

Sustainability of Expansion in an African Airline: A Case Study

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Abstract

Ethiopian Air Lines (EAL) has committed to the purchase of 41 new aircraft, nearly doubling their fleet and introducing three new, state-of-the-art types (the A350-900 and the 787-8, and the DA40NG) into a fleet currently consisting of seven models. In a logistically complex industry, this represents a substantial increase in resource commitments and management responsibility in many areas including maintenance, pilot training, facilities, and route planning. The purpose of this paper is to examine this growth strategy, its underlying assumptions, and its sustainability given long-range industry trends in both the developed and the developing world. We will also examine some of the sociotechnical issues identified by aircraft manufacturers and political issues from the perspective of national governments in rapid growth of airlines in developing nations. These issues include human resource requirements and management models appropriate to a technological periphery. We anticipate that these comparisons will yield useful insights to other airlines in developing nations that are planning their expansion into wider markets.

Overview

History of Ethiopian Airlines (Ethiopian). Emperor Haile Selassie established the airline following the Italian Occupancy, 1935-40. Americans, British and French were enlisted to assist. Ethiopian was formed on December 21, 1945 and began operations on April 8, 1946. Ethiopian made its maiden international flight to Cairo in 1946 flying a Douglas C-47 Skytrain (Ethiopia: Academy Graduates, 2012). TWA assisted in the development by providing American pilots, maintenance technicians, administrators and managers. Within 25 years, in 1971, Ethiopian was prepared to operate independently, with Ethiopian personnel. Since its inception, Ethiopian Airlines has grown steadily (Ethiopian Airlines, n.d.). Currently, Ethiopian has nearly 6000 employees. They currently have 66 international and 17 domestic destinations. Within African, there are 41 destinations, eight in Europe and America, 17 in the Middle East and Asia. In addition they also have 24 destinations for cargo, 15 in Africa, seven in Gulf, Middle East and Asia and two in Europe (<http://www.ethiopianairlines.com/en/corporate/default.aspx>).

Operating Fleet	
Long Range Passenger Services	5 - Boeing 777-200LR 11 - Boeing 767-300ER
Medium Range Passenger Services	7 - Boeing 757-200 ER 5 - Boeing 737-700 6 - Boeing 737-800 [2 with Sky Interior]
Regional and Domestic Passenger Services	8 - Q400 DHC-8
Cargo and Non-Scheduled Services	2 - Boeing 757-260F 2 - MD-11F 2 - Boeing 747-200F
Total operating fleet	48 Aircraft

Table 1. Fleet information: Their fleet consists of 48 commercial transport aircraft. This chart depicts their current fleet. (<http://www.ethiopianairlines.com/en/corporate/fleet.aspx>)

Aviation Activity in Africa

How does Ethiopian Airlines' activity level compare to the current aviation activity in all of Africa? The International Monetary Fund (IMF), in its July 2010 Economic update says

growth in Sub-Saharan Africa is expected to increase by 4.5% in 2010 and 4.9% in 2011, following growth of 2.9% in 2009. In response to the renewed economic activity in Africa and growing demand for air services, African airlines are repositioning themselves through cost-cutting, restructuring and re-engineering and this is set to yield profitability in 2010 of about US\$100 million according to IATA.

Boeing forecast that the overall African economy is projected to grow at 4.8% in 2010 following 2.9% growth in 2009. The strong growth will be the outcome of the worldwide recovery, set to stimulate demand for African exports as well as attract imports into the continent. The strongest growth region will be West Africa, buoyed by foreign interest in new oil and minerals discoveries and mining activities.

Substantial Fleet Increase in the next 20 Years

In September 2010, Boeing forecast African carriers will experience steady growth over the next 20 years as air travel in Africa continues to grow with the economy. Boeing's forecast African market new aircraft requirement to be 710 airplanes, approximately 2.3% of the estimated global forecast; worth about US\$80 billion over the next 20 years.

African market forecast Aircraft Requirement: 2010 to 2029

Kuuchi (2010) reported that Airbus' outlook for Africa is more bullish than Boeing's, with Airbus expecting 1,270 aircraft deliveries in the 2009 to 2028 period, comprised of 341 aircraft of under 100 seats and 929 aircraft with more than 100 seats. This represents a more than doubling of the African passenger aircraft fleet. According to Airbus, the fleet growth would be boosted by intra-regional operations. The manufacturer forecast that domestic and intra-regional traffic will increase by 5.6% in the 2009 to 2018 period and by 6.2% in the 2019 to 2028 period.

Both Airbus and Boeing see opportunities arising from the need for replacing older aircraft in the region, particularly in the single-aisle market segment. The current African fleet is nearly 20 years old on average and the market craves more fuel efficient aircraft to bring down the cost of operations, improve safety and minimize service disruptions (Kuuchi, 2010).

The drivers for new aircraft deliveries therefore will include; the growing demand for airline services, the need to replace aging, less fuel efficient and heavy maintenance dependent equipment as well as competition pressure by more aggressive non-African operators.

Boeing views strong growth in Africa and this trend is expected to continue, with anticipated growth of intra-Africa at 5.7% over the 2009 to 2029 period. The growth to Asia Pacific is expected to be 8.7%, to North America 7.3%, to Europe 4.6%, to Middle East 6.5% and to Latin America 5.5%.

Airbus forecasted that total Africa traffic is expected to grow by 5.8% in the 2009 to 2018 period and by 5.4% in the 2019 to 2028 period. This represents a 20-year average growth of 5.6%, above the world average of 4.7%. Growth in freight traffic is anticipated at 4.9% and 4.5% respectively.

Ethiopian ordered 35 new airplanes direct from the manufacturers. Including the orders of five B777-200LR and twelve A350-900, Ethiopian has also on order ten Boeing B787 and eight Bombardier aircrafts. These investments enable Ethiopian to operate one of the youngest fleet in Africa with better comfort and efficiency. Ethiopian Airlines and ASKY signed a management contract which enables Ethiopian Airlines to manage ASKY for a period of five years. The management contract is an important move marking an historic intra-African co-operation in the airline business. The agreement helps the two carriers to develop a West African hub in Lome, Togo for the regional and inter-continental routes (Corporate History, 2012).

Ethiopian Airlines, the Premier Airline in Africa

Ethiopian received four different awards during in 2011. Ethiopian received "AFRICAN CARGO AIRLINE OF THE YEAR" Award on 24 February 2011. Ethiopian won "Deal of the Year 2010" Award on 20 April, 2011. Ethiopian Airlines also named "Africa's Most Profitable Airlines" for the third time in a row in July 2011. Ethiopian Airlines also received the AFRAA

Award for being consistently profitable over the years at the 43rd AFRAA Annual General Assembly held in Marrakesh, Morocco on November 21, 2011 (<http://www.ethiopianairlines.com/en/corporate/history.aspx>).

Also noteworthy is that on December 11, 2011, Ethiopian Airlines Captain flew the first 787 to the African soil with debut landing at Addis Ababa's Bole International Airport. Ethiopian Airlines joined Star Alliance on December 13, 2011. At a ceremony held at Addis Ababa's Bole International Airport the Star Alliance Chief Executive Board (CEB) welcomed Ethiopian Airlines as the Alliance's third carrier based on the African continent. Ethiopian's expansion is supported by their mission statements as follows.

- To become the leading Aviation group in Africa by providing safe and reliable passenger and cargo air transport, Aviation Training, Flight Catering, MRO and Ground Services whose quality and price "value proposition" is always better than its competitors,
- To ensure being an airline of choice to its customers, employer of choice to its employees and an investment of choice to its Owner,
- To contribute positively to socio economic development of Ethiopia in particular and the countries, to which it operates in general by undertaking its corporate social responsibilities and providing vital global air connectivity,

Vision 2025

- To become 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, MRO and ground services by 2025.

In 2010, Ethiopian produced an aggressive expansion plan in response to their high level of demand. Last year they experienced a 450% increase in passenger demand resulting in a 40% profit margin (TerefeInterview, 2011).

By 2025, Ethiopian expects to triple their fleet size from 45 to 112 aircraft. Their passenger traffic is expected to reach 18 million per year. Cargo is expected to increase by a factor of 7, to 710,000 million kilos. Revenue will increase by a factor of 10. Profit increases by a factor of 9. Staff will increase from 5,600 to 16,900.

Below is a list of the aircraft on order (<http://www.ethiopianairlines.com/en/corporate/fleet.aspx>). This is the largest order from any one airline within Africa and the most ambitious expansion plan in airline history.

Fleet on Order	
Long Range Passenger/Cargo Services	12 - A350-900 from Airbus 6 - 777-200F for Cargo 2 - 777-300F for Cargo 10 - 787-8 Dream Liner from Boeing
Long Range Cargo Services	4 - 777 Freighters from Boeing
Medium Range Passenger Services	8 - 737-800 from Boeing
Regional and Domestic Passenger Services	5 - Q400 (training aircraft)
Total fleet on order	43 Aircrafts

Table 2. Ramnifications of Rapid Growth on an Airline.

Human Resources

(How will they recruit eligible candidates for employment?). According to Ms.Terefe, Director, Public Relations at Ethiopian (TerefeInterview, 2011), the goal is to recruit mostly from the local population. In fact, their training programs are designed for Ethiopian Citizens only. The qualifications for candidates in all programs include age, height and weight

criteria. The most common age range for applicants is 18 to 25 years (<http://www.ethiopianairlines.com/en/careers/training.aspx>).

In contrast to aviation training practices in the United States, where students self-fund their own aviation training and education through various programs and schools, Ethiopian conducts ab-initio training for all of their new hires, including pilots, maintenance technicians, and cabin crew. They even provide leadership training for the administrators. Most new employees are trained by the airline within their Ethiopian Aviation Academy. This is a huge financial commitment on the part of Ethiopian. Therefore, they only hire and train the number of personnel that they need to fulfill operational duties.

In addition, they recruit world-wide for various positions, including flight crew (<http://www.ethiopianairlines.com/en/careers/default.aspx>). Approximately 4,000 people go through training each year. They are continuously updated their training technology (Tour of Ethiopian, February 2012). Ethiopian also conducts recurrent training in various areas including technical, cabin crew and commercial operation.

In the 2010/2011 reporting period, they increased this type of training by 27%. Therefore, in order to sustain the retraining activity, they will have to increase their staff and facilities accordingly. According to Captain Steve Jones, interviewed in April, 2011, a former Chief Pilot and operation manager at United Airlines, there are typically 6.5 pilots needed for each airplane. For Ethiopian, that equates to 280 new pilot hires just for the newly ordered aircraft. For support staff, the ratio of staff increases at the same proportion as the increase in fleet size...for example, by doubling their fleet, they will need to double their staff. This is in agreement with Ethiopians' Vision 2025, where they stated an increase in staff from 5,600 to 16,900. In order to support their expanding route structure, they will also need to increase their sales force around the world. Each new destination required airline staff as well (Jones Interview, 2011). For Ethiopian, that means that they will need to staff numerous new locations. In 2010, Ethiopian opened new services to Pointe Noire, the second largest city in the Republic of Congo, effective June 16, 2010. In 2011, Ethiopian started new services to Hangzhou-China, to Malakal-Southern Sudan, Milan-Italy, and Muscat-Oman. Ethiopian also launched daily nonstop flights to Beijing with its long range 777-200.

Regardless of whether Ethiopian transfers their own employees from Addis or hire locally in at each new destination location, they must be anticipated the challenges of blending different cultures, language, authority, and work habits.

What is required to accommodate increased training needs? Ethiopian purchased five (5) new training aircraft, the Bombardier Q400, a turbo-prop aircraft. In addition, they have full scale simulation capability at the aviation academy (Tour of Ethiopian, Feb 2012). More instructors will join the training organization.

According to Ethiopians' 2010/2011 Annual Report (p. 10), in order to satisfy the human capital requirement of the company along with Vision 2025, formulating cooperative programs with learning institutions was one of the major tasks for the year.

The effort is complemented by the support secured from the MoE (Ministry of Education) and MoD (Ministry of Defense). Currently, they have four groups of AMT (Aircraft Maintenance Technicians) trainees, enrolled in the Air Force training facility. The project with MoE has been successful and the curricula development for Technician, Cabin Crew and Customer service fields are completed and the documents are ready to be forwarded to MoE for accreditation with a plan to start the program in September 2011.

As one part of vision 2025 strategic direction, main partnership areas were clearly identified and memorandum of understanding (MoU) has been signed to institutionalize the relationships and assure continuity. To facilitate the recruitment process on cabin crew, customer service agents and others, ten regional and 14 preparatory high schools in Addis Ababa were approached to provide data exchange of students.

How will they retain employees once they are hired? African airlines face new challenges because of liberalization, alliances, free market pricing and new technology. The brain drain represents a safety hazard if inadequately skilled or inexperienced personnel are allowed to fly or maintain our aircraft. Airlines need to train and retrain in a context of scarce capacity. Once trained and qualified, staff migrate to other higher paying jobs. Airlines training needs cover a wide range of disciplines including: maintenance and engineering, flight crew, middle and high level management, commercial management, safety and risk management, etc. Also, training is often delivered in English only, which represents a barrier to non-English speaking organizations (Chingosho, ICAO Panel 3).

Infrastructure

What changes will need to be made at the airline's facilities? There is a building at their facility at Bole airport dedicated to training, including simulators. Ethiopian currently has maintenance hangars dedicated to smaller turbo-prop, large transport category, component overhaul and engine. They are building a brand new hangar for maintenance to accommodate the new aircraft and ultimately will have three hangars for aircraft maintenance: turbo-prop, narrow body and wide body (tour of Ethiopian Airline facility at Bole Airport, Addis, 2012)

Aircraft delivery schedules (how will these impact their schedule for infrastructure?). Since Ethiopian's operations are all based at Bole Airport in Addis Ababa, the airport will have to grow in order to accommodate the increased size and number of aircraft, passengers, baggage and cargo. The dimensions of the runways and taxiways must be able to accommodate all of the new large transport category aircraft. An on airport fuel farm and fueling equipment must be able to handle the significantly increasing number of operations. New gates, loading bridges, and baggage handling equipment and terminal space must increase to handle passenger processing needs. Passenger services must be provided such as rest rooms, waiting areas, work space with reliable internet service, and concessions for shopping and eating. Increases in security must also be proportional to the increasing number of passengers and cargo (Powell Interview, April 2011).

New destinations. At each new destination, Ethiopian must secure airport use agreements for passenger processing; including ticket counters, baggage handling, and gates (including waiting areas). The airline must arrange adequate office and work space for flight crews, maintenance personnel and cleaning personnel. For aircraft processing, they must arrange adequate spares inventory for turn-around inspections and replenishments, and common scheduled and unscheduled maintenance. Maintenance personnel must have access to maintenance inspection and repair instruction manuals, usually software based.

Therefore reliable computer technology and internet service is a requirement. Reliable internet service is a rarity in developing countries. Hardware must be purchased, such as tooling and equipment for maintenance and ground handling. Contracts must be arranged for fueling, catering and lavatory services.

Safety

Oversight and governance at Ethiopian Airlines is collaborative effort. The regulatory authority presiding over Ethiopian is the Civil Aviation Authority (CAA). Also, the Federal Aviation Authority is present at Ethiopian in Addis to regulate the facilities and services. Ethiopian complies with International Civil Aviation Organization (ICAO) policies. The African Aviation Authority (AFRAA) is also involved in the oversight at Ethiopian. Ethiopian publishes reports routinely for each of these regulatory agencies and meets the requirements satisfactorily (Terefe Interview, 2011). Recently, the Ethiopian Aviation Academy and Ethiopian MRO secured European Aviation Safety Agency Approval. Ethiopian Airlines Aviation Academy received the European Aviation Safety Agency (EASA) approved part-147 type maintenance training organization certification while Ethiopian MRO Unit received EASA Part 145 approval.

Human Factors and Technology

Ethiopia holds safety as the number one priority, according to their Vision Statement **Invalid source specified**. However, within any business, growth is a hazardous undertaking. In an industry that combines technological complexity with a zero-tolerance for error, too-rapid growth has unique dangers: ValuJet was a startup carrier, formed in 1993 after airlines were deregulated in the United States in 1979; rapid, improvised growth led to numerous mishaps, capped by the crash of flight 592 in the Everglades in 1996 effectively killed the airline. This crash was a very public illustration of Charles Perrow's concept of a "system accident," one that results from the complexity and tight coupling of the operational system.

In ValuJet's case, it was the tight coupling of the aircraft, leaving little tolerance for mishandled materiel and little margin for error once airborne, with the complexity of relationships with a maintenance contractor and maintenance procedures, in which unfamiliarity with or misunderstanding of "expired" oxygen canisters led to their shipment in the hold of a passenger flight.

Perrow's concept, which has been given added dimensionality by "high reliability theory" (positing that there are measures that can be taken to mitigate or minimize the hazards of complexity and tight coupling), has been extended to the addition of cultural complexity by a research collaboration, "technological peripheries," that held a workshop in Mexico City in April, 2004. One notable insight from this workshop might be summarized by stating that safety culture does not scale up. Every airline has a commitment to safety; the industry veterans that founded ValuJet were all safety conscious. But as they took on new business relationships, new business commitments, new routes, new obligations, and new team-members, this commitment took a back seat to the more urgent tasks of meeting schedules and growth objectives. Some of the cultural complexities that go along with expansion into diverse geographic regions include:

- Linguistic differences
- Resource depth
- Authority
- Cooperation and individualism
- External relationships and topology
- Corruption

These are all issues that bear on system complexity and coupling, and also on capabilities for maintaining a resilient and high reliability response. Some of these complexities are more obvious than others. **Language differences** can be overcome through training, and ICAO has set standards for English proficiency; yet minimal levels of proficiency are not adequate for negotiating and resolving any but the simplest problems. Negotiating such issues as an ambiguous clearance or confusing weather takes additional time if one must code-switch between languages.

Language differences can be viewed as resource issues manageable through commitments and tradeoffs: if an airline is willing to invest sufficiently in language training for its flight crews. **Resources** such as these often cannot be easily scaled up. An airline operating in Europe can confidently assume a deep pool of available personnel with English as a first or second language; in other regions, this assumption cannot be made, particularly if one is looking for higher levels of competence required for complex negotiations.

As anyone who has operated a field station knows, availability of qualified personnel can be a problem. After language, perhaps the most culturally sensitive issue is **authority**. (We can reference Jing's work here.) Air transport, initially growing out of a military background, makes clear assumptions about rank and chain of command.

Yet within these assumptions, there are a number of unanswered questions:

- Is authority absolute? Are there no circumstances under which crew should take over? The recent Jet Blue incident ended without catastrophe because the F/O took actions that, in other circumstances, would be viewed as crew mutiny.
- Which has final authority – live, or automated instructions? The Überlingen crash, between a Federal Express and a Bakshirian aircraft, resulted from different responses to a TCAS advisory and ATC voice instructions.
- Should flight crew, especially cabin crew, ever contradict the CAP? The entire discipline of CRM provides instruction in how and when this is appropriate, but in authoritarian cultures CRM is only a varnish painted over deeply ingrained habitual responses.
- Do informal assumptions regarding authority override written directives? The crash of American 965 in Colombia resulted, in part, from ATC's unwillingness to correct a hazardous approach; differences in rank and social status made Colombian ATC defer to the US flight crew.

As flight systems become more automated, i.e., less flexible and therefore less negotiable, these issues will stay in the forefront.

A related set of issues is **cooperation and individualism**. The discipline of Crew Resource Management is derived from Anglophone social psychology, and its success in averting several catastrophes is justly celebrated.

I have observed training manuals in the Far East where the phrase “Crew Resource Management” stood out in Roman letters amidst Chinese orthography, because the phrase did not easily translate into Mandarin. If translating the words is difficult, translating the attitudes and behaviors is even more so. As any enterprise expands, it takes on an enlarged array of **external relationships**, the management of which adds complexity: the experience of ValuJet with its maintenance contractor Sabretech is illustrative of this. A regional carrier providing point-to-point or hub-and-spoke services among a few pairs of destinations, with its own maintenance sheds and in-house staff, adds several dimensions of complexity when it expands to a networked system of routes. To state this way, taking on new relationships, whether with new contractors or new destinations, is like an injection of steroids into the problem of complexity. In part this comes from new flows of resources, which Operations Research provides insight for managing; but more seriously it comes from flows and collisions of attitudes, which must also be managed.

There is a final issue that I hesitate to bring up, because it could seem to be painting ethnic stereotypes, yet it is an issue in every industry and every region. This is the issue of **corruption**. Within stable industries, personnel have been socialized into the norms of proper behavior, and develop an intuitive sense of when someone else can or cannot be trusted. Rapidly growing or changing industries – Wall Street, for example – are corruption-prone, particularly if there are large rewards involved. The aviation community tends to be very straight-arrow, and those who are inclined to cut corners are quickly weeded out; an interesting study waiting to be done would be of corruption in commercial aviation, if for no other reason than its findings would probably be quite slim. On the other hand, we know from studies by Transparency International (www.transparency.org) that some geographic regions are far more corrupt than others. Transparency uses corruption index that ranges from 1 (most corrupt) and 10 (clean or zero corruption). Most countries around the world are between 1 to 9. For example, the cleanest top two countries are New Zealand 9.5, Denmark and Finland tied at 9.4, The USA is 7.1 below Qatar & Chile in 2010.

Countries with major African Airlines and their CPX include: South Africa=4.1, Ghana 3.9, Egypt=2.9, Ethiopia=2.7, Nigeria=2.4, Kenya 2.2. Both Nigeria and Kenya are top corrupt states, Ethiopia is a little better. South Africa and Ghana less corrupt and Botswana is the most clean in Africa at 6.1 and ties with Taiwan. China is also corrupt at 3.6 and India at 3.1. The most corrupt countries in the world are North Korea and Somalia which are rogue state and failed states respectively. Corruption affects capacity and sustainability of Airline run by

governments. Effective Good Governance is important to get an Airline of the ground. For example, the most populated African country in Africa Nigeria could never get a national Airline of the ground in spite of oil wealth. Recently it had disaster in accident.

Environmental Impact. What is Ethiopian Airlines doing to minimize the negative impact of the environment given that they are increasing the number of airplane operations? According to Ms.Terefe (Interview, 2012), Ethiopian's management is making conscious decisions to that will enable the airline operations to have less of a negative impact on the environment. They have purchased newer, state-of-the-art fuel efficient aircraft. And they are installing solar power in buildings, including the airport. Training sessions for employees provide information on how to conserve resources, including light, paper and water.

Economic Impact. The economic impact of EAL is significant since it employs over 6000 persons across skills and injects significant funding to Addis Ababa business communities ranging from hotels, condos, taxis. EAL brings in several African business persons and diplomats given Addis Ababa is home of African Union and United Nations Economic Commission of Africa and other international organizations including large diplomatic community of African states and nations around the world and their families. So, it has significant multiplier or snow ball effect on the country's economy. It also contributes to tourist industry bringing in people to the land of 13 months sunshine.

Ethiopia has a great potential in tourism. EAL contributes that. She has both historic, cultural and rare animal and bird as well various ethnic groups in its territory. EAL also connects 44 African states to each other and to the world. The financing of Ethiopian is basically from sales revenues and perhaps loans. Since it is not a public company there is no shares sold. It is governed owned company with a management team of 15 persons that includes two women under a CEO that cover different areas of operation. We have met Mr. Samuel Assefa, 2011, who is VP of Ethiopian Aviation who was just coming on the team when we visited. EAL is governed Management Board of 10 persons, all male, directly selected by the Prime Minister. How such board is selected is critical since the board or the PM also appoints the CEO. Ethiopian Airlines' governance is highly centralized that may impede flexibility and innovation in management. Greater Transparency of selection of Board including CEO is critical. But, Ethiopian has survived through difficult Ethiopian Regimes since 1974, starting in 1945 with American connections through TWA and Boeing later.

That strong historic connection between US-Ethiopia before 1974 created strong national airlines, Airforce, the Navy where Ethiopia was a leader in Africa during imperial period up to 1974 when a Military Dictator influenced by former Soviet destroyed the US-Ethiopia connections, and committed massive human rights.US Government under the Carter Administration abandoned a strong relationship that run for over half a century.

So, Ethiopia became a cold war victim and a former Soviet Union client state. The Soviet Union imploded in 1991. But, EAL survived under both Ethiopian Regimes that ruled since 1974. The Ethiopian CEO insisted to be autonomous during the period of Military rule from 1974-91. The financing basically from investing its profit since EAL has been the most profitable Airline in Africa. Although it is a government owned it has positive impact both in Addis Ababa and Ethiopia. EAL also has several airports to connect other regions of the country. The estimated growth rate the highest in Africa. According to the current CEO Available Seat Kilometers(AS) increased by 24%, passengers carried grew by 19% and freight uplift grew by 20%, and operating revenue reached 24.7Billion in local currency, increasing by 43% over the previous year 2010 and expenses were 24.3Billion with 53% increase in fuel cost. The net result of fiscal year 2010/11 was 1.23Billion in local currency.

With arrival of f B777-200LRs, Ethiopian upgraded the standard of service by enhancing passenger comfort. The new fleet allowed Ethiopian to introduce world- class sleeper seat and state of the art entertainment system in the business class. The B777 is a modern and long-range twin engine world liner capable of any two cities around the world on daily flight. Ethiopian now

has direct daily flights from Addis Ababa to Washington and to Beijing, China. Ethiopian has leading role in transforming Addis Ababa into world class aviation hub of African continent not only for trade, business and tourism. Addis Ababa has become a pivotal link in connecting four continents. Ethiopian plane improvement also the complete replacement of F-50 fleet of the Bombardier Q-400 that has been growing regional and domestic services, which has become the fastest and quietest in its category

Future Outlook

Ethiopia is at the threshold of this aggressive expansion program. Ethiopians' sustained success of its ambitious plan for will surely evolve, depending on the outcome of factors that includes effective management, excellent training and improvement in safety for which EAL long and successful record. The challenge is whether it is continues this trend and remain autonomous focused on core business. Ethiopia is backward in communication technology and the Internet due to excessive control of the government. Ethiopian also risks significant brain drain of its aviation personnel and the challenges of keeping airline personnel such as pilots, mechanics, waiters, and avoid brain drain to Middle East Airlines that pay much more for aviation such the United Emirates.

According to aviation international news dated May 28,2012, for Ethiopian Airlines, winning reputation as a world-class has not been easy in a continent not known for service or safety. Seemingly EAL has managed to do that while expanding its fleet to 48 aircraft and its route to 83 destinations. Ethiopian has laid a foundation that will continue to be Africa's flag carrier to watch for the next decade. Ethiopian recently took delivery of Boeing 777-200LRs and it holds orders for 12 Airbus 350-900 and 10 Boeing 787s, putting it well ahead of several developed world players. The CEO states two Dream liners to be delivered at the end of 2012 and five to be delivered by the end of 2013. Founded in 1945, the airline is 100% government owned and based on Bole International Airport in Addis Ababa. It serves 66 international destinations, 41 in Africa and 7 in Europe and 17 in the Middle East and Asia. It operates a 24-route cargo network. So, there is no question that Ethiopian the most successful African carrier that is global. Ethiopian may face a challenge from the decision to switch to Airbus that it should rethink seriously. A switch from Boeing will require new culture and language and other structural change. What is not clear is whether the planned decision is a political or business decision. According the head of Ethiopian Aviation Academy, to be effective the air transportation system must be must balance safety and efficient service in a cost-effective manner and overcome the challenges the aviation system that includes: insufficient training capacity in broad range of disciplines, overcome barriers in language, economic and political differences and disparity of national regulatory system and reconcile accountability toward stakeholders and over comes serious coordination problem with rapid expansion to be sustainable.

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