Assessing Impacts on Airline Fleet Emissions and Direct Operating Costs through Aircraft Allocation

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Using fuel burn (as a surrogate for CO_2 emissions) and direct operating costs as objective and constraint functions, the study assesses the impact of fleet-level emissions restrictions on the optimal aircraft allocation of U.S. domestic flights. This study also explores how new aircraft and / or new technology affect the optimal allocation in the presence of emissions restrictions. Impacts are measured relative to a representation of airline operations amongst the "102 LMINET" airports in 2005.

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