical factor transforming and integrating the spatial economy of the U.S.
Coverage	United States.

Title	Airline Traffic and Urban Economic Development
Author(s)	Brueckner, J.
Publication/Year	Urban Studies, Vol. 40, No. 8, 1455–1469, July 2003
Methodology	Examined the impact of air service on employment in the U.S. The author regressed employment in 94 metropolitan areas in the U.S. against a number of factors including measures of air service.
Key Findings	The analysis found that a 10 percent increase in departing passenger in a metropolitan area leads to an approximately 1 percent increase in employment in service-related industries. Frequent service to a variety of destinations, reflected in the high levels of departing passengers was found to both attract new firms to the metro area and stimulate employment at established enterprises. However, the analysis found that there was no impact on manufacturing and other goods-related employment, suggesting that air travel is less important to these industries than it is to service-related industries. The analysis included instruments to control for reverse causality between employment and traffic.
Coverage	United States.

Title	High-technology employment and hub airports
Author(s)	Button, K., Lall, S., Stough, R. and Trice, M.
Publication/Year	Journal of Air Transport Management, Vol. 5, Issue 1, January 1999.
Methodology	The authors examined empirically the link between high-tech employment in a region and whether the region is served by a hub airport. Using data from 321 U.S. metropolitan areas in 1994, the authors regressed high-tech employment against a number of controlling factors including a dummy indicating that the region was served by a hub airport.
Key Findings	The analysis found that the presence of a hub airport increased high-tech employment by an average of 12,000 jobs in a region. An additional case study of medium sized hub and non-hub cities also determined that the effect of a city being a hub, irrespective of the total volume of airline traffic passing through it, attracts more high-technology employment than a comparable non-hub city. Finally, the authors addressed the issue of causality (i.e. does the presence of a hub airport lead to more employment or does higher employment in a region increase the likelihood of a hub airport being developed?). Using the Granger causality test, the authors found that there was statistically significant evidence that the presence of a hub airport caused an increase in high-tech employment, rather than airlines selecting cities as hubs simply because they are already economically dynamic.
Coverage	United States.

Appendix E: Backgrounder on Bilateral Air Service Agreements

Across the world, international air transportation is governed by a network of bilateral air service agreements (BASAs) which dictate air transportation rights between two nations. These BASAs are generally of treaty status and are enforceable in international law (although some operate under, or are modified by, a less formal Memorandum of Understanding arrangement). The framework for these bilateral air service agreements was established towards the end of World War II in 1944, when 52 countries came together at the International Civil Aviation Conference held in Chicago, USA, which established the *Chicago Convention*.[179]

Bilateral air services agreements/arrangements contain provisions on:

- *Traffic rights* - the routes airlines can fly, including cities that can be served within, between, and beyond the countries. These rights include the so called "**Freedoms of the Air**" - commercial aviation rights granting a country's airlines the privilege to enter and land in another country's airspace and to carry passengers and cargo. A summary of the freedoms of the air are provided in the box overleaf.
- *Capacity* - the number of flights or seats that can be operated, or passengers that can be carried between the countries.
- *Airline designation* - the number of airlines the countries can nominate to operate services and the ownership criteria airlines must meet to be designated under the bilateral agreement. This clause sometimes includes foreign ownership restrictions.
- *Tariffs or fares* - some agreements require airlines to submit ticket prices to aeronautical authorities for approval.
- *Named routes* or airports that can be used for air service.
- Many other clauses addressing competition policy, safety and security.

Historically, many of the BASAs have been fairly restrictive. One of the earliest agreements was the "Bermuda I" agreement between the United States and the United Kingdom signed in 1946. This BASA specified limits on pricing, capacity, designated airlines, and routes operated. This restrictive agreement has acted as a template for a great number of subsequent BASAs between various countries.[180] As a result, the development of international air service has been as much a function of government policy as it has been a function of commercial considerations.

[179] The Chicago Convention framework clearly distinguishes between international and domestic services. Domestic services are considered strictly a matter for the respective national government.

[180] Bermuda I was replaced by a slightly less restrictive Bermuda II agreement in 1977. Bermuda II was then replaced by the U.S.-EU Open skies agreement which came into force in 2008. With the UK formally leaving the EU in January 2020, the UK and U.S. have signed a new open skies agreement in November 2020.

Freedoms of the Air

When countries negotiate BASAs, they grant traffic rights to airlines that are referred to as "freedoms of the air." These rights are:

First Freedom. The right to fly over another nation's territory without landing.

Second Freedom. The right to land in a foreign country for non-traffic reasons, such as maintenance or refuelling, without picking up or setting down revenue traffic.

Third Freedom. The right to carry people (or cargo) from the airline's own country to the other country.

Fourth Freedom. The right to carry people (or cargo) from the other country to the airline's own country.

Fifth Freedom. The right to carry traffic between two foreign countries with services starting or ending in the airline's own country (also known as beyond rights).

Sixth Freedom. The right to carry traffic between two countries via the airline's own country.

Seventh Freedom. The right to carry traffic between two foreign countries on a service that does not involve the airline's own country.

Eighth Freedom. The right to carry traffic between two points within a foreign country (i.e., domestic traffic) as an extension of a service starting or ending in the airline's own country (also known as tag-on or fill-up cabotage).

Ninth Freedom. The right to carry traffic between two points within a foreign country with no requirement to start or end the service in the airline's own country (also known as pure or standalone cabotage).

Virtually all BASAs will allow freedoms one to four. However, they differ in their treatment of 5th freedom rights — the ability of a carrier from Country A to carry traffic from Country B to a third country as an extension of a service between Countries A and B. Some BASAs do not permit this type of traffic while others do, or some variant of it.

Sixth freedom clauses rarely appear in the BASAs (it is essentially an airline using the 3rd and 4th freedom rights of two separate agreements).

Freedoms seven to nine are less frequently granted within most BASAs but have been permitted in some multilateral agreements.

Liberalization of International Air Services

Starting the 1970s, it began to be recognised that these restrictive BASAs were holding back the aviation sector and harming other sectors of the economy. BASAs were unresponsive to market demand, as they had to be changed through diplomatic negotiation, and they did not serve the interests of passengers, shippers and the wider economy (tourism, trade, etc.).

Recognising these shortcomings and the potential economic benefits of a more liberal aviation sector, many governments have moved to deregulate various aspects of aviation. This has included the privatisation of airlines and airports, deregulation of domestic markets and liberalization of BASAs.

Governments started to pursue "open skies" BASAs that allowed the carriers of the two nations to operate any route between the two countries without restrictions on capacity, frequency, or price. Some also allowed carriers to operate "tag-on" services to third countries (5th freedom rights) and a few removed foreign ownership restrictions.

The first major open skies agreement was between the United States and the Netherlands in 1992. The term “open skies” is somewhat loosely defined within the industry, but the U.S. government defines it as allowing the carriers of the two nations to operate any route between the two countries without restrictions on capacity, frequency, or price and to have the right to operate 5th and 6th freedom services. It also allows cooperative marketing arrangements such as code-sharing and liberal all-cargo operations (e.g., seventh freedom operations). The U.S. definition of “open skies” does not include 7th freedom passenger services, cabotage, or liberalization of ownership and control restrictions, although other definitions of “open skies” do (e.g., the European Union considers cabotage to be part of open skies). As of the end of 2015, the U.S. has signed 118 open skies agreements (Source: U.S. State Department).

More recently, there has been movement towards multilateral agreements between groups of countries. The most notable of these has been the European single aviation market covering the European Union (EU). Between 1987 and 1993, the EU introduced three packages of reforms that almost fully deregulated the EU air market. Carriers from within the EU are now free to operate any route within the EU without restriction on price or capacity, including cabotage (i.e., domestic air travel within a member state), which has been permitted since 1997. In addition, all restrictions on airline ownership have been removed for EU citizens (e.g., an air carrier operating from Italy can be 100% owned by investors from the UK; however, investment by non-EU citizens is restricted to 49%). The EU is also negotiating open skies bilateral agreements as a block with other countries, for example the EU-U.S. Open Skies Agreement in 2008.

Other multilateral agreements include the ASEAN agreement in Asia or the MALIAT agreement covering Pacific countries and the Yamoussoukro Decision in Africa.