

# Indian Journal of Modern Research and Reviews

This Journal is a member of the '*Committee on Publication Ethics*'

Online ISSN: 2584-184X



## Review Article

## An Analysis of The Evolution and Causes of Nigeria's Civil Aviation Industry

Wu Honghao<sup>1\*</sup>

<sup>1</sup>Institute of African Studies, Zhejiang Normal University, China

Corresponding Author: \* Wu Honghao

ABSTRACT	Manuscript Info.
<p>This article is Sponsored by the Institute of African Studies (College of African Area and Countries Studies), Zhejiang Normal University 2023 Research Project in Africa (Project Number: FF202306).</p> <p>The civil aviation industry is the focus of the development strategies of most contemporary African countries and is of great strategic significance for maintaining the relationship between Africa and other countries in the world. Nigeria is the largest economy and the most populous country in Africa. Historically, Nigeria's civil aviation industry has experienced ups and downs, and has passed through five stages namely; The formation and initial development in the mid-20th century, The steady development and golden age of the country after independence, the low point of the civil aviation industry in the early stage of deregulation, and the prosperity after the recovery of the civil aviation industry in the early 21st century. The civil aviation industry faces many crises in the post-pandemic era. Therefore, this article explores in detail the development trajectory of Nigeria's civil aviation industry, which experienced two ups and downs. It also analyzes the main factors that led to its two declines, drawing some inspiration for China-Africa aviation cooperation.</p>	<ul style="list-style-type: none"> <li>✓ ISSN No: 2584-184X</li> <li>✓ Received: 07-06-2024</li> <li>✓ Accepted: 25-07-2024</li> <li>✓ Published: 18-08-2024</li> <li>✓ MRR:2(8):2024:08-15</li> <li>✓ ©2024, All Rights Reserved.</li> <li>✓ Peer Review Process: Yes</li> <li>✓ Plagiarism Checked: Yes</li> </ul> <p style="text-align: center;"><b>How To Cite</b></p> <p>Wu Honghao. An Analysis of The Evolution and Causes of Nigeria's Civil Aviation Industry. Indian Journal of Modern Research and Reviews: 2024;2(8):08-15.</p>

**KEYWORDS:** Nigeria, civil aviation industry; resource curse; China-Africa cooperation; National Airlines

### INTRODUCTION

Civil aviation is an indispensable tool for economic, social, and political development. In Nigeria, which is the largest economy in Africa, the civil aviation industry is a symbol of its regional influence. It has directly or indirectly driven the employment of hundreds of thousands of people and made great contributions to the economic, social, and cultural development of Nigeria. However, 60 years after independence, the development of Nigeria's civil aviation industry has not shown a steady upward trend but has experienced "two ups and two downs" and is currently in its second trough. Therefore, it is necessary to explore the reasons for the two declines in Nigeria's civil aviation industry, which is of great significance to understanding the economic and social development of African countries. It is equally of great significance to China-Africa aviation cooperation.

### Five stages of development of Nigeria's civil aviation industry

#### 1. The formation and initial development of Nigeria's civil aviation industry in the mid-20th century (1930-1956)

In 1925, a Royal Air Force plane first landed at an important city in northern Nigeria (Kano). The industry has evolved since started after this first flight in Nigeria. The Royal Air Force relied on flight intelligence and navigation equipment to operate irregular flights

to Kano and Maiduguri from Khartoum in Sudan, therefore becoming the first frequent flight route in Nigeria's aviation history.<sup>[1]</sup> However, this international route was not commercial or civilian. The real commercial civil aviation in Nigeria began in the 1930s. In 1930, with the support of the British colonial authorities and the British Royal Air Force, Nigerian civil aircraft and some military aircraft began to operate scheduled domestic flights. In this period too, the prototype of civil aviation air network was already emerging. During this period, the civil aviation network of Nigeria mainly showed a linear structure, and was operational mainly in 6 cities in total: Maiduguri, Kano, Kaduna, Minna, Osogbo, and Lagos. In 1935, the British Royal Airway started flights from London to Lagos. At this initial stage, it was only regular passenger and mail flights that were in vogue, which also helped in ushering Nigeria's civil aviation into the modern era. In this early period, the British completely dominated the Nigerian sky.

After World War II, the colonial authorities of Nigeria and Ghana reached an agreement with the British to jointly establish the West African Airways Corporation (WAAC), which replaced the regional routes originally operated by the British Royal Air Force. The reason for this is twofold; First, after World War II, the European economy was in serious recession. West Africa as an important source of raw materials for European industries attracted a large number of Europeans, which also brought about economic prosperity to the sub-region, and an increasing demand for, and growth in the aviation business. The Second reason is that when the colonial authorities were faced with the surging independence movements in various parts of Africa, the British colonial government was also eager to demonstrate its efforts in colonial development before Nigeria's independence to improve its image. However, since Nigeria's civil aviation industry has always been dominated by the United Kingdom, the colonial authorities of Nigeria and Ghana lacked the equipment and experience needed to operate an airline. Therefore, the colonial authorities reached an agreement with the British Overseas Airways Corporation (BOAC) to provide business and technical support to help it operate West African Airlines. In 1948, West African Airlines officially began operations with Lagos as its base. Eight years later, West African Airlines completely took over the main routes originally established by the Royal Air Force in West Africa. At this time, Nigeria's civil aviation industry had formed an air network centered in the two major airports of Lagos and Kano, extending to 11 other cities on domestic routes, and was able to fly to Ghana and Sierra Leone.

## 2. Steady development and golden period after national independence (1957-1985)

In 1957, when Ghana gained independence, its first Prime Minister Kwame Nkrumah established a separate Ghana airline. The Nigerian Minister of Aviation and Communications was inspired by the separation of West African Airlines and the establishment of Ghana Airlines in

that same year. Therefore, the idea of building a Nigerian national airline was first raised in Parliament that same year, and on October 1st of the following year, the restructuring of West African Airlines was completed. The government held a 51% stake in the airline.<sup>[2]</sup> After independence on October 1, 1960. The first fully owned national Airline was established in 1961, and the Nigerian government acquired the remaining shares of West African Airlines to subsequently establish Nigerian Airlines Corporation (Nigeria Airways). This opened up a new era for the development of civil aviation in Nigeria after independence and also laid a solid foundation for the steady development of the civil aviation industry in the next 10 years.

In 1970, with the end of the Biafran Civil War and the expansion of oil extraction in the Niger Delta, Nigeria's oil revenue increased significantly. The oil economy gradually became the lifeblood of Nigeria's national economy and the main source of national fiscal revenue, this period also ushered Nigeria into the era of the so-called "oil boom" period. With the increase in oil revenue, government spending increased significantly, and Nigeria began to build aviation infrastructures on a large scale. Before 1970, Nigeria had only two international airports and many old airports, which obviously could not meet the growing demand for aviation. Therefore, Nigeria formulated the second and third national development plans which established the Nigerian Airports Authority (NAA) in 1976 to coordinate the planning and construction of airports. From 1978 to 1984, Nigeria built modern new airports in Enugu, Yola, Port Harcourt, Sokoto, Kaduna, Jos, Calabar, and Ibadan, bringing the number of modern airports in the country to 15. This period also saw a steady appreciation of the Naira (Nigerian official currency). Nigerian National Airlines imported a large number of advanced jet aircraft from Europe and America, which expanded the Country's fleet size of jets rapidly. In the golden fifteen years from 1971 to 1985, Nigerian National Airlines introduced 30 large and medium-sized aircraft that were extremely advanced at the time, including Boeing 747-200 and McDonnell Douglas DC-10-30 (excluding aircraft that were leased to cope with the pilgrimage). These advanced aircraft and infrastructures directly promoted the rapid extension of the number of air routes. In 1975, there were only 17 major air routes in Nigeria. But by 1983, there was an increase in the domestic air route networks, with 63 routes starting from Lagos, Kano, and Port Harcourt. These routes spanned the country and directly connected the state capitals. For international routes, Nigeria's national airline broke the monopoly of Europe and the United States, joined the operation of golden routes such as Lagos to New York and London, and became the first airline in Africa to obtain long-term operating qualifications at American terminals. The developed route network brought an increase in passenger volume. In 1985, Nigeria's domestic registered carriers transported a total of 2,575,000 passengers worldwide, ranking second in Africa. This data was the highest point of Nigeria's civil aviation industry in the 20th century, an increase of 798%

compared to 286,800 passengers in 1972. This feat was not broken until 2010 at the beginning of the next golden period.

### 3. The low point of the civil aviation industry in the early stage of deregulation (1986-1999)

In 1978, the United States government passed the Air Passenger Deregulation Act. The bill emphasized that the government should reduce its control over the civil aviation industry and guide enterprises to compete through market forces. This led to the wave of liberalization of the global civil aviation industry.<sup>[3]</sup> In 1982, Nigeria first allowed non-scheduled private charter operators to fly in the country. In 1986, due to the deterioration of the balance of payments, the Nigerian government had difficulty repaying its foreign debts. In addition, due to the political turmoil, it was no longer able to obtain financing from the international market. With no other options, then President Ibrahim Babangida signed the International Monetary Fund's and the World Bank's Structural Adjustment Program (SAP). Due to the impact of this, Nigeria's civil aviation industry relaxed its originally strict regulatory policies and allowed private capital to enter the civil aviation industry. Okada Airlines, Kabo Air Travel, and Gas Air became the first private airlines in Nigeria to operate scheduled flights, competing with Air Nigeria, and the actual number of passengers carried accounted for 33.5% of the total number of passengers of domestic airlines.

When the Yamoussoukro Declaration was signed in Cote d'Ivoire in 1988, it called for the liberalization and integration of the African aviation market, allowing airlines from other countries to enter the country's airspace to operate and encourage competition. This further advanced the Civil Aviation Policy Reforms.<sup>[4]</sup> In 1990, Nigeria established the Federal Civil Aviation Authority (FCAA) to take over the functions of the Civil Aviation Department (CAD) formerly under the Federal Ministry of Aviation, and reduce the political attributes of the civil aviation industry. In 1994, the number of licensed private airlines in Nigeria's civil aviation industry increased to 28, and the number of passengers carried accounted for 74.1% of the total passenger volume, becoming the backbone of civil aviation transportation. However, there are major flaws in the management practice of FCAA in attracting foreign investment and encouraging competition, which has aroused strong dissatisfaction from the government. To activate competition and promote full liberalization, in 1995, FCAA was abolished, and the new Safety Regulation and Monitoring Bureau (DSRAM) and the Economic Regulation and Supervision Bureau led by the Ministry of Economy were established. DSRAM replaced the safety and economic regulatory functions of the FCAA. At the same time, the Air Traffic Services (ATS) and Airports Department merged with the previous NAA to form the Federal Airports Authority of Nigeria (FAAN).

The practice of civil aviation deregulation has had a great impact on the entire industry. Some major positive factors of the Deregulation in the Aviation industry are that it led to an increase in passenger volume, a reduction in ticket prices,

improved air transport efficiency, and international market share. For example, the United States relaxed regulations on the air transport industry in 1978. Just 20 years later, the number of U.S. air passengers reached 600 million, more than double the number in 1978. The market share on popular routes such as the US-Japan and US-France routes exceeded 65%.<sup>[5]</sup> However, this growth was not yet feasible in Nigeria. On the contrary, in the early stages of deregulation in Nigeria, the civil aviation industry reached rock bottom; the number of domestic routes dropped from 63 in the prosperous period to 15. Many unprofitable routes were abandoned, and air accessibility dropped significantly. Nigeria's national airline was mired in a debt crisis, and its fleet was drastically reduced from 34 aircraft at its peak in 1980 to 3 in 1997. The private airline fleet declined rapidly after a short period of rapid development due to a lack of maintenance funds and equipment; from 77 aircraft to 11 private airlines in its heyday to only 9 aircraft available in 1997. Passenger traffic dropped significantly, from 2,575,000 in 1985 to 221,200 in 1996, the lowest point since statistics were available in 1972. Despite this, air ticket prices continued to rise. In the first year of deregulation, Nigeria's air ticket prices rose by 40%, and by 1989 they had risen by 75%. In the late 1990s and early 1991, with the rise in oil prices caused by the Gulf War and the political need to transition to a civilian government, the money supply increased again, and airfares experienced two more sharp increases. Many potential air passengers were unable to afford air travel.

### 4. Prosperity after the recovery of the civil aviation industry in the early 21st century (2000-2019)

On May 29, 1999, President Obasanjo took over office as a Civilian President, ending Nigeria's 16-year military rule. Obasanjo's election was widely seen as a reversal of Nigeria's serious political and economic backwardness, a hope for the restoration of democracy, freedom, stability, and development, and also marked the arrival of a period of comprehensive deregulation of Nigeria's civil aviation industry.<sup>[6]</sup> In January 2000, Nigeria's first regulatory oversight body that met the standards of the International Civil Aviation Organization (ICAO), NCAA, began operations. In the same year, Nigeria National Airlines began bankruptcy reorganization. In 2001, FAAN was included in the privatization list of Nigeria's Public Enterprise Bureau. In 2004, Nigeria National Airlines completed its reorganization and was jointly owned by Nigeria and the British Virgin Group, and was renamed Virgin Nigeria. The adjustment of public institutions and policy reforms have promoted the recovery of Nigeria's civil aviation industry, and more civil capital and airlines have entered Nigeria's civil aviation market. However, the comprehensive deregulation has led to frequent occurrences of unsafe incidents, with four consecutive air crashes in a short period, leading to more than 100 casualties.

In 2006, Nigeria officially gave up the implementation of the structural adjustment plan. The Country's domestic airlines introduced a large number of passenger aircraft into their

operations. The two largest airlines; Virgin Nigeria Airlines and Arik Air, introduced a total of 12 aircraft, including the Airbus A340-300 wide-body aircraft, which greatly enhanced Nigeria's air transport capacity. At the same time, in 2006, after the ADC Airlines crash in Lagos in October, the Nigerian federal government was determined to entrust the NCAA to restructure the capital of operating airlines, gradually eliminate airlines with weak funds, and ensure aviation safety. In the end, 13 airlines passed the review, and 6 airlines, including ADC Airlines, were merged or permanently stopped operating. Four years later, the civil aviation safety situation in Nigeria had improved significantly, and no cases of an aircraft crash was recorded.

In 2010, when Jonathan succeeded the deceased Yaradua, He was committed to promoting economic diversification. Industries such as transportation enjoyed new infrastructures and reforms. With these structural reforms, Nigeria's civil aviation industry ushered in a second period of prosperity. In 2010, Nigeria's air transport volume was 4,197,375, an increase of 207.4%, and the global departure volume of registered carriers was 61,789, an increase of 266.6%. In the next decade, although there were slight fluctuations in 2013 and 2016, the data generally showed an upward trend and reached a peak in 2018. The impressive data is inseparable from the efforts of all aspects of Nigeria's civil aviation industry. First, in the era of comprehensive market deregulation, Nigeria's private airlines replaced the national airlines and became the mainstay of Nigeria's civil aviation transport market. After several restructurings, Nigeria's national airlines finally went bankrupt and ceased operations in 2013. Private airlines such as Arik Air and Air Peace immediately filled the gap, and airlines funded by local governments such as Ibom Air also emerged. The route fares were relatively low, and air travel became the first choice for Nigerians to travel safely. Secondly, Nigeria's airport infrastructure has entered a period of modernization. In 2011, the Jonathan government started Airport construction plans; building and renovating 16 airport cargo terminals to transport perishable products, and introducing and upgrading of instrument landing system. An agreement was signed with China Railway Group to build five new terminals and six airport cargo warehouses in Abuja, Lagos, Kano, Port Harcourt, and Enugu. There has been a continuous internationalization of Nigeria's civil aviation industry since then. In 2015, the African Union Assembly adopted the Declaration on the Establishment of the Single African Air Transport Market (SAATM), which was launched in 2018. As a signatory country, Nigeria actively implemented relevant commitments and allowed other African airlines to enter its airports for operation. Not only that, Nigeria has also actively signed bilateral air service agreements (BASA) with countries outside the African Union, allowing their airlines to operate international routes to and from Nigeria. As of 2016, at least 90 countries have signed bilateral air service agreements with it.

Unlike the first boom in Nigeria's civil aviation industry, which was led by the federal government and the national airline, the second boom was driven more by the market, private airlines, and foreign forces. This driving force made this boom seem more in line with the pace of globalization and the needs of the world market. Many have predicted that the Nigerian aviation industry will continue to expand and improve its services from that period.

### **5. The civil aviation industry faces many crises in the post-epidemic era (2020-present)**

In 2020, the COVID-19 pandemic swept the world, and countries adopted strict lockdown policies to fight the virus, causing a sharp decline in global air travel. Nigeria's civil aviation industry is recovering slowly. Even when affected by the new variant Omicron, Nigeria still had 15,971,705 passengers arriving and departing from the 22 airports under FAAN, this was an increase of 71% in 2020 and recovered to 90% of the pre-epidemic level. As expected, Nigeria's civil aviation transport level was expected to return to the pre-epidemic level in 2022, and all undertakings will return to normal. Unfortunately, due to the Russia-Ukraine conflict and soaring oil prices, coupled with the continued chaos and endless banditry before the domestic elections, the situation in Nigeria's civil aviation industry has deteriorated sharply. First, the normal operation rate of flights is low. At the beginning of 2022, only 56 of the 104 aircraft of all major airlines in Nigeria were in use, with an actual utilization rate of only 53.8%. By the end of 2022, there were only 38 aircraft available, with an actual utilization rate as low as 36.1%, and a significant reduction in capacity. There were recorded cases of over 59.7% of flights delay. Second, many airlines have suffered operational crises. In the past few years, more than 70 airlines of all sizes have closed down in Nigeria, and in 2022, three major airlines have suspended flight services. Third, flight fares have risen sharply. At the end of 2021, the average one-way fare for domestic flights in Nigeria was only 35,000 naira, but on Christmas Eve 2022, the lowest one-way fare for domestic flights in Nigeria was 70,000 naira, and some routes even had one-way fares as high as 100,000 naira, equivalent to a month's salary for ordinary people, and travel costs soared. Fourth, the construction of aviation infrastructure has been questioned by the media. The International Terminal 2 of Lagos International Airport, built by China Civil Aviation Group, has a small spacing between aprons due to design defects. After delivery, only a few airlines have settled in, including British Airways, Air France and most other airlines still operate in the old terminal, which is far from their expected traffic. Fifth, the number of scheduled international routes operated by domestic airlines in Nigeria is at a historical low. Only Air Peace have scheduled international routes, and most international routes are monopolized by foreign airlines. Multiple crises have dealt a heavy blow to Nigeria's civil aviation industry. The glory before the epidemic is gone, and with the increasingly tense global situation, the second trough arrived.

## Analysis of the common causes of the two declines in Nigeria's civil aviation industry

### 1. "Resource curse" and "rent-seeking" phenomena associated with oil extraction

In the discussion of international relations theory, there is no formal definition of "resource curse". It is generally believed that it refers to the phenomenon that countries with abundant natural resources have slower economic development than countries with fewer natural resources.<sup>[7]</sup> Nigeria is the largest oil producer in Africa and the sixth largest crude oil exporter in the world. In recent years, its oil exports have exceeded US\$10 billion. However, the abundant oil resources have not brought "good news" to Nigeria, but have instead hindered the country's economic and social development. In the early 1970s, Nigeria's oil revenue surged, and this encouraged the Nigerian government and the national airline to import the large quantities of aircraft, equipment, and spare parts they needed and to try to develop their aviation industry. However, due to the high profitability of oil in Nigeria, investment has shifted from other industries to resource extraction. Oil extraction has become the only pillar of Nigeria's economy. The development of other industries has not been taken seriously. The civil aviation industry is highly dependent on national finances and it is difficult to achieve self-sufficiency. In the early 1980s, the price of oil in the international market plummeted, causing the Nigerian economy, which was already dangerously dependent on oil exports, to face an increasing balance of payments crisis and rapidly rising inflation. Extremely dependent on national finances, the Civil aviation departments were also powerless in the purchase of aircraft and although the oil economy continued to prosper in the late 1980s, the conflict between the federal government and the oil-producing regions deepened due to the issue of profit distribution. The national finance was unable to support the development of Nigeria's civil aviation industry. In the following 30 years, Nigeria actively adjusted its economic policies and tried to get rid of its dependence on oil. The civil aviation industry also entered its second golden age, but the shadow of the "resource curse" still lingers, and oil revenue still accounts for 80% of Nigeria's fiscal revenue and more than 95% of foreign exchange revenue. Since 2020, due to the dual impact of the epidemic and the conflict between Russia and Ukraine, global oil prices have soared. But worldwide, as one of the top 20 crude oil-producing countries, Nigeria continuously faces fuel shortages. Fuel shortages led to high fuel costs faced by airlines, and which directly led to the second decline of Nigeria's civil aviation industry.

In addition, as oil revenues rise, the Nigerian government can rely on its control of oil to obtain revenue to maintain the operation of the government, thus evading the pressure imposed on the government by taxpayers, which has led to government corruption, institutional deficiencies, social instability, etc. The Nigerian government is no longer a manager and caretaker of national resources but is increasingly extracting profits from these resources. Almost all aviation officials accept bribes from airlines and other agencies for

security services, baggage handling and airport management. Although many governments, including Buhari's, have made anti-corruption a priority, the huge interest chain, the large number of corrupt people, and the great resistance to corruption have led to increased corruption and weakened the ability of Nigeria's civil aviation industry to cope with risks.

### 2. Unstable political landscape and security situation

From the history of world development, many countries rich in natural resources, such as Saudi Arabia, the United Arab Emirates, and some Southeast Asian countries, have achieved good economic growth and their civil aviation industry has also flourished. This is mainly due to its stable domestic political structure and security situation. Nigeria does not have a stable political and secure environment like the above countries. As the long-standing social contradictions were deeply rooted, bloody incidents caused by tribal conflicts and religious conflicts occurred one after another, especially from 1985 to 1999. During that time, the military was in power, and various factions were fighting for power and conflicts were constant. After entering the 21<sup>st</sup> century, civilian democratic government became the mainstream, and political stability improved, but every general election still caused strong social unrest. On the eve of the 2023 Nigerian general election, multiple parties competed, rallies, marches and riots occurred frequently, terrorists took advantage of the situation, and the security situation deteriorated sharply. In March 2022, Kaduna Airport was besieged by a large number of militants, forcing the airport to suspend operations. The unstable political and security situation, as well as the failure to create a good and stable environment for the development of the civil aviation industry, has directly led to the industry missing out on its golden opportunity for development and heading towards decline.

### 3. Serious debt and foreign exchange crises caused by currency devaluation

In the 1980s, the International Monetary Fund IMF and international financial institutions such as the World Bank promoted implementation in Sub-Saharan Africa of the Structural Adjustment Program, forcing them to adopt the privatization of state-owned enterprises and market liberalization. African countries that faced trial and error in the economic field returned to the market while allowing Western countries led by the United States to participate in market competition.<sup>[8]</sup> This brought Nigeria a heavy disaster. In 1980, Nigeria's government debt accounted for only 10% of GDP. However, the balance of payments crisis and debt crisis followed the plunge in oil prices. In 1986, Nigeria's government debt accounted for more than 100% of GDP. After the implementation of the structural adjustment plan, Nigeria not only failed to repay its debts, but the exchange rate of the naira against the US dollar also dropped from 1.3% to 2.6%. Rising steadily, from 2:1 naira to the dollar exchange rate at the start of the plan depreciated to 22:1.<sup>[9]</sup> The continued depreciation of the exchange rate is devastating for the civil

aviation industry as they can no longer afford to import the aircraft, spare parts, and equipment they need, making it impossible for most airlines and airports to replace old aircraft and equipment.

The same situation also occurred before the second decline in the post-epidemic era. Since the end of 2020, the naira has begun to depreciate continuously. In 2021, the Central Bank of Nigeria devalued the naira by 7.6%. Since December 2021, the official interest rate of the naira has depreciated by less than 10%, while the parallel market interest rate has fallen by nearly one-third during the same period. The gap between the two has widened to nearly 70%, resulting in an increasing excessive demand for foreign exchange in the parallel market. To make matters worse, the Nigerian government also forced a new and old currency swap plan in October 2022. The extremely short exchange period caused serious cash shortages, and people took to the streets and protests turned into riots. Affected by this, Nigeria had to relax the swap period, which also led to a further decline in the naira. Due to the shortage of foreign exchange and the depreciation of the naira, domestic airlines are unable to purchase new passenger planes, aircraft cannot fly abroad for maintenance, airports find it difficult to upgrade equipment, and foreign airlines are trapped in increasing expenditure, with little profit

#### 4. Intensified competition in the aviation market within the African continent

For the modern civil aviation industry, advanced equipment and efficient management are indispensable. For example, since the 1970s, Ethiopia formulated Civil Aviation Policies, while expanding its fleet and airports, it introduced advanced airline and airport management experience from Europe and the United States. This has significantly raised its professional standards and steadily developed the civil aviation industry. In 1987, Ethiopian Airlines was described as the most reliable and profitable airline in the Third World, and Bole International Airport became the most important aviation hub in East Africa. With the advent of deregulation, local airlines in Nigeria lost policy protection, and foreign airlines with better experience and more efficient management methods gradually squeezed out the international route share of local airlines.

In the 21<sup>st</sup> century, the entry of private capital and advanced foreign management experience has strengthened the competitiveness of Nigeria's civil aviation industry. However, in 2018, the African Single Air Transport Market plan was implemented, and internal competition in the African aviation market was further strengthened. To win the market, airlines need to have unique marketing strategies in addition to relying on cheap air tickets. They must attract customers by marketing their unique service quality. For example, Ethiopian Airlines and Kenya Airways have introduced the latest Boeing 787 and Airbus 350 respectively to improve the passenger experience. To grab the transfer passenger flow, Airlines Service facilities and accessibility must be improved. Ghana's Kotoka International Airport is an example. After the completion of

the new terminal, the government also introduced Preferential policies, opening up new routes, which also attracted more airlines to join, with the hope of building it into a sub-regional aviation hub in West Africa.<sup>[10]</sup> Facing competition from other countries, Nigeria's civil aviation industry has no outstanding advantages and cannot meet Traveler's actual demand.

#### 5. Poor civil aircraft MRO and landside transportation systems

Every aircraft will encounter many parts failures during operation. After a certain period, Regular inspections must be conducted. In both cases, the aircraft needs to be repaired and maintained by specialized companies to ensure the safety of aviation operations, and to extend the life of the aircraft. MRO in the aviation field refers to the maintenance, repair, and overhaul of aircraft. Generally speaking, domestic MRO companies can greatly reduce the cost of domestic airlines. Cost can also attract foreign airlines to enhance the influence of the country's civil aviation industry. Therefore, every aviation power will have a complete MRO industry. Used for Serving domestic and foreign airlines. During economic downturns, airlines with MRO businesses may generate stable income. From MRO, we can obtain more cash flow than our competitors. Nigeria's civil aviation industry has long been lacking in MRO, and airlines' aircraft need to fly abroad for C-checks and maintenance conduct. In 2021, Nigeria's expenditure on the total cost of MRO is about 1.52 trillion naira (about 2.5 billion U.S. dollars at the exchange rate in 2021), which makes Nigeria's already scarce foreign exchange even worse. In response, Nigeria plans to set up an independent MRO company in Abuja to meet the maintenance needs of domestic airlines in Nigeria, West Africa, and Central Africa. If the large MRO company is finally completed, Nigeria's MRO expenditure will be halved, to enhance the ability of its civil aviation industry to cope with economic recession.

Like the poor MRO, the landside transportation system's challenges also directly led to the decline of Nigeria's civil aviation industry. Landside traffic problems have long affected Nigeria. There is a link between airport and urban transportation, the side transportation system is a prerequisite for the realization of airport functions, and its importance is self-evident.<sup>[11]</sup> Generally speaking, airports, railways, and road transportation are the important transportation facilities in Nigeria. However, since the founding of the country, except for Abuja, no airport in Nigeria has been connected to rail transportation. In terms of road transportation, although most airports have airport roads, there is a lack of public transportation services. People need to drive or take taxis to and from the airport. Once they encounter bad road conditions such as rainy season or peak traffic jams, it will be greatly inconvenient. This also increases the time and money costs for passengers, making air travel no longer efficient. During a recession, more price-sensitive travelers will choose other modes of transportation.

## 6. Nigeria's deteriorating international image

International image is the most important intangible asset of a sovereign state. It also determines, to a large extent, a country's position, influence, and development conditions on the international stage.<sup>[12]</sup> From 1970 to 1985, Nigeria had strong financial resources and a relatively stable environment and was committed to participating in regional affairs. It had a highly secular nature and a good international image. However, in 1986, the Babangida government secretly joined Islam, causing great panic among Christians, escalating religious conflicts, and increasing Nigeria's negative international image. After the execution of Ken Saro Wiwa and the Ogoni Nine, Nigeria's international image hit rock bottom and was isolated internationally. After Abubakar came to power in 1998, he actively made diplomatic efforts to restore relations with South Africa and the West participated in peacekeeping forces, and promised to cede power in 1999. In May 1999, Nigeria restored a democratic civilian government, and the economy rose rapidly and became the largest economy in Africa in 2013. Coupled with the abolition of anti-human policies such as "stoning", Nigeria's international image quickly recovered. However, in 2019, Nigeria's general election was postponed, extremism kidnapping and ransom cases spread rapidly, drugs became increasingly rampant, and its international image was affected again. Things took a sharp turn for the worse, with citizens often suffering unfair treatment abroad.

As an international industry, the decline of Nigeria's civil aviation industry is highly overlapped with the decline of its international image. During the two declines of Nigeria's international image, the civil aviation industry encountered a series of problems such as the withdrawal of foreign investment, the reduction of international routes, and the decline of recognition, which seriously affected passenger flow and revenue.

## CONCLUSIONS AND IMPLICATIONS FOR CHINA-AFRICA AVIATION COOPERATION

In summary, we can find that Nigeria's civil aviation industry experienced a decline in the late 1980s compared to the 1970s and early 1980s. Although it recovered and ushered in a second golden age in the early 21st century, it is now repeating the same mistakes. The common factors that caused the two recessions in Nigeria's civil aviation industry are complex. Many local and global political and economic factors have caused the current situation: resource curse, turbulent political landscape and security situation, serious debt and foreign exchange crisis caused by currency depreciation, global competition in the civil aviation industry, poor logistics support, especially MRO and landside transportation systems, lack of reasonable institutions and continuous good policies, and deteriorating international image are all reasons for this situation. In general, from 1960 to the present, the cyclical development of Nigeria's civil aviation industry with two ups and two downs is not an individual phenomenon of the Nigerian civil aviation industry but can be said to be a trend in

the civil aviation industry of the entire African continent. The civil aviation industries of major African countries such as South Africa and Algeria have all fallen into it. Breaking out of the law of cyclical development requires not only internal changes in African countries but also promotion by China. China-Africa aviation cooperation mainly focuses on aviation infrastructure, with relatively little cooperation in aviation services.<sup>[13]</sup> From the case of Nigeria, we can also get some useful inspiration for the selection of key countries and fields for China-Africa aviation cooperation under the background of the "Belt and Road" initiative. Firstly, Countries with rich resources and unstable political situations should be cautiously selected as key countries for China-Africa aviation cooperation. As mentioned above, the combination of "resource curse" and political turmoil can be said to be the primary reason for the two recessions in Nigeria's civil aviation industry. The experience of African countries in their 60 years of independence also shows that rich resources and political turmoil will inevitably bring about the "resource curse", which will inevitably lead to imbalances in international payments and sharp fluctuations in exchange rates, leading to further deterioration of the economic and political environment and large amounts of loan debts cannot be recovered. In serious cases, Western media will falsely accuse Africa of bringing a "debt trap", damage China's national image, and undermine the effectiveness of China-Africa aviation cooperation. Secondly, Countries with a poor international image should not be the focus of China-Africa aviation cooperation. The deterioration of international image is a common reason for the two recessions of Nigeria's civil aviation industry. Indeed, international image is crucial to the development of the aviation industry. Most African countries are small in size and need to rely on external forces. A poor international image will inevitably lead to a lack of foreign investment and exchanges, making it difficult to achieve sustainable development of the aviation industry. If we focus on cooperation with such countries, it means that we can only rely on China's strength. The result is likely to be that the return on investment cannot meet expectations, which will seriously impact the future of China-Africa aviation cooperation. Thirdly, aviation supporting Base Construction of facilities and promotion of domestically produced aircraft and talent development as a key area of China-Africa aviation cooperation in the new era, for some countries with huge markets, great potential, stable political situations, and a basis for cooperation, we can consider focusing on promoting domestically produced aircraft, such as ARJ21 and C919 in civil aviation, JF-17 and L-15 in military aviation, etc. At the same time, we should strengthen talent training, help them improve the training mechanism, and create a good aviation cooperation environment in local areas.

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