Performance of State-Owned Enterprises:
A Comparative Analysis of Ethiopian Airlines and Ghana Airways

Samuel K. Andoh
Southern Connecticut State University

Yilma Gebremariam
Southern Connecticut State University

James Thorson
Southern Connecticut State University

Peter Bodo
Southern Connecticut State University

This paper examines the performance of two state-owned airlines: Ethiopian Airlines and Ghana Airways. While Ethiopian Airlines continues to operate successfully, the other airline has gone out of business. In an industry characterized by heavy competition and a high rate of failure, the success of the state- owned Ethiopian Airlines is intriguing. The evidence shows that Ethiopian Airlines outperforms the industry on some important benchmarks. These findings suggest that being a state enterprise is not necessarily a characteristic that leads to failure. Corporate culture and governance appear to be important factors in the success of Ethiopian Airlines.

Keywords: State owned Enterprises, Ghana Airways, Ethiopian Airlines

INTRODUCTION

There is a perception that state-owned enterprises (SOEs) are less efficient than privately owned enterprises (POEs). Yet, state enterprises have proven to propel emerging economies forward, often at a rate faster than they would have otherwise developed.

In the 1950s and 60s, when many African countries became independent, they saw the state as the only entity that could marshal the resources to set up enterprises that could lead to faster growth. In the 1950s and 60s, when many African countries became independent, they saw the state as the only entity that could marshal the resources to set up enterprises that could lead to faster growth; in the former Soviet Union and the Eastern Bloc nations of Europe, a similar philosophy prevailed. In Africa, Ghana set up several state enterprises including Ghana Airways. Ethiopia also set up a state airline, Ethiopian Airlines. Of the two SOEs, only Ethiopian Airlines survives. In spite of the success of some of the SOEs, the perception that they operate inefficiently persists.

An SOE is an enterprise in which the state or the government owns more than 50% of the shares. According to Buge et al. (2013) more than 10% of the world's largest firms are state owned and have a combined total sales volume of 3.6 trillion dollars, as of 2011. Further, while most of the enterprises are from emerging economies – China, UAE, Russia being the top three, the list also includes enterprises from bastions of free market developed economies such as Germany, Norway and Finland.

In theory, there is no reason for an SOE to fail or succeed any more than a POE. They both suffer from the same information asymmetries and bounded rationality. Moreover, according to the Sappington-Stiglitz (1987) Fundamental Privatization Theorem, the performance of POEs is superior to SOEs under very stringent and often unrealistic assumptions. Whether an enterprise should be private or public or a combination is therefore purely a matter of preference. Since it is a matter of preference, and ownership is not a significant factor, then why do so many SOEs, especially in poor countries perform poorly?

The failure of state-owned enterprises is an interesting subject area that has received attention in economics and management literature. Economic theory posits that firms exist to maximize some objective function, and in the case of POEs, usually profits or shareholders' wealth. Depending on the structure of the industry in which they operate, firms may or may not have control over pricing decisions and hence, profit. An SOE may not seek to maximize the same objective function as POEs. The airline industry is often described as oligopolistic—due to its high entry and operating costs—but it is also a good example of a contestable market. There are studies, however, such as Kanoria (2007) that suggest that the minimum efficient scale (MES) of operation of airlines is small: for the US only eight aircrafts. If the MES is small, then the barriers to entry are not high, and the industry barring legal barriers should be competitive. The high fixed and variable costs mean that an airline operator requires a large initial capital outlay and sometimes has to sustain losses for a while before it becomes profitable or breakeven.

In this paper, we first discuss the origins and performance of Ethiopian Airlines and Ghana Airways. Secondly, we attempt to address the question of whether the continued operation of Ethiopian Airlines is matter of just a surviving SOE or the case of a competitive and efficient airline. To address the latter, we compare the performance of Ethiopian Airlines with some industry standard performance indicators.

The paper is organized as follows: **Section II** reviews the literature on the failure of enterprises both private and state; **Section III** presents a detailed discussion on each of the two airlines; **Section IV** examines the performance of Ethiopian Airlines relative to industry performance indicators; and **Section V** presents the summary and conclusion.

LITERATURE REVIEW

The failure of state enterprises is an interesting subject area in business and economics literature. According to Mellahi and Wilkinson (2010), an organization fails when it is unable to meet expected or actual standards. Economic theory posits that firms exist to maximize some objective function and if they consistently fail to meet the objective they have set as standard, they are forced to liquidate. Economists often use profit or shareholders' wealth as the objective function that is being maximized. State enterprises may not seek to maximize profit or shareholders' wealth, although they can. More often than not, they are set up to correct some market failure.

According to Boko and Qin (2011), state enterprises are established for a variety of reasons: to promote industrialization and speed economic growth, or to prevent foreign domination and exploitation of certain sectors of the economy. In addition, there are certain industries that are considered critical to the economy because of the beneficial externalities they bring, but which, because of the large initial capital outlay required, do not easily lend themselves to local private participation. An SOE may also be set up because of capital market failure; an enterprise that can be successful in the long run may require too long a gestation period for its financing to be appealing to the market.

In a review of the literature of enterprise failures, Mellahi & Wilkinson (2010) attribute the causes to both internal and external factors. The internal factors include asymmetric information, lack of a clear business strategy and frequent changes in the management team. One might also add the lack of internal proper controls.

The most important aspect of asymmetric information that can cause a failure is the principal-agent problem. Whether an enterprise is private or state-owned, there is often a separation between ownership and day-to-day control of the enterprise. The owners of the enterprise be it the state or shareholders, the principals, cede day-to-day control to managers, the agents, because they do not have the time or the expertise to manage the business. Where the incentives of the agents are not compatible with those of the principals, the agents may pursue short-term objectives that may in the long run lead to the collapse of the enterprise.

Sometimes businesses fail because of the because of an unclear business strategy or no business strategy at all. Not having a business strategy is equivalent to traveling to a place but not knowing the roads to get there. As a variation of the old saying goes, "if you do not know how you are going then anyhow is just as good." State-owned enterprises that don't have a coherent strategy risk subpar performance.

Proper internal controls ensure that the business meets its goals and objectives; consequently, the lack of proper internal controls leads to the eventual demise of the business. Proper internal controls ensure that all employees are accountable, corporate assets are safeguarded, the company is in compliance with applicable laws and regulations, and deviations from acceptable practices are quickly detected and corrected. In a well-designed environment, all systems in the business will be well-integrated and functioning to achieving common goals. Each unit knows its functions and its limitations and each unit carries out the directives of management efficiently with minimal chances of failure. Weaknesses in internal controls lead to fraud.

The external causes for failure can come in several forms: gradual small changes in the business environment which management may not respond to appropriately or in a timely manner, or a sudden minor unexpected event or series of events which may interact nonlinearly with other events and produce a bigger effect on the enterprise. The external causes may also be in the form of an abrupt change in the business environment. For example, a change in the production process caused by a new technology, a political crisis or economic crisis could all happen suddenly and management may not have the time to react to it. A change in the market structure in which the enterprise operates could reduce profitability and force the failure of an organization. For an enterprise that operate internationally, currency fluctuations could make the enterprise more or less competitive. If it becomes less competitive, this could lead to ultimate failure. Mwawura, (2007) writing about reforms being made in Kenya to make SOEs more efficient, argues that not hiring chief executives on a competitive basis and giving them more autonomy make SOEs inefficient. He also argues that for the privatized sectors, the absence of a corporate regulatory framework with high standards of corporate governance is responsible for the lack of prudent management. Obara et al. (2014) cites that the lack of fiscal transparency and accountability led to the collapse of SOEs in Nigeria, and that clarity of roles and responsibilities, public availability of information and open preparation and proper implementation of budgets would have minimized the failure of the SOEs.

OVERVIEW OF THE TWO AIRLINES

Ghana Airways

Ghana Airways started operation on July 4, 1958 with a start-up capital of £400,000, (US$ 1,120,000) (July 8, 1958). The initial agreement was with British Overseas Airways Corporation (BOAC), which had a stake of 40% with the remaining 60% held by the Ghanian government. The plan was for BOAC to train Ghanaians and offer management assistance to get the nascent airline on its feet. The airline was meant to be a source of pride for the country and to generate profit for the government. At the time, air service in Ghana was provided by foreign carriers and there was no domestic commercial air travel. Initial routes were from Ghana to Europe and then from Europe to other destinations on other airlines. The Airline ceased operation in July 2004. It was later reorganized as Ghana Airways and then as Ghana International Airlines. After five consecutive years of losses, with a debt of US$170 million, comprising loans of

US$50 million, overdue suppliers' credits of US$100 million and arears of US$21 million, it ceased operation in 2004.

It is not clear that Ghana Airways was established with the sole purpose of maximizing shareholders' value, notwithstanding the stated objective. It, like many state enterprises in Ghana, operated under multiple objectives, some of which may have been in conflict. There is no doubt that the government saw it as potential revenue contributor, but it was also meant as a showcase for the newly independent county and its ability to manage its own affairs. In addition, it was probably meant to generate employment. A compilation of articles by Prokopenko, and Pavlin (1981) cites the many reasons for failure of state enterprises, but chief among the reasons is what management experts refer to as the paternalistic and the clear absence of incentive compatibility. A paternalistic management style controls subordinates who are expected to be loyal and obedient and toe a line set by management, who in most cases are appointed by the government and thus are also subject to paternalistic control (Soylu, 2011).

In such an environment, creativity that entails risk is shunned by employees and management alike. Further, there is often no incentive compatibility between the owner of the enterprise, the government on behalf of the people, and the agent, in this case management, appointed by the government. In theory, the government is a principal, but in reality, the government is an agent for the people. The fact that the government, an agent of the people, is acting as a principal and appointing manager who are agents introduces a further layer of insularity, making it difficult for incentives to be made compatible.

The government as agent and principal, can and does make decisions which may not be in the best interest of the people (the principals), by simply appointing managers /agents whose interests align more with the government as agent than the government as principal. The problem is accentuated by the fact that the public cannot exit the relationship easily, and thus inefficiency can persist (Pennington, 2011).

The misalignment of incentives leads to a lack of proper monitoring and accountability and perpetuates inefficiency and/or corruption. In the case of Ghana Airways, the government sought to right things by seeking to exert even more control over operation with frequent changes in the Board of Directors and management. According to Amankwah-Amoah and Debrah (2010), in an interview they conducted with retired personnel of the airline, there were 39 different chief executives during the airline's 40-year history. Such a large turn-over of the CEO position suggests that either the management appointed were incompetent, or that the government intervened too much in the running of the airline. The high turn-over is not without cost. The airline business is complicated and requires a high degree of expertise in transportation economics and management as well as years of experience; this is the very reason the initial set- up required an alliance with an already established airline with years of operational experience, BOAC.

With CEOs being replaced every year, it is difficult to imagine any CEO having the time to craft a viable strategic plan and executing it. There is reason to believe, according to Amankwah-Amoah and Debrah, that some of the executives did not know much about running an airline and were appointed for other reasons, such as having been captains for a long time in the corporation. Instead of the government/principal setting the outcome, it sought to control the process. This amounted to meddling in day-to-day operations, undercutting managerial independence and ultimately creating unwillingness within management to take risks for fear of failing and job loss.

Table 1, below, culled from Chivakul and York, summarizes the factors that confirm the non-commercial orientation of the airline.

TABLE 1
ORIENTATION OF GHANA AIRWAYS

Managerial Independence				Relations with Government		Financial Conditions			Governance Structure	
Pricing policy		Employment policy		Loan guarantees	Tax & other exempt	Profit	Credit-worthiness		Stock listing	Outside audits
Cost recovery	Non-market	Enter-prise specific	Civil servants in mgt.				Debt level	Debt cost		
Yes	No	Yes	No	Yes	Yes	-	-	-	No	Yes

Source: Chivakul and York, 2006

Managerial independence refers to the ability of the management team qua agents, once appointed, to be free of interference from the owners qua principals, in the day-to-day operation of the business, including what price to charge for the product or service and whom to employ. In theory and practice, this happens only when the incentives of management coincide with those of the principal. It has already been argued that it is difficult to separate the role of the government as principal from its role as an agent. The ability to set price is one of the characteristics of independence, but according to Chivakul and York (2006), price was set to recover cost and not to maximize profit or shareholders' wealth.

The airline had authority to employ its own personnel who were not civil servants. There is no doubt, however, that with its close links to the government, civil service employees would have been favored by the government. Further, even though price was set to recover cost, many people familiar with the operation of the airline suggest that many employees and their family members flew free or at deeply discounted prices. In the years immediately preceding the collapse of the airline, its revenue was not enough to cover operating cost. This explains why, at the time of cessation of operation, the airline had accumulated a debt of US$750 million.

The relationship between the airline and the government made the airline a non-independent corporate entity. The airline enjoyed a tax-exempt status and its loans were guaranteed by the government. Under these conditions, the airline did not have to demonstrate credit worthiness to obtain credit. Treated as another government entity, it could operate at a deficit and not be worried about creditors shutting it down. When it was finally shut down the government ended up with all its debts. In essence, the airline knew it could not be left in the lurch, and for some forty years it was not. Because the stock of the airline was not listed, no external pressure was brought upon it by the market. Further, even though it was supposed to be audited by the Ghana Audit Service, which audits all state enterprises, a thorough search by one of the authors at the Ghana Audit Service, the State Library and Archives, and the Library at the Parliament could not produce any audited copies of any report. Thus, it appears that the airline was not audited by outside auditors. If there was ever an inside audit, copies have not been made public.

The potential for Ghana Airways to succeed was quite high. For the most part, it operated in a market that was favorable. In addition to being a monopolist in the domestic market, it was one of a handful of airlines that provided regional service in West Africa. In the early days, the domestic routes were from Accra to Kumasi, Takoradi and Tamale, and later to Sunyani. Regional routes included flights from Accra to Abidjan (Ivory Coast), Bamako (Mali), Bathurst (Gambia), Conakry (Guinea), Dakar (Senegal), Freetown (Sierra Leone) and to Monrovia (Liberia), along the Atlantic coastline of West Africa. Another route, inland and up north, originated from Kumasi to Tamale (Ghana) to Ouagadougou (Burkina Faso/Upper Volta) to Mopti, Ségou and then onto Bamako (all in Mali).

From October 1996 until its final demise in 2004, the airline also had a monopoly on flights from West Africa to the east coast of the US. At the time, it was the only airline ferrying passengers between the US (JFK in New York and Baltimore in Maryland) and Kotoka International Airport, in Accra.

Travelers to the sub-region of West Africa were all transiting to their respective countries through Accra from the US. Accra had, in essence, become the hub for air passengers traveling to West Africa. Indeed, it was the dream of the airline to turn Accra into a regional hub (flightglobal.com, October 2, 2014.). Securing Category One landing status from the US Federal Aviation Administration made Ghana Airways only the second sub-Saharan African airline (the other being South African Airline) to have that prestigious status. It meant that the airline was capable of meeting the rigorous application process and to exercise the difficult oversight it needed over its operation; it demonstrated that the airline could operate efficiently.

In spite of this monopoly and the initial demonstration of competence, the airline was unable to capitalize on it to buttress its advantage. Complaints about its operation continued to mount. For example, a log of complaints to the US Department of Transportation indicates that between January and September of 2004, Ghana Airways received the most complaints of all foreign airlines that flew to the US. Of the 186 flight problems lodged against all international airlines, 75 (or 31%) were against Ghana Airways. Flight problems are defined as "cancellations, delays or any other deviation from schedule, whether planned or unplanned." The airline also registered 4.84% of all problems with refunds defined as "problems in obtaining refunds for unused or lost tickets, fare adjustments, or bankruptcies." The airline also appeared to have had problems with its baggage handling; 4.3% of baggage handling problems were against it (Report, November 2004, p. 40). Table 2 below summarizes the discussion.

TABLE 2
COMPLAINTS

Problems	Total Complaints	Percentage of Total	Rank
Flight Problems	58	31.18	1st
Refunds	9	4.84	3rd
Baggage	8	4.3	7th
Total	75		

Source: Adapted from USDOT, Air Travel Consumer Report, 9/2004, Issued 11/2004

Two caveats are in order to put these figures in proper perspective:
1. Ghana Airways ceased operation in July 2004. This means that the number of reported complaints understates what it would have been had it continued operating to the end of the reporting period.
2. The data includes several large airlines such as British Airways, Air France, KLM, Lufthansa, Alitalia, Emirates and EL AL, several of which have numerous flights a day to different cities in the US, compared to the two or three a week that Ghana Airways flew.

What these suggest is that, adjusted for the period and the numbers of flights, the complaints against the airline were more severe than the raw numbers and percentages presented above. When the airline was finally banned from flying to the US in July 2004, it was against a background of gross mismanagement and inability to remedy safety problems raised by the US DOT.

The potential for running a profitable airline business in West Africa, especially an international airline, is enormous. With a large diasporic population in Europe and North America, there is frequent to and from by this population. For example, in 2010 there were close to 350,000 foreign born Nigerians and Ghanaians in the US. (U.S Department of Transportation, 2004) Most of this population resides in the Northeastern US. With the impressive economic growth numbers posted by countries such as Ghana, Nigeria and Senegal, the volume of traffic between West Africa and the rest of the world has been increasing. With the demise of Ghana Airways, Delta Airlines (and later United Airlines) began to run regular flights between the US and West Africa. Delta currently has over 20 flights to West Africa with an excess of 5,000 seats per week, garnering 30% of the US to West Africa market (Raphael Kuuchi, 1/6/2015).

Ethiopian Airlines

The growth and transformation of a *"transportation system" (*Economic Focus, Volume 9, No 4,*)* is fundamental to the overall economic growth and development of a country. During the last decade or more, Ethiopia has been characterized as being among the fastest growing economies, not only in Africa, but also in the world. The Ethiopian Airlines (Ethiopian, henceforth) has shown resilience under three different types of political regimes for the 70 years it has existed.

The Emperor Haile Selassie Period (1946-1973) — Emperor Haile Selassie, following the end of WWII, pleaded to the governments of America, England and France to assist him starting an airline company, and founded Ethiopian in 1946. Ethiopian began its operation as a joint venture with an American airline, the Trans World Airlines (TWA). Five US Government surplus C-47 aircraft were purchased for venture (report.aspx, 1/6/15). Ethiopian began its first fight in a Douglas C-47 Skytrain from Addis Ababa to Cairo, Egypt with a stopover in Asmara, Eritrea in 1946 (report.aspx, 1/6/15).

The Marxist-Leninist Period (1974-1991) — The Military junta leader, Mengistu Hailemariam, introduced a Marxist-Leninist political ideology, ruling the country for seventeen years. Ethiopian was able to survive even during this intrusive period, however things improved when Mengistu invited back from New York Capt. Mohammed Ahmed to run Ethiopian without government interference from 1980-1991.

The EPRDF Period (1992-Present) — The Ethiopian People's Revolutionary Democratic Front came to power in Ethiopia after the previous regime was forced to exit (May 1991) without bloodshed in Addis Ababa. Although political stability was not certain initially, as time passed, the EPRDF was able to consolidate power. The EPRDF regime has been in power now for over 22 years, during which (see the various Figures), as an SOE, Ethiopian has expanded considerably.

After 70 years in the business of air transportation, Ethiopian has been transformed; its fleet now owns several state-of-the-art Boeing 787-Dreamliners. It has received recognition for many types of merits, with several awards granted in 2011 alone. Undeniably, Ethiopian is characterized as the fastest growing company in Africa and is ranked first among African airlines (Various sources). Today, Ethiopian's markets have expanded significantly, covering every continent. Ethiopian was named as Africa's Best Airline for Staff Service at the 2013 World Airline Awards (worldairlineawards.com/awards_2013/), followed by South African Airways, Air Seychelles, Air Mauritius and Kenya Airways.

In 1985, Ethiopian was characterized as "Ethiopia's Capitalist Airline" (May (August 19, 1985).). After three regimes with differing governments, Ethiopian remained as state-owned enterprise, but its management continued to flourish under the patronages of corporate organizational culture. The seeds of this corporate culture were planted during Ethiopian's commencement under TWA's sponsorship in 1946. The corporate culture inherited from TWA was kept unbroken in Ethiopian's operation. The decision to keep the connectivity with TWA's corporate culture has insured profitability and ever-expanding international service by Ethiopian**.**

The literature underscores that **"**Ethiopian has skillfully maintained its corporate culture in order to provide excellent air transportation services sustainably**" (**Kebede, May 3, 2016**)** For example, during the award, Mr. Tewolde Gebremariam, the CEO of Ethiopian, stated in his acceptance speech as follows:

> "As a customer service organization, we clearly understand the value of high quality service delivery and accordingly we have been investing heavily in training and development of our staff on one hand and state of the art information and communication technology and fleet on the other hand." (World Airline Awards. (2013)

The Factors Influencing Ethiopian's Success

There are political, economic, social, technological, environmental and legal factors influencing the success or failure of Ethiopian as a national flagship of air "transportation system." Ethiopian has sustainably shown a successful and profitable business venture throughout its existence, more so during the last two decades. Observers and air transportation experts have provided evidence to this effect.

According to Henok Teferra Shawl, Vice President for Strategy and Alliances at Ethiopian, pointed out that the success of Ethiopian is centers on its 'strategic capture' of the African market by establishing a multi-hub system of major connectivity within the continent and expanding its strategic market penetration through global markets *("Ethiopian Airlines, 14 January 2016).*

By all accounts, Ethiopian has shown sustainable growth and has expanded profitably in Africa. Ethiopia's geographical location has given Ethiopian the best comparative advantage to serve the African air-travelling population and other travelers from the Middle East and the Far East. Thus, Ethiopian is benefiting greatly from continental and international traveling population. In "Ethiopian Airlines: A glass half full" (June 2013), the CEO of Ethiopian, Tewolde Gebremariam, has enumerated four major factors that have given Ethiopian its success: *(1) its fleet, (2) infrastructure, (3) human resources, and (4) IT systems.*

These four pillars are a system of integrated factors acting as the engines of Ethiopian's success. As a result of Ethiopia's rapid economic growth and development, including growth within the country's civil aviation activities (increases in flight, passenger and cargo traffic growth in pattern and volume; increases in manufacturing, and maintenance-repair-overhaul activities; increases in new airports and business developments, etc.), the transportation sector needs qualified personnel. Therefore, the number of institutions in higher education (university level) within the framework of the civil aviation sector has increased significantly.

According to IATA, Ethiopian is ranked high as a leading airline in 'revenue and profit' making. In 2014, IATA ranked Ethiopian as the largest airline in Africa in revenue and profit (IATA, Aviation Analysis. (13th January, 2015)). To ensure that it remains globally competitive and profitable, Ethiopian has devised a 15-year strategic plan — Vision 2025 — a multifactor competitive policy *[Ethiopian International Passenger Service; Ethiopian Regional Service; Ethiopian Cargo; Ethiopian MRO; Ethiopian Aviation Academy; Ethiopian In-flight Catering Service and Ethiopian Ground Service].* Accordingly, Ethiopian has confidently surpassed both Egypt Air and South African Airlines *(Ethiopian Airlines, 2/3/15).*

Ethiopian's Business Model: The Full-service Network Carriers
Currently, there are seven airlines in Africa—South African Airways, EgyptAir, Kenya Airways, Ethiopian, Royal Air Maroc and Air Algérie—that one can characterize as "full-service network carriers." What are the advantages and disadvantages of this model for Ethiopian?

Management Strategy: State Ownership
From what we have been able to determine from the data and from interviewing the most senior strategist at Ethiopian, Mr. Henok Teferra Shawl, VP Corporate Strategy, Communications and Alliances, Ethiopian is 100% government-owned, while its operation is strictly based on private business discipline (Henok Teferra Shawl, Communications and Alliances, (March 2015).).

Management stability matters in the functioning of a global organization like Ethiopian. A closer examination of Ethiopian's Annual Report reveals that over 75% of the board of directors has remained in their post for over a decade. The longer these board members stay together will ensure the trust between them, thus generating a much-needed *social capital*. The 2014/15 Annual Report underscores that Ethiopian "Act in an open fashion and be result-oriented, creative and innovative" *(Ethiopian Airlines, Annual_Report_2014_15.)*

The growth of an organization like Ethiopian is an inevitable transformational process. In the last two years, Tewolde Gebremariam, CEO of Ethiopian, was interviewed by many business organizations, such as CNN and The International Air Transport Association (IATA), and had projected the following:

"By 2025, that should mean that Ethiopian is a $10 billion airline. And it will also be an aviation group with several business units and four hubs in Africa—in the east, west, central, and south. Africa is a big place and you can't serve it through one hub. We will be operating some 120 aircraft flying to 90 international destinations and carrying around 18 million passengers per annum. We will carry 820,000 tonnes of cargo and the number of employees will grow from 7,000 today to 17,000." (Ethiopian (vision 2025)

Ethiopian's Capacity Building

Ethiopian is a transformational organization with a well-defined *capacity building* process (Ethiopian (vision 2025)), which includes:

1. Ethiopian is self-sufficient in all aviation training systems, and has been since the 1960s. Other African countries' aviation trainees were receiving their training at Ethiopian.
2. The training academy provides training services and management assistance to many other countries. It also provides recurrent training to technicians, pilots, marketing & sales staff and cabin crew.

Thus, a well-designed and functioning organizational structure and/or culture contribute positively to the attainment of *"capacity building"* is a long-term process. Ethiopian is "currently in the second year of a huge three years, $60 million dollars' capacity building project." There are no obvious signs that indicate otherwise. For example,

- "Ethiopian as a national carrier currently enjoys state of the art maintenance facilities that maintain not just its own aircraft, but also over 75 African and Middle Easter airlines. It maintains Boeing 767, 757, 727, and 737 and Fokker 50 model airplanes and their components."
- "Ethiopian's organizational transformation of the entire air transportation system is commensurate with standards laid out and approved by the Federal Aviation Administration (FAA) and a number other international regulatory bodies"
- "In March 2015, Ethiopian hosted the 18th African Aviation Maintenance, Repair and Overhaul (MRO) conference in Addis Ababa's Hilton Hotel, attracting participants from every part of the world." **(**Tadesse, 2009**)**

The Ethiopian Aviation Academy

The Ethiopian Aviation Academy (EAA) is evidence of how far the company has come during the last 50 years, compared to its institutional maturity/capacity of the 1960s and 1970s, during which Ethiopian was still flying DC-6s and Boeing 707s and 720s. The EAA is one of trademarks of Ethiopian's sustained transformation. According to Gebremariam, the EAA is the largest aviation training school on the continent (CNN**,** Mar 25, 2016). Mr. Gebremariam further asserted that "the EAA is going to play a leading role in making sure that Africans are well educated and prepared for 21st Century African aviation." (CNN**,** Mar 25, 2016) The following are the EAA's two objectives:" (CNN**,** Mar 25, 2016)

1) Make sure Ethiopian is not challenged by the shortage of skilled manpower.
2) Train African youth to enable them to acquire the tools so they can get high quality jobs. This could be at Ethiopian or (over) the entire continent of Africa.

By 2025, the EAA hopes to train 4,000 students a year with five training schools (CNN**,** Mar 25, 2016) including, but not limited to: 1) the pilot training school, 2) aviation maintenance training school, 3) commercial school, 4) ground service school and 5) leadership school. According to the International Air Transport Association (IATA), the EAA has recently been transformed into a profit center of Ethiopian. It is certified by the Ethiopian Civil Aviation Authority, the U.S Federal Aviation Administration, the European Aviation Safety Agency (EASA), and IOSA (IATA Safety Audit). Mr. Gebremariam points out that the EAA will become a launching pad for African aviation trainees at all levels. Currently, all African airlines combined control only 20% of African air transportation, compared to 80% controlled by non-Africans. According to Mr. Gebremariam, Ethiopian should go forward with

the current vision and mission of 2025 to control both their continental and international traffic (http://allafrica.com/stories/200704250586.html).

Ethiopian's Networking and Code Sharing

Ethiopian has code share agreements with 26 airlines companies and is increasing the number of hubs within Africa. The main hub being Addis Ababa, with a second hub ASKY is a multinational private airline based in Lomé, Togo. On July 11, 2013, a third hub emerged with Malawi Airlines. Ethiopian has now 42 destinations in Africa (Ethiopian Airlines, 3/21/16.).

The core strategy for Ethiopian as a "full-service network carrier" focuses on the strategically expected benefits—*networking and code sharing*—influenced by regional and international factors. Ethiopian is expanding beyond the Addis Ababa hub, opening additional hubs and spokes ((June 16, 2014).) in Africa as well as other non-African countries, serving approximately 83 international and 20 domestic destinations across Africa, Asia, Europe, the Middle East, and North America. It is also operating an extensive domestic and international cargo network. Ethiopian became a member of Star Alliance in December 2011 ([The] Star Alliance Network. (December 2011)). The expansion of hubs and spokes provides several network advantages both in the short run and long run (BPO Industry, 2012). Ethiopian operates the youngest fleet in Africa with an operating fleet of 76 aircraft (Ethiopian Airlines,2/21/16.). Ethiopian has a commanding lead in terms of Africa-East Asia capacity with 18, 494 (non-stop seats) by carrier (6-Oct-2014 to 12-Oct-2014, CAPA – Centre for Aviation & OAG.)

ETHIOPIAN PERFORMANCE MEASURES

Trend and Comparative Analysis of Ethiopian Airline Performance

In the previous sections of this paper, we discuss two airlines—namely, Ghana Airways and Ethiopian Airlines—with the objective of highlighting the fact that the former failed and the later survived. In this section, we attempt to present a descriptive analysis of Ethiopian Airline's performance using both trend and comparative analysis. The goal is to determine whether Ethiopian is just another surviving national airline or one that meets or even exceeds industry performance expectations.

Trend Analysis

Trend analysis has long been employed to gain insights into the performance of corporate entities over time, usually with the goal of discerning temporal changes that require management attention. In the context of Ethiopian, Figure 1 below presents the temporal performance for two indicators, namely passenger revenue and operating revenue. While both indicators increased from 1994 to 2014, the total revenue indicator has consistently outperformed the passenger revenue, suggesting that Ethiopian has since-1994 diversified its revenue generation stream into other services beyond passenger haulage. It is even more interesting to note that the divergence between passenger revenue and total operating revenue spiked after 2005, indicating the generation of more revenue from non-passenger related services and diversification of its revenue sources.

FIGURE 1
PASSENGER REVENUE AND TOTAL OPERATING REVENUE, 1994-2014
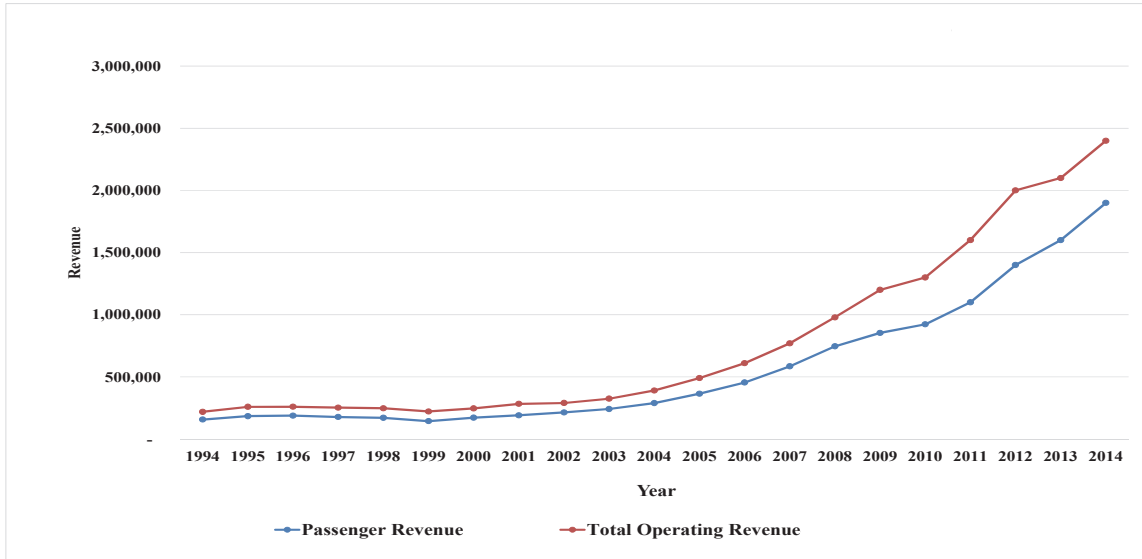
In Figure 2, below, Ethiopian's Available Seat Kilometer (ASK) is compared to its Revenue Passenger Kilometer (RPK). *Available Seat Kilometers* (ASK) captures the total *flight* passenger carrying capacity of an *airline* in *kilometers*. It is obtained by multiplying the total number of *seats available* for scheduled passengers and the total number of *kilometers* those *seats* were flown. Revenue passenger kilometers (RPK), on the other hand are a measure of the volume of passengers carried by an airline. Both indicators have increased since 1994 with an apparent increase in growth since the early 2000s. It is evident that the airline has, since that period, increased its excess capacity, which we take to be the difference between its carrying capacity and the volume of passengers actually carried. These trends are consistent with the growth of Ethiopian in the last decade as globally recognized airline.

FIGURE 2
AVAILABLE SEAT KILOMETER (ASK-000) AND REVENUE PASSENGER KILOMETER (RPK-000), 1994-2014
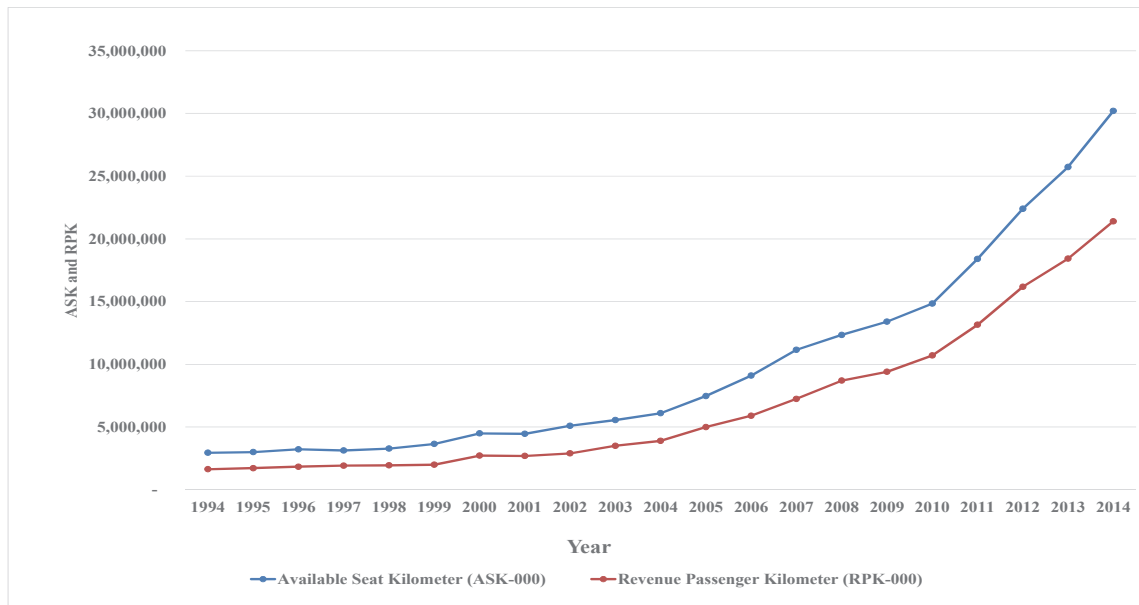
In Figure 3, below, the Passenger Revenue per ASK is shown. This indicator captures the total passenger revenues earned per available seat kilometer of the airline. "It is obtained by dividing passenger revenues by total available seat kilometers."

After a sharp drop between 1997 and 2000, we see an upward trend for the past decade and half (between 2000 and 2014). In that case, Ethiopian Airlines appears to be increasing its passenger carrying capacity while maintaining or increasing its revenue generated per passenger. It is therefore not surprising that our comparative analysis below shows that Ethiopian Airlines outperform both African and Global industry operating profit margins.

FIGURE 3
PASSENGER REVENUE PER ASK

Figure 3. Passenger Revenue per ASK
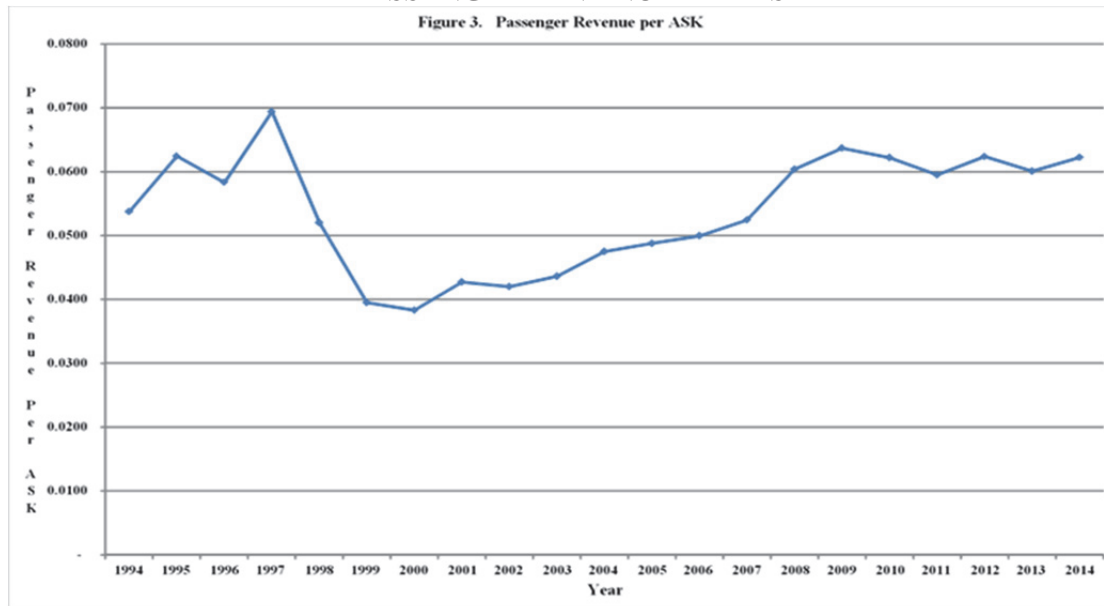
COMPARATIVE ANALYSIS

While the trend analysis above points to several indicators reflecting positively on Ethiopian Airlines, there remains the question of how Ethiopian performs relative to its peers in the Airline industry. In Table 3 below, performance indicators of Ethiopian such as Revenue per Kilometer (RPK), Passenger Load Factor (PLF), Available seat Kilometer (ASK) and Operating Profit Margin are contrasted with industry indicators at the African and Global level. It is evident that Ethiopian outperforms all four indicators at the industry level, except the Global Industry indicator for PLF. The OPM of Ethiopian is nearly double that of the Global Industry indicator and about eight times that of the African industry margin. Similarly, Ethiopian RPK and ASK performance easily more than doubles the African and Global industry averages. For example, the "Available seat Kilometer (ASK) grew by 17.2%, and traffic measured in revenue passenger kilometers (RPK) increased by 16%."

TABLE 3
ETHIOPIAN GROWTH VS. AFRICA & GLOBAL AVERAGE

	RPK Growth	ASK Growth	Passenger Load Factor (PLF)	Operating Profit Margin
Africa Industry*	5.8%	6.5%	68.7%	0.8%
Global Industry*	5.8%	5.7%	79.6%	4.3%
Ethiopian**	16.0%	17.2%	70.8%	7.9%

Source: *IATA-Jul 2013 –Jun. 2014; ** ET July 2013 – Jun 2014
Adapted from: Annual Report 2013/2014,

The descriptive information on Ethiopian Airlines suggest that it did not just survive while Ghana Airways collapsed, but has since demonstrated, through performance indicators, that it is a well-managed airline in terms of expansion and growing revenue generation over the last decade. The existing evidence, as shown above, also suggests Ethiopian is not only a government-owned Airline that has survived while others collapsed, but actually an airline that is competitive and better managed in terms of African and

Global Industry standards. In general, these insights regarding the performance of Ethiopian point to the fact that state enterprises are not by default inefficient or less competitive.

Ethiopian is a classic case of a state enterprise that has not succumbed to the well-established notion that state enterprises are by nature destined be inefficient. While the successful performance of Ethiopian Airlines over the years has been established on a temporal as well as a comparative basis, the question still remains as to which factors are responsible for its performance. Because of the lack of adequate data to do causality tests, we do not address that question and leave it to future studies.

CONCLUSION

This paper has investigated the factors affecting the success and failure of state-owned airlines. Of the three airlines considered, Ethiopian was successful, while Ghana Airways failed. While the sample size is too small to arrive at definitive conclusions, we can speculate a few factors that contributed to success and failure. First, Ethiopian airlines had a long relationship with TWA which may have helped create a corporate culture that lead to its success. Second, governance seems to be a significant factor in the success of state-owned airlines. One limitation of this paper is the lack of data for the failed Ghana Airways. Since history tends to be written by the winners, it is not surprising that we found much more information for Ethiopian than we did for the other airline.

Ethiopian Airlines has had a successful track record, which is rare for a state owned enterprise. What is even more surprising is how they managed to grow under three different governmental regimes. This makes them unique among African airlines. Their dominant position has allowed them to grow through partnerships with other countries. If they are able to maintain their competitive advantage, they are likely to be the dominant African airline for the foreseeable future.

REFERENCES

Amankwah-Amoah, J., & Debrah, Y. A. (2010). The Protracted Collapse of Ghana Airways: Lessons in Organizational Failure. *Group & Organization Management*, 35(5), 636-665.

Barlow, A. (2016). *Ethiopian Airlines: How SOEs can succeed*. Retrieved from http://www.politicsweb.co.za/news-and-analysis/ethiopian-airlines-how-soes-can-succeed

Boko, F., & Qin, Y. J. (2014). Failure of State-Owned Enterprises in Benin. *Management and Service Science (MASS), International Conference on Management and Service Science*. Retrieved from http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=5998620

Buge, M., Egeland, M., Kowalski, P., & Sztajerowska, M. (2013). *State-owned enterprises in the global economy: Reason for concern?* Retrieved from http://www.voxeu.org/-article/state-owned-enterprises-global-economy-reason-concern

Chvakul, M., & York, R.C. (2006). Implications of Quasi-Fiscal Activities in Ghana. *IMF Working Paper*, WP/06/24, January.

CNN. (2016). Inside Africa's largest aviation academy. From Earl Nurse CNN; TM & © 2016 Cable News Network, Inc., a Time Warner Company. Retrieved from http://www.kitv.com/-story/31564216/inside-africas-largest-aviation-academy

Dikolli, S. (n.d). Retrieved from http://lexicon.ft.com/Term?term=non_-financial-performance-measures.

Ethiopian. (2025). Will be the most competitive and leading aviation group in Africa by providing safe, market driven and customer focused passenger and Cargo Transport, Aviation Training, Flight Catering, Maintenance Repair and Overhaul (MRO), Ground Services, Domestic and regional services by 2025. Retrieved from http://www.ethiopianairlines.com/corporate/strategic lan,3/20/16. Also, Strategic Plans (Vision, Mission and Values), http://www.ethiopianairlines.com/-corporate/strategic-plan

Ethiopian Airlines. (2014). Annual Report. Retrieved from http://www.ethiopianairlines.com/Cms_Data/-Contents/Ethiopian-Airlines/Media/Corporate/-Company/Reports/EAL%20_Annual_-Report_2014_15.pdf

Ethiopian Airlines. (2014). The High-Flying Success of Ethiopian Airlines. Retrieved from
http://www.natlawreview.com/-article/high-flying-success-ethiopian-airlines; also, Ethiopian's
domestic and International route network. Also see http://www.ethiopianairlines.com/en/-
network/domestic/

Ethiopian Airlines. (2015). A response to an interview conducted with Mr. Henok Teferra Shawl, VP
Corporate Strategy, Communications and Alliances.

Ethiopian Airlines. (2015). Retrieved from http://www.ethioembassycanada.org/news/news-3/415-
ethiopian-airlines-2015-outlook-more-rapid-expansion-as-it-becomes-africa-s-largest-airline

Ethiopian Airlines (Annual Report of 2013/14). (n.d.). Executive Summary. Retrieved from
http://www.world-airlineawards.com/main/-mthds.htm

Ethiopian Airlines. (n.d). Following the successful inaugural flight to Cairo, a regular weekly service was
established. Weekly services to Djibouti and Aden followed, as well as a domestic service to
Jimma. Demands for additional services were so great that towards the end of 1946, four more C-
47 Skytrains were purchased. Since these aircraft were ex-US military, they had few comforts; all
had folding bench-type canvas seats along the sides, with the central aisle kept clear so that cargo
could be lashed to the floor, http://www.ethiopianairlines.com/en/corporate/annual- report.aspx.

Ethiopian Airlines. (n.d). See the details of Code Share Partners with Ethiopian. Retrieved from
http://www.ethiopianairlines.com/-corporate/company/partner-alliance/code-share

Ethiopian Airlines. (n.d). Strategic Partnership: Hubs and Spokes: Lome (Togo) - Ethiopian Second Hub
ASKY is a multinational private airline based in Lome, Togo. Retrieved from
http://www.ethiopianairlines.com/-en/network/domestic/.

Ethiopian Airlines. (n.d). Retrieved from
http://www.ethiopianairlines.com/en/news/prarchive.aspx?id=569.

Flight Global. (1958, July 8). The Baltimore Afro-American. Retrieved October 2, 2014, from
http://www.flightglobal.com/-news/articles/ghana-clears-faa-hurdle-13487/

Gillespie, N., & Dietz, G. (2009). "Trust repair after organization-level failure", *Academy ofManagement
Review, 34*(1), 127-145.

Hub and Spoke operating model A new business paradigm for the Indian IT-BPO Industry. (2012). The
Hub & Spoke model. Retrieved January 25, 2015, from
http://www.kpmg.com/IN/en/IssuesAndInsights/-ThoughtLeadership/Hub-and-spoke-model.pdf

IATA. (2015). Aviation Analysis.

IATA. (2013). Ethiopian Airlines: A glass half full. Retrieved March 21, 2016, from
http://www.airlines.iata.org/ceo-interviews/ethiopian-airlines-a-glass-half-full

Kanoria, S.P. (2007). *An Analysis of Airline Cost Curves for US Carriers: Determining Minimum
Efficient Scale.* Economics Honours Thesis, Stanford University, US. Retrieved from
http://economics.stanford.edu/files/Honors_Theses/Theses_2008/Kanoria,%20S.%202008.pdf

Kebede, N. (2016). *Ethiopian Airlines: A Testament of Vivacity in the African Aviation Industry.*
Retrieved from https://www.africanexponent.com/

Kuuchi, R. (2012). *The Bane of West Africa Air Transport.* Retrieved http://www.afraa.org/-
index.php/media-center/publications/articles-a-research-papers/2012-articles-and-research-
papers/390-the-bane-of-west-africa-air-transport-by-mr-raphael-kuuchi/file

May, C.D. (1985, August 19). *Ethiopia's Capitalist Airline.* Special to the New York Times. Retrieved
from http://www.nytimes.com/1985/08/19/business/ethiopia-s-capitalist-airline.html

Mellahi1, K., & Wilkinson, A. (2010, October 12). Managing and Coping with Organizational Failure:
Introduction to the Special Issue. *Group and Organization Management*, 35(2).

Mwawura, K. (2007). The Failure of Corporate Governance in State Owned Enterprises and the Need for
Restructured Governance in Fully and Partially Privatized Enterprises: The Case of Kenya.
Fordham International Law Journal, 31(1), 1.

Mugabe, D. (2007). Ethiopian Passes Top Aviation Safety Audit. *East African Business Week (Kampala).*
Retrieved from http://allafrica.com/stories/200704250586.html

Obara, C.L., & Ogoun, S. (2014). Fiscal Transparency, Accountability and Corporate Collapse: A Post-Mortem Analysis of Failure of State-Owned Enterprises (SOEs) in Nigeria. *Research Journal of Finance and Accounting*, 5(18). Retrieved from http://iiste.org/Journals/index.php/RJFA/article/view/16222/16605

Pennington, M. (2011). Principal-Agent Theory and the Welfare State. *Cato Policy Report*, September/October. Retrieved from http://www.cato.org/policy-report/septemberoctober-2011/principal-agent-theory-welfare-state.

Prokopenko, J., & Pavlin, I. (1981). Entrepreneurship Development in Public Enterprises. *Management Development Series*, No 29, ILO, Geneva.

Sappington, D.E., & Joseph E. Stiglitz (1987). "Privatization, Information and Incentives", *Journal of Policy Analysis & Management*, 6(4), Summer, 567-85.

Soylu, S. (2011). Creating a Family or Loyalty-Based Framework: The Effects of Paternalistic Leadership on Workplace Bullying. *Journal of Business Ethics*, 99(2), 217–231. Retrieved from http://www.jstor.org/stable/41476194 and http://www.ethiopianairlines.com/en/corporate/annual-report.aspx

Tadesse, K. (2009). *Ethiopian Airlines spends big for capacity building*. Retrieved from http://nazret.com/blog/index.php/-2009/03/30/ethiopian_airlines_spends_big_for_capaci

The Baltimore Afro-American. (1958). Transportation System" is a multi-sector—air, water, road and rail and trucking environment. A longitudinal analysis" is provided in "The Role of the Transport Sector in Ethiopia's Economic Development. Economic Focus, Ethiopian Economic Association, 9(4). Temesgen Aklilu—Translated by Yonas Admassu.

The Star Alliance Network. (2011). Retrieved from http://www.staralliance.com/documents/20184/680657/SCP-Facts+and+Figures/c8797e1f-12d0-46ea-b5ad-28edfa31803c. See also, http://www.staralliance.com/en/member-airline-details?airlineCode=ET

World Airline Awards. (2013). The Best Airline Staff Service Awards represent the combined rating for an airline's performance across both the Airport Staff and Cabin Staff. Retrieved from http://www.worldairlineawards.com/awards_2013/svcexcafrica.htm

US Department of Transportation. (2004). US Department of Transportation: Air Travel Consumer Report, p. 40, Table 4. Retrieved from http://immigrationpolicy.org/just-facts/african-immigrants-america-demographic-overview