

# Measuring the technical efficiency and the productivity of the major African airlines

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## Abstract

An efficient air transport service increases countries' economic competitiveness by fostering access to the world market, regional integration, labour mobility and tourism. This is especially true for African countries given that many of them are landlocked and with alternative modes of transport under-developed. The pursuit of efficiency is one of the main objectives of the liberalization process initiated by African countries with the Yamoussoukro Decision of 1999. This paper aims at estimating an efficient production frontier for a representative sample of the major African airlines for the period 2009 – 2011 by adopting non-parametric techniques. Our preliminary results, obtained by studying the ability of the airlines in producing revenue passenger kilometres (RPK) and freight tons kilometres (FTK) in the year 2011, show that the average scale efficiency is equal to 0.95. Interestingly, scale inefficiency seems to be more concentrated in the increasing returns to scale area (5 over 12 airlines). This suggests that, on average, African carriers could improve their efficiency by increasing their scale of operation to the optimal scale.

**KEYWORDS:** Airlines; Efficiency; African countries; Productivity

**CLASSIFICATION:** Airport and Airline Performance, Airline Economics, Air Transport Policy and Regulation.