CATCHING-UP THROUGH TECHNOLOGICAL LEARNING, PRODUCTIVE CAPACITY-BUILDING AND STRUCTURAL TRANSFORMATION: THE CASE OF ETHIOPIAN AIRLINES

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OUTLINE

- The origin of Ethiopian Airlines
- The vision and policy direction that drove its growth
- Structural transformation in EAL and catching up with international best practice
- The main drivers of technological learning and catching-up
- Lessons for technological learning and structural transformation from EAL

A PERFECT ETHIOPIAN EXAMPLE OF TECHNOLOGICAL LEARNING, PRODUCTIVE CAPACITY-BUILDING & STRUCTURAL TRANSFORMATION

EAL: TECHNOLOGICAL LEARNING AND CATCHING-UP

Source: Twitter, Ethiopian Airlines @flyethiopian, Jun 22, 2017
Ethiopian DC-6B at Nairobi: the Super Cloud master served this route from 21 June 1958.

- Established in 1946 – as a flagship project – regional vision;
- Defied 'comparative advantage' – in 1946, Ethiopia a feudal State; 96% illiteracy rate; only two high schools; no tertiary level education; no 'absorptive capacity';
- US loans; management agreement with TWA - which was given complete control of financial, operational, technical and management aspects; but, EAL remained State-owned;
- TWA proposed a 'turnkey' transfer of technology' – engine repair and overhauling capability, pilot, technical, operational know-how, management training capacities, etc.
- Agreement conditions:
  - For TWA – non-interference;
  - For the Ethiopian government – strict Ethiopianization programme and transfer of technology.
- The partnership lasted 30 years.

EAL: TECHNOLOGICAL LEARNING AND CATCHING-UP

- Partnership with TWA ended in 1975 – EAL fully operated by Ethiopians.
- In the 1970s, the only airline linking East and West Africa, and the only airline with direct flights from Africa to China and Japan.
- Difficult external environment (1975 – 1991) - but EAL had built resilience and a strong corporate culture – as demonstrated by the collective management reaction to government's attempts to interfere.
- Fast forward to 2021, the EAL is the largest airline in Africa and an exporter of technical and management capabilities:
  - Operates over 121 latest aircrafts (85% < 5 years old - youngest aircraft fleet compared with British Airways, United, American, etc);
  - Services over 120 international destinations (more than most European airlines) and 23 domestic destinations;
  - Passengers in 2019 - 12m, projected to rise to 20m by 2025;
  - Total revenue in 2019 was US$5b – more than the country's earnings from merchandize export – US$3.1b.

Source: Twitter, Ethiopian Airlines @flyethiopian, Jun 11, 2015. Captain Alemayehu immediately after his first flight in command of a DC-3 on 27 January 1957

Source: Ethiopian Airlines Cargo Website, 2021

EAL: TECHNOLOGICAL LEARNING AND CATCHING-UP

- EAL receives no subsidy from the government – in fact, it is the only profitable airline in Africa - contributes to government revenue;
- Has the largest Aviation Academy (established in 1957) in Africa and the Middle-east – training pilots, aircraft engineers, operational skills to Ethiopians and foreigners (from more than 30 countries);
- In 2011 the EAL became a member of star alliance, indicating that it has narrowed the gap between itself and leading industry players;
- By 2019, 40% of EAL's income originates from non-passenger services, indicating diversification, sophistication and operates as an integrated 'aviation group';
- The largest cargo delivery service provider in Africa (1 million tons annually) – joint venture with DHL Logistics (owning 51% of the joint company);
- An important player in the development of Ethiopia's flower and horticulture export industry;

EAL: TECHNOLOGICAL LEARNING AND CATCHING-UP

Credit: © Photographer Ted Fahn, reproduced from www.xturnover.dk

- EAL is a major employer (15,000), over 2000 MRO (maintenance, repair and overhaul) engineers outsourced;
- EAL has emerged as an overseas investor and exporter of technical and management services;
  - 40% equity share and technical and management contract in ASKY – creating a West African aviation hub;
  - 49% equity in Air Malawi – South African hub;
  - 49% equity and technical services contract in Guinea Airlines;
  - 45% equity share and technical services contract in Zambia Airways;
  - Management contract with CEIBA international - Equatorial Guinee;
  - Establishment of a new domestic airline in Mozambique - joint EAL-Mozambique airlines.
  - Approached by South African Airways; discussing involvement in DRC, Djibouti;
- Question: ***How did EAL acquire the technological and organizational capability and transform itself into a global competitor and exporter of advanced technical, operational and management services?***

THE DRIVERS OF TECHNOLOGICAL LEARNING AND CATCHING-UP

- Strategic partnership with TWA – was critical; created the preconditions (absorptive capacity); credit goes to the government for strategic decision;
- The role of the State was critical: pragmatic; self-discipline in fulfilling the non-interference understanding; clarity of purpose (the 'what', 'how', 'who', 'when' policy implementation) – clear long-term objectives and vision;
- Obsessive focus on Ethiopianization -- technology transfer and catching-up – as KPI for TWA; created 'intensity of learning'!
- State-ownership provided the opportunity to pursue long-term strategy – rather than short-term profit-driven objectives;
- Lack of subsidy created a 'sink or swim' sense of existence and discipline; intensifying the pressure to learn, remain competitive and catch-up;
- Narrow latitude for poor performance – high safety standards left no room for failure; also super sensitive to external conditions – fuel price, global economic crisis, pandemic, etc

Thank you for your attention!