An Analysis of Air Transport Liberalization, Tourism Development, and Visa Openness in Africa

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How to cite this article: Francis Malinga, Arvind Kumar Jain, Hiranmoy Roy (2024). An Analysis of Air Transport Liberalization, Tourism Development, and Visa Openness in Africa, Library Progress International, 44(3), 6243-6255.

Abstract

This study analyzed the liberalization of air travel, tourism development, and visas openness in Africa. The Umbrella Literature Review methodology, which provides a thorough review of the current state of knowledge on a given issue, was applied in this study. Umbrella Literature Review entails a thorough evaluation of previous research studies. The study additionally employed gravity models to demonstrate the relationships between the liberalization of air travel, the expansion of tourism, and visa openness in Africa in order to meet the primary goals of African Union Agenda 2063. The results of the study demonstrate that the main objective of liberalizing air travel is to create a dynamic and competitive market through boosting trade, enabling connectivity, and boosting tourism, for the economic growth of Africa. The ease and volume of international tourism were found to be significantly influenced by visa regulations, which are closely related to international air travel. A number of significant research gaps regarding Africa's aviation industry and tourism development were also identified in the literature. In order to better understand how visa liberalization influences tourism flows, the study advises policy makers to include visa friendly policies into their national policies and develop strategies that maximize the benefits of air transport liberalization, tourist development as well as visa access while guaranteeing safety and security to tourists and tourism destinations.

Keywords: Air Transport Liberalization, Africa Visa Openness, Tourism Development, Regional Integration.

1. Introduction

Worldwide air travel is intricately linked to visa requirements, which play a critical role in determining the ease and volume of international tourism. Historically, visa-free travel has been a rare privilege, limited to select groups. However, Gowreesunkar (2019) argues that in order to accomplish major goals like Africa's Union Agenda 2063, which aims to advance sustainable growth, enhance livelihoods, and generate opportunities throughout the continent, visa accessibility has become crucial as international tourism grows. The aim is to enable efficient and affordable travel for the maximum number of people, boosting business activity and contributing to the continent's economic vitality. For tourism to thrive and stimulate national economies, visa regulations must be liberalized. The tourism sector plays a transformative role in improving lives by driving development, reducing poverty, creating employment, and fostering economic growth. In 2024, global tourism continues to be a powerful economic driver. The latest data from Statista (2024) reveals that international tourism generated over US\$1.9 trillion in revenue in 2023. According to UNWTO, tourist arrivals reached 1.46 billion globally in 2023, reflecting a steady recovery from the pandemic, with an increase of 4.1% compared to 2022.

Tourism's importance is reflected in its job creation potential. According to the World Economic Forum (2017), the sector was responsible for 292 million jobs worldwide in 2016, representing one in ten jobs globally, and contributed US\$7.6 trillion to the global economy, accounting for 10.2% of global GDP. Moreover, between 2017 and 2018, international tourist arrivals grew by 6%, with an additional 74 million visitors, bringing the total to 1.403 billion. This upward trend underscores the urgent need to ease visa restrictions to further unlock the potential of the global tourism sector. Liberalizing visa policies can catalyze tourism growth, empowering national economies and strengthening global economic progress. Despite this growth, global tourism revenue has yet to return to pre-COVID-19 levels. However, projections indicate that the industry could reach a value of approximately two trillion US dollars by 2024. This study adopts the Umbrella Literature Review methodology to evaluate the impacts of air transport liberalization, tourism

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development, and visa Openness in Africa, highlighting their critical role in promoting freedom of movement and economic integration across the continent. The rest of this paper is structured as follows:

Section 2: Objectives. Section 3: Research Methodology. Section 4: Literature Review. Section 5: Research Gap. Section 6. Theories and Models that explain Intra-African Tourism, Air Transport Liberalization and Visa Openness. Section 7: Discussion. Section 8: Conclusion. Section 9: Way forward

2. Objectives

The liberalization of air transport services has the potential to improve competitiveness, boost connectivity, open up new regional and international air routes, and hasten economic growth. In addition to meeting the objectives of the African Union Agenda 2063 and the UN Sustainable Development Goals, this partnership between air travel, tourism, and visa accessibility can help promote sustainable development in Africa. Developing friendly visa laws and maximizing connectivity are essential for the growth of air travel and tourism in African nations. Thus, the objective of this research is to find patterns, inconsistencies, and consensus in the literature, especially in areas like travel, tourism and visa access. The study also seeks to achieve the goals of African Union Agenda 2063 by highlighting the links among liberalization of air travel, expansion of tourism, and openness to visas in Africa.

3. Research Methodology

This study employs the Umbrella Literature Review methodology, which entails a thorough examination of existing studies to provide a comprehensive picture of the current state of knowledge on a specific topic. As described by Choi and Kang (2022), umbrella reviews provide a thorough and rigorous synthesis of existing information, making them useful for decision-makers looking for the best data. Given the complexities and interdependence of air transport liberalization, tourism development, and visa access, this methodology is especially appropriate for this study. The Umbrella Literature Review will help you grasp the interrelated themes of air transport liberalization, tourism development, and visa access. The study also uses statistical models to examine the impact of air transport liberalization on tourism and visa openness in Africa. It aims to identify trends, contradictions, and consensus within the literature, particularly in fields like tourism and air transport.

4. Literature Review

4.1 Liberalizing the Aviation Sector in Africa

The liberalization of Africa's aviation sector, initiated through the Yamoussoukro Decision, has been marked by significant delays, hindering the progress that was anticipated when the decision was first adopted in 1999 (Abate, 2016, 2018). This decision, aimed at fostering competition, reducing airfares, and improving connectivity across the continent, has faced numerous setbacks over the years. The delays in its implementation are primarily attributed to political resistance from various African governments, who are reluctant to relinquish control over their national airspaces due to concerns over sovereignty and the potential impact on their national airlines. Additionally, infrastructure challenges have compounded these issues, as many airports across Africa lack the necessary facilities to handle increased air traffic, and air traffic management systems remain underdeveloped. Moreover, national airlines, often state-owned or heavily subsidized, have adopted a protective stance against liberalization, fearing that increased competition could erode their market share and financial stability. This protective stance has led to the persistence of restrictive policies that prevent the entry of new competitors, ultimately stalling the anticipated benefits of liberalization, such as lower airfares and enhanced connectivity (Pirie, 2020).

In response to these challenges, the African Union (AU) adopted the Single African Air Transport Market (SAATM) in 2015 as a flagship project under its Agenda 2063. SAATM was designed to overcome the barriers that had impeded the implementation of the Yamoussoukro Decision by creating a unified air transport market across Africa. This ambitious initiative seeks to liberalize market access, allowing airlines to operate freely within the continent without being constrained by restrictive bilateral agreements. By permitting the unrestricted exercise of traffic rights, particularly the fifth freedom rights, and eliminating ownership restrictions that currently limit foreign investment, SAATM aims to stimulate competition, reduce airfares, and improve service quality across the African aviation sector (Eboigbe & Anazodo, 2018). The overarching goal is to foster a competitive and dynamic air transport market that can contribute significantly to Africa's economic development by enhancing connectivity, facilitating trade, and promoting tourism.

Despite these ambitious goals, the implementation of SAATM has been uneven, with only some African countries fully committing to the process. The uneven commitment among African nations is partly due to varying levels of political will and capacity to implement the necessary reforms. In many cases, governments remain cautious about fully liberalizing their markets due to concerns over the potential impact on their national airlines and a perceived loss of control over their airspaces. These concerns have led to the persistence of restrictive policies that limit market access, thereby preventing the full realization of SAATM's benefits. The reluctance to fully embrace SAATM has resulted in a fragmented aviation market, where some regions have made significant progress, while others continue to face high airfares and limited connectivity, undermining the overall objectives of the initiative (IATA Consulting/InterVISTAS, 2021)

The East African Community, which includes nations like Kenya, Uganda, Tanzania, Rwanda, and Burundi among others, provides an illustrative example of this uneven implementation. However, the synthesis of evidence consistently showed that BASA liberalization led to increased frequencies, routes, and connectivity, increased traffic, and supported economic growth after the InterVISTAS Consulting (2016) study on the costs and benefits of Open skies in the East

African Community. While the EAC has made strides in standardizing bilateral air service agreements as part of its efforts to harmonize aviation policies, significant challenges remain. Specifically, the implementation of fifth freedom traffic rights, which are crucial for enhancing connectivity within the region, has been inconsistent. Some EAC member states continue to impose restrictions on these rights, driven by concerns over the impact on their national carriers. These restrictions prevent airlines from fully capitalizing on the benefits of liberalization, such as increased efficiency and reduced travel times, ultimately limiting the positive outcomes that a fully integrated regional aviation market could offer (Mwesigye, Mike, & Kemeirembe, 2020).

The ongoing tension between the potential economic benefits of liberalization and the desire for political control continues to hinder the full realization of a liberalized aviation sector in Africa (Abate, 2016; Njoya & Christidis, 2017). While the economic advantages of liberalization are clear, ranging from increased investment and job creation to enhanced connectivity and lower airfares, many African governments remain wary of ceding control over their airspace. This caution is often driven by fears that foreign airlines could dominate the market, undermining the viability of national carriers and, by extension, national sovereignty. As a result, many governments prioritize political control over economic liberalization, implementing policies that restrict market access and limit competition. This tension between economic opportunity and political control has created a fragmented and unevenly liberalized aviation sector in Africa, preventing the continent from fully capitalizing on the potential benefits of a more open and competitive air transport market (Button, 2020).

4.2 Air Transport Liberalization and International Tourism

The liberalization of air transport is intricately linked to the expansion of international tourism, serving as a critical catalyst for broadening global travel opportunities. Air transport liberalization involves the dismantling of government-imposed restrictions on market access, which traditionally limited airlines' ability to operate freely across international borders. This regulatory shift not only spurs competition among air carriers but also facilitates the development of new routes and the introduction of more frequent services. These developments are particularly beneficial to the tourism sector, as they enhance connectivity between destinations, making international travel more accessible and affordable for a larger number of people. According to Zajac (2016), the entry of new air carriers into previously underserved markets significantly increases connectivity, thus lowering the barriers for international tourists. The International Air Transport Association (IATA) supports this view, reporting that liberalized air transport markets have experienced an average annual increase in passenger traffic of 12%, a growth rate that substantially boosts tourism flows and contributes to the overall dynamism of the global tourism industry (IATA, 2017).

By removing restrictions on market access and fostering competition, air transport liberalization has effectively driven down the cost of air travel. Lower airfares are a direct consequence of increased competition, and they play a crucial role in making travel more accessible to a broader segment of the population. This expansion of the potential tourist base is particularly notable with the entry of low-cost carriers (LCCs) into liberalized markets. LCCs typically offer significantly lower prices compared to traditional carriers, making air travel affordable for consumers who might otherwise be priced out of the market. The European Union's experience with the Single Aviation Market is a prime example of this phenomenon. The liberalization of air transport within the EU led to a dramatic decrease in airfares, which in turn resulted in a substantial increase in the number of tourists traveling within Europe and to European destinations (Dobruszkes, 2009). This trend is not confined to Europe; similar patterns have been observed in other regions, including Africa. In Africa, countries like Morocco and South Africa, which have embraced air transport liberalization, have witnessed a surge in tourist arrivals, underscoring the positive impact of reduced airfares on tourism (Ssamula, 2012).

The liberalization of the aviation industry has been particularly instrumental in driving the growth of international tourism in Africa, a region with vast but largely untapped tourism potential. Zajac (2016) highlights how initiatives like the Yamoussoukro Decision and the Single African Air Transport Market (SAATM) have played a pivotal role in opening up African skies, leading to the establishment of new air routes that connect the continent's diverse tourist destinations to the global market. The implementation of SAATM in 2018, for instance, facilitated the launch of several new routes by African carriers, significantly enhancing the continent's connectivity. This increased connectivity is crucial for promoting Africa as a viable tourist destination, as it offers easier access to the continent's rich cultural heritage, natural attractions, and unique experiences. The ability to travel more easily between African countries and from international destinations to Africa has not only attracted more international tourists but also contributed to the economic development of the continent by stimulating investment in tourism infrastructure and creating jobs (African Union, 2018).

The growth of aviation tourism in Africa faces several significant challenges, despite the continent's efforts to liberalize air transport. One of the most prominent barriers to tourism expansion is the prevalence of stringent visa policies. While air transport liberalization aims to increase accessibility and connectivity, many African countries continue to maintain restrictive visa requirements that dissuade potential tourists from visiting. These policies create additional hurdles by increasing the cost and complexity of travel, undermining the positive effects of air transport liberalization. The African Development Bank (AfDB) highlights that only 24% of African countries offer visas on arrival to African travelers, with even fewer extending this facilitation to non-African tourists (AfDB, 2023). As a result, prospective visitors must navigate cumbersome application processes and high fees, which can discourage them from choosing African destinations. Thus, restrictive visa policies remain a critical impediment to realizing the full potential of aviation tourism on the continent.

Security concerns also play a significant role in impeding the growth of tourism in Africa. The threat of terrorist attacks in key tourist destinations has had a profound impact on visitor numbers, as tourists are increasingly cautious about traveling to regions perceived as unsafe. Several African countries rank highly on the Global Terrorism Index (GTI), with terrorism directly affecting tourism by deterring visitors (Institute for Economics & Peace, 2023). High-profile terrorist incidents, such as the 2013 Westgate shopping mall attack in Kenya and the 2015 Bardo Museum attack in Tunisia, have caused lasting damage to the tourism industries in these countries. Despite efforts to rebuild their reputations and restore safety, these attacks have left a legacy of fear that continues to discourage travelers. Consequently, even with air transport liberalization, African nations struggle to leverage its benefits as security concerns exacerbate the challenges faced by the tourism sector. Tourists often prioritize safety when selecting travel destinations, and these security issues have tarnished the image of some African countries as viable tourism hubs.

To fully benefit from air transport liberalization, African countries must create a secure and welcoming tourist environment by revising visa policies, streamlining processes, offering visas on arrival, and lowering fees. However, investing in security infrastructure and crisis management systems is also crucial to mitigate potential threats. Enhancing security cooperation between African countries, including intelligence sharing and coordinated responses to terrorism, is vital for fostering a safer environment that will encourage tourism growth (Glen, 2020). In addition to practical security measures. African nations can benefit from marketing campaigns that aim to restore tourists' confidence in the continent's safety and security. These campaigns should emphasize improvements in security protocols, highlight safe tourist destinations, and showcase Africa's unique attractions. By addressing both visa and security challenges, Africa can better position itself to attract international tourists and maximize the benefits of air transport liberalization. By addressing these issues, African countries can not only boost travel demand but also elevate their status as leading travel destinations on the global stage. The potential for growth in Africa's tourism sector is immense, with the continent's diverse landscapes, rich cultural heritage, and unique wildlife offering unparalleled experiences for international travelers. However, realizing this potential requires a concerted effort to overcome the challenges currently hindering the sector's development. As African countries continue to liberalize their air transport markets, it is essential that they also prioritize policies and practices that enhance the overall safety, accessibility, and attractiveness of their tourism offerings.

4.3 The Role of Visa Access in facilitating tourism development

Visa access significantly influences a region's tourism industry's competitiveness, as the ease of obtaining a visa, including cost, time, and procedural simplicity, directly influences a tourist's decision to visit a destination, especially in a globalized world with diverse travel choices. The World Travel & Tourism Council (WTTC) highlights that visa facilitation can lead to a significant increase in tourist arrivals, with an estimated 5% to 25% rise in countries that have simplified their visa processes (WTTC, 2016). Therefore, regions that implement user-friendly visa policies tend to attract more international tourists, which in turn boosts their tourism industry. Visa policy is crucial for a destination's appeal and attracts tourists. High fees, lengthy processing times, and complex procedures can deter potential visitors. Destinations with visa-on-arrival or e-visa facilities often see increased tourist numbers, highlighting the importance of visa policy in enhancing a region's competitiveness in the global tourism market (UNWTO, 2015).

Lubbe & Kruger (2012) highlight the importance of open visa policies in enhancing a region's attractiveness to international tourists. Their research emphasizes that countries with more liberal visa regimes, such as those offering visa-free entry or visas on arrival, are perceived as more accessible and welcoming, which enhances their appeal to potential tourists. This is particularly relevant in the context of Africa, where many countries have historically maintained restrictive visa policies. The African Development Bank (AfDB) supports this view, noting that visa openness is directly linked to increased tourist arrivals, as it lowers the cost and complexity of travel (AfDB, 2023). Ferreira (2004) notes that tourism has long been viewed as a solution to Africa's economic challenges, offering a pathway to sustainable development, poverty reduction, and economic diversification. However, the continent's potential as a leading tourist destination remains underutilized due to restrictive visa policies that hinder the free movement of tourists. These policies not only reduce the number of potential visitors but also diminish Africa's competitiveness compared to other regions with more open visa regimes. The World Bank (2018) echoes this concern, stating that visa restrictions in Africa are among the most stringent globally, which acts as a significant barrier to the continent's tourism development.

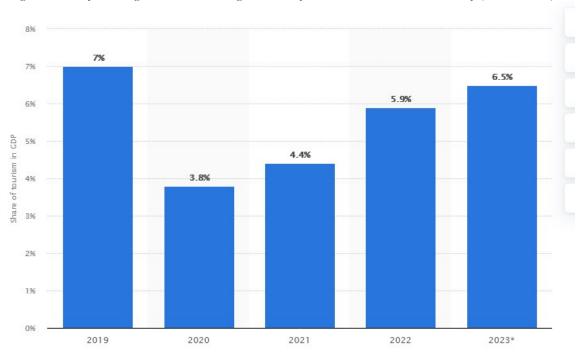


Figure: 1. The percentage of Africa's GDP generated by the travel and tourism industry (2019 to 2023)

Source: Statistica, 2024

Restrictive visa policies continue to hinder the continent's ability to fully realize its tourism potential. These policies often include high visa fees, cumbersome application processes, and long waiting periods, all of which deter international tourists. The African Union's *Visa Openness Report (2023)* reveals that while some African countries have made progress in liberalizing their visa regimes, the majority still impose significant restrictions that limit tourist arrivals (Visa Openness Report, 2023). This is particularly problematic in a region where tourism is seen as a critical engine of economic growth and development. African countries must adopt liberal visa policies to boost tourism development, including reduced fees, simplified application processes, and expanded options like visa-on-arrival or e-visa systems, which are crucial for increasing the continent's global tourism market share and economic growth.

A notable example is Rwanda's visa policy reforms, which have had a transformative impact on the country's tourism sector. Rwanda introduced a visa-on-arrival policy for all nationalities as part of its broader efforts to make travel more accessible. Since the implementation of these reforms, Rwanda has experienced a significant increase in tourist arrivals. According to the Rwanda Development Board (2020), the surge in tourism has played a pivotal role in stimulating the country's economic growth, contributing to both job creation and foreign exchange earnings (Kalulu et al., 2020).

Rwanda's success in visa liberalization demonstrates the potential benefits of such policies for other African nations, enhancing their tourism sectors, local development, and global competitiveness. Expanding visa-on-arrival and e-visa systems would lower entry barriers, boost visitor numbers, and promote economic prosperity.

4.4 Africa Visa Openness

Visa access is a crucial factor in determining the competitiveness of a region's tourism industry, as it directly influences a tourist's decision to visit a particular destination. The ease with which a tourist can obtain a visa, whether in terms of cost, time, or procedural simplicity, can significantly affect their choice. Research consistently shows that countries with more liberal visa policies tend to attract a higher number of international tourists. For example, a report by the United Nations World Tourism Organization (UNWTO) indicated that countries that adopted visa facilitation policies experienced an increase in tourist arrivals by an average of 5% to 25% after implementing such changes (UNWTO, 2016). These findings underscore the importance of visa policies in shaping tourism flows. Regions that implement open and user-friendly visa policies can thus expect to see a boost in their tourism industry, as these policies make the destination more accessible and attractive to international travelers (Lubbe & Kruger, 2012). Conversely, restrictive visa policies serve as barriers that discourage potential tourists, thereby limiting the flow of visitors and the economic benefits that tourism could bring.

The significance of open visa policies in enhancing a region's attractiveness to international tourists is well-documented. Studies have consistently shown that when visa policies are liberalized, the number of international tourists increases, bringing with it substantial economic benefits (Lubbe & Kruger, 2012). However, despite the clear advantages, there is a noticeable gap in research specifically focusing on the impact of Africa's visa policies on the development of its tourism sector. This gap is particularly concerning given the continent's heavy reliance on tourism as a key driver of economic growth. In 2019, Africa attracted 70 million international tourists, which contributed approximately USD 40 billion to the continent's GDP (World Travel & Tourism Council, 2019). These figures highlight the significant role that tourism plays in Africa's economy. However, the continent's ability to further capitalize on its tourism potential is constrained by restrictive visa regimes. As Ferreira (2004) notes, tourism has long been viewed as a potential solution to Africa's economic challenges, offering opportunities for job creation, foreign exchange earnings, and infrastructure development. Yet, the full realization of these opportunities is hampered by the visa barriers that persist across many African countries. Restrictive visa policies in Africa continue to undermine the continent's ability to fully capitalize on its tourism potential. These policies often involve cumbersome application processes, high fees, and long wait times, all of which serve as significant deterrents to international tourists considering Africa as a travel destination (Ferreira, 2004). The economic repercussions of these restrictions are considerable. For instance, the African Development Bank (AfDB) estimated that Africa loses out on approximately USD 10 billion annually due to restrictive visa policies (AfDB, 2018). This substantial loss underscores the missed economic opportunities that could be captured if visa regimes were more liberalized. Although there have been some improvements in visa facilitation across Africa, many countries still maintain restrictive policies that hinder tourism growth. The Visa Openness Report (2023) highlights this ongoing issue, noting that despite progress, restrictive visa policies continue to limit Africa's competitiveness in the global tourism market (Visa Openness Report, 2023). These limitations not only restrict the continent's ability to attract international tourists but also impede its capacity to compete with other global tourist destinations that offer more liberal visa regimes.

For African countries to foster tourism development and reap the associated economic benefits, there is a pressing need to adopt more liberal visa policies. Such policies would facilitate easier access for international visitors, making the continent more attractive to global tourists. This could involve measures such as implementing visa-on-arrival schemes, reducing visa fees, or even offering visa waivers for certain countries. By lowering these barriers, African nations could significantly enhance their tourism sectors, driving economic growth and improving their global competitiveness in the tourism industry.

5. Research Gap

The existing literature on Africa's aviation sector and tourism development reveals several key research gaps that need addressing.

One prominent gap, the identification gap is the effectiveness of the Yamoussoukro Decision and the Single African Air Transport Market (SAATM). Although there is a broad discussion on these policies, empirical evidence on their specific outcomes and effectiveness across different African regions is scarce (Pirie, 2020; Eboigbe & Anazodo, 2018). Detailed case studies and quantitative analyses are needed to assess how these policies have been implemented and their real-world impacts on competition, connectivity, and economic growth in various African countries. Furthermore, while the literature provides a general overview of the aviation sector, it lacks specific case studies and detailed comparisons between regions within Africa, such as East Africa versus West Africa (Mwesigye, Mike, & Kemeirembe, 2020; Ssamula, 2012). Research into how regional policies and local contexts influence the success of aviation liberalization and visa openness would provide a more nuanced understanding. Despite the recognition of tourism as a key driver of economic growth, there is limited research on the impact of Africa's visa policies on the development of the tourism sector. This gap in the literature is surprising given the continent's heavy reliance on tourism for economic development. Tourism is a significant source of foreign exchange, employment, and investment in many African countries. According to the World Travel & Tourism Council (WTTC), tourism contributed USD 40 billion to Africa's GDP in 2019, accounting for 7.1% of the continent's total GDP and supporting millions of jobs (WTTC, 2019). However, restrictive visa policies continue to limit the full realization of this potential by making it more difficult for international tourists to visit Africa

Conceptually, there is also a need for more in-depth analysis of the interplay between visa policies and air transport liberalization. Although some discussion exists on how these factors interact, the combined effects of visa policies and air transport liberalization on tourism development are not fully explored (Zajac, 2016; IATA, 2017). Understanding how improvements in one area might mitigate deficiencies in the other remains underexplored. Additionally, security concerns, which are recognized as barriers to tourism, are not thoroughly analyzed in the context of their interaction with aviation and visa policies (Glen, 2020; AfDB, 2023). A detailed investigation into how security issues impact tourist perceptions and intersect with visa and aviation policies is necessary.

In terms of policy, there is a lack of detailed analysis on the impact of specific visa regimes, such as visa-on-arrival versus e-visa, on tourist arrivals and economic growth in different African countries (WTTC, 2016; Lubbe & Kruger, 2012). Research is needed to compare the effectiveness of various visa policies and identify best practices. Additionally, while the economic impacts of aviation liberalization and visa policies on broader economic indicators, such as GDP growth and employment, are mentioned, they are not deeply analyzed (WTTC, 2019; World Bank, 2018). Comprehensive assessments are needed to quantify how changes in these policies influence broader economic factors in African countries.

The use of models like Normalized Revealed Comparative Advantage (NRCA) in African policy-making, can help identify sectors with high growth potential, guiding strategic investments in infrastructure, human capital development, and environmental conservation, ultimately enhancing the competitiveness of African nations and maximizing tourism benefits.

Visa openness and air traffic liberalization are crucial for enhancing access to African destinations and unlocking tourism's full potential for economic growth. The Visa Openness Model and propose Heckscher-Ohlin Model for Tourism Competitiveness provide a framework for evaluating policy reforms aimed at boosting tourism flows and economic integration across the continent. Methodologically, most literature touches on political resistance and infrastructure challenges but does not fully explore the underlying reasons behind these issues or the role of stakeholders in overcoming them (Pirie, 2020; Button, 2020). Research approaches that investigate the political and economic motivations behind resistance and explore collaborative strategies for addressing these challenges are necessary. Furthermore, there is limited research on how changes in visa policies and air transport affect tourist preferences and behaviors specifically in the African context (UNWTO, 2015; Lubbe & Kruger, 2012). Behavioral studies are needed to understand how visa facilitation and improved air connectivity alter tourist decision-making and travel patterns in Africa.

The liberalization of air transport and visa easing in Africa is expected to boost economies, expand free trade, and facilitate people's movement. However, sovereignty concerns and fears of large-scale immigration hinder full liberalization, and some states are hesitant to embrace these reforms. The participation of private African airlines in the liberalization process has also been limited, with local airlines often expressing concerns about the potential loss of market share to larger foreign carriers. For example, Nigerian airlines have voiced opposition to the country's participation in the Single African Air Transport Market (SAATM), fearing that it would benefit larger African airlines at their expense (The Guardian, 2022). Addressing these concerns is essential for ensuring the successful implementation of air transport liberalization and visa policy reforms in Africa.

6. Theories and Models that explain Intra-African Tourism, Air Transport Liberalization and Visa Openness

The foundation of tourism, particularly in Africa, lies in domestic and regional travel, with over 80% of international tourists visiting destinations within the same region (Viljoen, Saayman, & Saayman, 2019). This underscores the interdependence between tourism and trade, suggesting that regional integration is essential for the growth of Africa's tourism industry.

The Heckscher-Ohlin (H-O) model and the Ricardian comparative advantage theory

The Heckscher-Ohlin (H-O) model and the Ricardian comparative advantage theory offer valuable insights into the factors driving competitiveness in tourism. The H-O model, which focuses on factor endowments, has been applied to various trade-related scenarios, including unemployment reduction (Dutt, Mitra & Ranjan, 2009), skills demand (Michaels, 2008), and per capita income (Markusen, 2013). By analyzing the comparative advantage of destinations and their factor endowments, these theories provide a framework for understanding the competitiveness of Africa's tourism industry.

Economic Theory of Air Transport Liberalisation

Theoretical justification of the air transport liberalization notion, which demonstrates how stringent regulatory frameworks of air service agreements shape the institutional makeup of international airline markets, provides another avenue for reforming air transport regulation policy. In order to provide a scientific explanation of the concept, the study investigates a few theories. A generic graphic depiction of the problem was provided by Button and Drexler (2006), as noted in the Figure below. The possible effects of the various regulatory regime types on fare and production are highlighted. Within the framework of a BASA regulatory system, the theory assumes that international traffic between nations A and B has a linear demand D1. Due to global regulations, the market is limited to P1 and T1 for both fares and capacity.

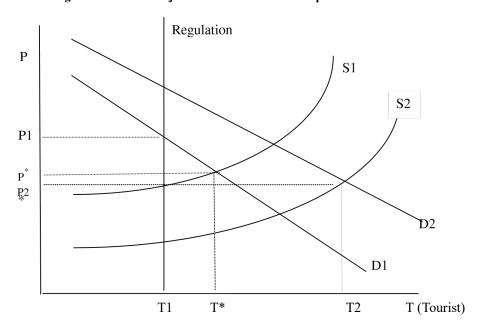


Figure: 2 Theoretical justification of the air transport liberalization notion

However, Button and Drexler (2006) further stated that competition and a price decline to P* follow the elimination of regulation as a result of a liberalization strategy like an open skies agreement or an African-style Yamoussoukro Declaration. Due to downward pressure on costs from the privatized carriers that reduce industry inefficiencies and route extension, this has an impact on both the supply and demand curves for international air travel between point A and point B. Adoption of the policy encourages more integrated quality of service options such as code sharing, hubbing, shared lounges, interchangeable frequent flyer programs, and baggage check-in, which drives demand for international service to D2. The above Figure depicts how more tourists are traveling to T2 as a result of lower costs and an outward shift in demand, and how deregulation allows prices to fall to P2. The diagram shows that by putting the ceteris paribus rule into effect, liberalization leads to lower operational costs and more tourists' movements.

The graphic implies that liberalization results in a greater number of tourists and reduced operating costs by using the ceteris paribus criterion. The degree of liberalization and tourists' volumes seem to be positively correlated, but the effects on air fares are controversial and the direction of the shift relies on the elasticity of the supply and demand curves (Grancay, 2009).

The theory appears to support the liberalization of the air transportation industry in order to promote efficiency, market expansion, and potential low fares or consumer surplus. However, it does not offer solutions for safeguarding domestic carriers that were previously covered by regulations, nor does it forecast how smaller carriers from developing nations can successfully compete with larger carriers from developed nations under a liberalized framework. In order to appease proponents of regulation, the theory must also solve other difficult problems.

Apart from the aforementioned notion, a plethora of scientific conjectures propel the cause for air transport reform, ranging from regulatory measures to liberalization policies across multiple nations. According to numerous studies, the reform was started in the USA in 1978 and progressively expanded to many other countries over the course of the previous 35 years. As a result, the market for air transportation saw a considerable shift in a number of fundamental factors, including the degree of competition, traffic demand, pricing, cost, and frequency.

There is strong evidence that the liberalization of global markets has benefited air travelers and the economy as a whole, according to InterVISTAS-EU (2009). According to a research conducted on the EU single aviation market, there is now much more competition on many routes, which has led to the opening of numerous new routes and a 34% decrease in fares (UK CAA, 1998). According to a different analysis, the pace of increase in air traffic within the EU has doubled since the market was liberalized (Graham, 1998). Moreover, additional research has shown a connection between rising air travel and increases in GDP and employment (GDP). For instance,

The integration of gravity models into the analysis of air transport liberalization, tourism development, and visa access provides a rigorous framework for understanding how these factors interact to influence tourism flows and economic outcomes across Africa. Gravity models, rooted in trade theory, are particularly effective for assessing the comparative advantage of destinations by accounting for factor endowments such as labor, capital, and natural resources.

Proposed Heckscher-Ohlin Model for Tourism Competitiveness

The Heckscher-Ohlin (H-O) model, which traditionally explains trade patterns based on a country's factor endowments, can be effectively applied to analyze tourism competitiveness. In this context, a country's comparative advantage in tourism is determined by the relative abundance of resources that are essential for attracting tourists. For instance,

nation's rich in natural resources, such as wildlife, scenic landscapes, or unique ecosystems, are more likely to have a comparative advantage in eco-tourism. Likewise, countries with well-developed infrastructure, access to skilled labor, and advanced services are more competitive in business tourism or cultural tourism. These resource endowments drive tourism flows and shape how countries position themselves in the global tourism market.

By leveraging its factor endowments, a country can enhance its attractiveness as a tourist destination, which is further amplified by policies such as visa openness and air traffic liberalization. These policies remove barriers to travel and facilitate easier access for international visitors, increasing tourism flows and contributing to national economic growth. For African nations, adopting more liberal visa policies combined with investments in infrastructure and conservation of natural resources can lead to significant gains in tourism competitiveness.

Revealed Comparative Advantage (RCA) and Normalized Revealed Comparative Advantage (NRCA)

To measure the comparative advantage of African countries in the tourism sector, **Revealed Comparative Advantage** (**RCA**), originally introduced by Balassa (1965), can be employed. RCA provides a clear indication of whether a country has a comparative advantage in a particular sector, such as tourism. The **RCA** for tourism services from country j in sector i can be calculated using the following formula:

RCAij=<u>∑ixij</u> ∑ijxij∑jxij

Where:

Xij, represents the exports of tourism services from country j in sector i.

The formula compares the share of a country's tourism exports in a specific sector to the global share of that sector. A more sophisticated measure, Normalized Revealed Comparative Advantage (NRCA), offers a refined and time-consistent comparison. The NRCA is calculated as follows:

NRCAij= $xij-\sum i\sum jxij\sum i\sum jxij$ $(\sum ixij\sum jxij)^2$

This formula provides a normalized measure of a country's comparative advantage that accounts for changes over time and across different countries, making it robust for longitudinal analysis.

Testing the Theory for Travel Service Exports

Building on the **H-O hypothesis**, we propose that differences in tourism competitiveness across countries can be explained by variations in resource endowments, including factors such as capital (Ki), labor (Li), natural environment (Ni), and other resources (Ri). The comparative advantage in tourism services for country i in sector j can be modeled as:

NRCAj=F (Ki,Li,Ni,

Ri)

This model suggests that a country's comparative advantage in tourism is determined by its endowments of physical capital, human capital, natural resources, and cultural or infrastructural assets. For example, countries with a high **NRCA** in eco-tourism are likely to attract more international visitors due to their rich natural landscapes and wildlife. Similarly, countries with advanced infrastructure and skilled labor are positioned to thrive in business and cultural tourism.

Visa Openness Models

Visa openness is a crucial factor that influences international tourism flows, particularly in regions like Africa where stringent visa policies have historically hindered travel. The impact of visa openness can be analyzed using gravity models, which traditionally examine the flow of goods between countries based on factors such as economic size and distance. In the context of tourism, these models can be adapted to assess how visa policies affect the movement of people.

Heckscher-Ohlin Model and Visa Openness

The Heckscher-Ohlin (H-O) model can be adapted to explore the impact of visa openness on tourism by considering visa policies as part of a country's factor endowments that determine its comparative advantage. Countries that have more liberal visa policies are likely to attract more tourists, especially from neighboring regions. For example, nations that have implemented visa-free or visa-on-arrival policies for other African nationals, such as Seychelles and Rwanda, have seen a significant increase in intra-African tourism, which contributes to their overall competitiveness in the tourism sector.

The Impact of Visa Openness

To quantify the impact of visa openness on tourism

Visa Openness Model

Air Travel Demand (D): Air traffic liberalization (L) boosts air connectivity, which in turn increases air travel demand.

 $D = \alpha \cdot V + \beta \cdot T + \zeta \cdot A - \gamma \cdot S$

Where:

 ζ is the impact of air connectivity A on demand.

Air connectivity A is influenced by air traffic liberalization L:

 $A=v\cdot L$

Where v represents how air traffic liberalization improves air connectivity.

Tourism Activity (T): Tourism is now impacted by both visa openness and air traffic liberalization, as better air connectivity attracts more tourists.

 $T=\delta \cdot V + \tau \cdot A - \epsilon \cdot$

 $CT = \delta \cdot V + \tau \cdot A - \epsilon \cdot C$

Where τ is the impact of air connectivity on tourism.

Economic Growth (E): Economic growth now incorporates the effects of air traffic liberalization, which boosts tourism, trade, and regional integration.

$$E=\eta \cdot (D+I+R+A) - \rho \cdot Ca$$

$$E=\eta \cdot (D+I+R+A) - \rho \cdot Ca$$

Where:

 ρ is the cost factor associated with air traffic liberalization Ca.

Ca= ϕ ·(1-L), where ϕ represents the cost of maintaining air traffic restrictions.

Trade (I) and Regional Integration (R) are now impacted by both visa openness and air traffic liberalization:

 $I=\theta \cdot (V+L)I (V+L)$ $I=\theta \cdot (V+L)$ $R=\kappa \cdot (V+L)$ R = (V+L) R

The impact of trade and regional integration is now a function of both visa openness V and air traffic liberalization L.

Security Concerns (S): The security concerns remain primarily driven by visa openness: $S=\lambda \cdot V$

Combined Mathematical Model

With air traffic liberalization L infused, the full **economic growth equation** becomes:

$$E = \eta \cdot [\alpha \cdot V + \beta \cdot (\delta \cdot V + \tau \cdot \nu \cdot L - \epsilon \cdot C) + \theta \cdot (V + L) + \kappa \cdot (V + L) + \zeta \cdot \nu \cdot L] - \gamma \cdot (\lambda \cdot V) - \rho \cdot \phi \cdot (1 - L) E$$

Visa Openness (V) and Air Traffic Liberalization (L) work together to:

Increase air travel demand (D).

- 1. Boost tourism (T).
- 2. Enhance trade (I) and regional integration (R).
- 3. Improve air connectivity (A).

However, security concerns (S) are closely related to the strictness of visa policies. As countries relax visa requirements, there is a risk of increased security vulnerabilities, such as illegal immigration or terrorism. Governments often face the challenge of ensuring that their visa policies strike the right balance between allowing easier travel and maintaining national security.

In the context of the model, security concerns are represented as a function of visa openness (V). As visa openness increases, security concerns may rise, requiring additional measures to mitigate risks:

 $S=\lambda \cdot VS = \lambda \cdot V$

Where:

S represents security concerns.

V is visa openness (ranging from 0 to 1, with 1 being fully open).

 λ is a coefficient representing the sensitivity of security concerns to visa openness.

This formula highlights that as visa policies become more open, the security risks (S) increase proportionally, thus demanding enhanced security infrastructure and processes to maintain control over borders.

The costs related to visa policies (C) and air traffic liberalization (Ca) are significant factors that affect the implementation of more open travel policies. Maintaining restrictive visa policies requires a government to invest in

processing, border control, and security measures. Alternatively, liberalizing policies introduces the need for updated infrastructure, such as implementing e-visa systems or upgrading airports and air traffic control systems to handle increased traffic.

The costs associated with visa policies (C) and air traffic liberalization (Ca) can be expressed as follows:

Visa Policy Costs:

 $C=\epsilon \cdot (1-V)$

Where:

C represents the cost of maintaining restrictive visa policies.

V is visa openness (with 1–V representing the degree of restrictiveness).

 ϵ is a coefficient representing the administrative cost of visa restrictions.

Air Traffic Liberalization Costs:

1. Ca= $\phi \cdot (1-L)$

Where:

Ca represents the cost of maintaining restricted air traffic policies or the cost of transitioning to more liberalized air traffic.

L is the degree of air traffic liberalization (ranging from 0 to 1, where 1 is fully liberalized).

 ϕ is a coefficient representing the infrastructure cost needed for liberalization.

Together, these equations show how both **visa openness** and **air traffic liberalization** affect costs. As visa openness (V) and air traffic liberalization (L) increase, costs related to maintaining restrictive policies decrease. However, the costs associated with upgrading infrastructure or implementing new systems may temporarily rise as countries liberalize their visa and air traffic policies.

The model incorporates security concerns (S) and costs (C, Ca) interact with visa openness and air traffic liberalization to influence economic growth (E):

$$E = \eta \cdot [\alpha \cdot V + \beta \cdot (\delta \cdot V + \tau \cdot \nu \cdot L + \psi t \cdot TL - \epsilon \cdot C) + \theta \cdot (V + L) + \kappa \cdot (V + L) + \zeta \cdot \nu \cdot L] - \gamma \cdot (\lambda \cdot V) - \rho \cdot \phi \cdot (1 - L)$$

This formula balances the benefits of visa and air traffic liberalization on tourism, trade, and economic growth with the costs and security risks that accompany these policies. The model shows how **visa openness** and **air traffic liberalization** jointly stimulate demand for air travel, tourism, and economic growth, but also highlights the need to balance security and cost considerations. By reducing barriers through both visa and air service liberalization, countries can unlock significant economic benefits while fostering regional and global integration. This equation compares the share of tourists arriving under liberal visa policies in a specific country to the global share, revealing whether the country has a comparative advantage in attracting tourists due to its visa openness.

Normalized measure for changes in visa policies over time

The model provides a normalized measure that accounts for changes in visa policies over time and across different countries, making it more robust for longitudinal studies. This model helps to quantify the impact of visa policy liberalization on tourism flows, allowing for comparisons across countries and over time.

Building on the H-O hypothesis, we hypothesize that the comparative advantage in tourism due to visa openness is a function of both traditional factor endowments (such as capital, labor, and natural resources) and policy-driven factors like visa regulations. The modified model for visa openness can be expressed as:

$$E = \eta \cdot [\alpha \cdot V + \beta \cdot (\delta \cdot V + \tau \cdot \nu \cdot L + \psi t \cdot TL - \epsilon \cdot C) + \theta \cdot (V + L) + \psi \cdot TL \cdot (V + L) + \psi \cdot TL \cdot (Lb + K) + \zeta \cdot \nu \cdot L] - \gamma \cdot (\lambda \cdot V) - \rho \cdot \phi \cdot (1 - L)$$

- 1. Visa Openness (V) and Air Traffic Liberalization (L) drive air travel demand (D), tourism (T), trade (I), and regional integration (R).
- 2. Tourism is influenced by visa openness, air connectivity from air traffic liberalization, and trade liberalization, which attracts more tourists by improving economic conditions.
- 3. Trade (I) is enhanced by visa openness, air traffic liberalization, and trade liberalization, which, according to **Heckscher-Ohlin**, is driven by factor endowments like labor (Lb) and capital (K).
- **4. Economic Growth (E)** depends on all factors, with trade and tourism playing pivotal roles in growth driven by liberalized travel and trade policies.
- 5. Security concerns (S) are tied to visa openness, and costs (C, Ca) reflect maintaining restrictive policies or the need for infrastructure for liberalization.

This enhanced model now fully incorporates **tourism**, **visa openness**, **air traffic liberalization**, and **trade liberalization** under the **Heckscher-Ohlin theory**. It demonstrates how reducing barriers to both travel and trade boosts economic growth, with tourism and trade reinforcing each other. By aligning travel and trade liberalization, countries can optimize the use of their factor endowments (labor and capital) to unlock economic benefits while addressing security and cost considerations. This model suggests that countries with more open visa policies will have a higher comparative advantage in attracting international tourists, particularly from regions with similar policies. The insights from the study on international tourist arrivals in Africa support this hypothesis, showing that visa openness, along with good governance, plays a significant role in enhancing a country's attractiveness as a tourist destination.

7. Discussion

The idea of a single African air transport market, as promoted by the Africa Union through SAATM, must be accepted by African governments in order to achieve Agenda 2063 and the development objectives of the African Union. Furthermore, significant reforms are now required if Africa is to meet its aspirations for social and economic growth, even though the liberalization of air travel and visa requirements brings with it both opportunities and challenges. Visa openness and air traffic liberalization are policy-driven factors that significantly enhance a country's comparative advantage in tourism. These policies remove barriers to international travel, making it easier and more affordable for tourists to visit a destination. For instance, countries like Rwanda have successfully leveraged visa-on-arrival policies to boost international tourist arrivals, while liberalizing air traffic agreements has further increased connectivity. These efforts have made Rwanda a competitive player in African tourism.

By incorporating visa policies and air traffic liberalization into the H-O model and using tools like RCA and NRCA, we can better understand how African countries can capitalize on their natural and human resource endowments to gain a comparative advantage in tourism. This approach also allows for the assessment of regional initiatives such as the African Union's Visa Openness Index, which aims to facilitate the free movement of people across the continent. With effective implementation, African countries can enhance their competitiveness, attract more international tourists, and stimulate broader economic growth. New airlines entering underserved countries will eliminate obstacles for foreign tourists, improve connectivity, and reduce business expenses in Africa. However, these reforms must be carefully handled to address the interests of various governments and industry participants.

A coordinated regional strategy is required to strike a balance between national interests and the benefits of free trade. The availability of visas is critical to African countries' competitiveness in the travel and tourism business. Policymakers should improve and integrate these initiatives into national policies. The African Union's Visa Openness and Access framework can be used to evaluate the effectiveness of regional treaties. Security issues, such as terrorist assaults, have impacted tourism growth and overall tranquility in Africa. This has led to increased travel fear and lost income, which is important for economic development. Since this vice greatly hinders the advancement of the continent, efforts should be directed at drastically reducing it. If Agenda 2063 is to make an impact, policymakers must develop plans that maximize the benefits of security and peace on the continent.

8. Conclusion

A coordinated regional strategy that strikes a balance between the need to protect national interests and the benefits of air travel liberalization, tourism development, and open visa policies is needed to improve air travel connectivity, ease visa access, and promote tourism in Africa. More research and strategies on the social and political ramifications of the aforementioned discussions are greatly needed. The capacity to obtain visas is a crucial component that can significantly boost African countries' competitive edge in the travel and tourism sector.

9. Way Forward

To enhance air transport connectivity and visa openness in Africa, it is essential to adopt a multi-faceted approach that includes policy recommendations, capacity-building initiatives, and regional cooperation. African countries should work together to address the challenges of air transport liberalization and visa policy reforms, with a focus on creating a secure and welcoming environment for tourists. This will require a concerted effort to improve infrastructure, enhance security, and streamline administrative processes. By working together, African countries can unlock the full potential of their tourism industries and achieve the goals of Africa's Union Agenda 2063.

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