

Supporting
European
Aviation



Session C – Modulation of Charges

15th Florence Air Forum

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Modulation of Charges

Theory

- Already foreseen in legislation
- EU Regulation: can be used to reduce environmental impact of flying
- Cannot result in change to overall revenue of ANSP – over and under recovery in year n+2

Implementation

- Not used for route charges
- ICAO framework: as long as the modulation is related to the provision of air navigation services
- Would require exogenous funding to be properly implemented

Modulation for SAF

Main issue

- ICAO framework: use of charges as incentive for SAF not foreseen

Challenges

- Data flow not existing
- Airlines should not pay twice (different initiatives for SAF funding)

Possible solution

- Billing outside the current Eurocontrol Route Charges System but using its established billing and collection capacity

Other tools?

- Different initiatives:
 - ReFuelEU Initiative
 - Taxation
 - Re-organisation of the European airspace

Focus on where substantive gains can be achieved

EUROCONTROL Data Snapshot
Half of CO₂ emissions come from just 6% of flights: the long-haul ones.

16 February 2021

Category	Share of annual total
Departing Flights (2020) - > 4000km	6.2%
Departing Flights (2020) - < 4000km	19.6%
CO ₂ emissions (2020) - > 4000km	51.9%
CO ₂ emissions (2020) - < 4000km	23.2%

Annotations:
 - 6.2% OF FLIGHTS CREATE 51.9% OF CO₂
 - 30.6% OF FLIGHTS CREATE 4.3% OF CO₂

For some routes, only aviation can provide a timely connection. This is true for a land connection is difficult, but mostly this is a question of distance. In 2020, some were clearly long-haul, crossing more than 4000km.

For passengers and for urgent or high-value cargo, there is little or no alternative long-haul is even more clear when measured in capacity, rather than flights. For 6% of flights carry 10% of total seats, and more than 40% of seat-kilometres (the in the industry).

The chart shows, however, that there is an environmental cost. Longer distances and mostly by larger aircraft (hence the higher proportion of seats). That has a significant more than half of European aviation's CO₂ emissions were from this tiny proportion have mentioned in other data snapshots how COVID-19 has affected the mix of for domination of emissions by a few longer-haul flights is not COVID-related: in 2019 48% share of CO₂, very similar to 2020.

At the opposite end of the scale, the 31% of flights under 500km had only a 4% share CO₂ in 2019). Short-haul is an excellent candidate for early electrification, and environmental impact. These improvements will be needed, if aviation is to meet these data show that the maximum possible saving in short-haul is about 4% of total sustainable aviation fuel to cover just 10% of the needs of long-haul, would do more to reduce net CO₂ emissions.

Technical Note: The statistics shown are for departures from airports in the 48 European States which participate in the SESAR Joint Undertaking. Seats and seat-km data are from 2019. For this illustration we assume sustainable aviation fuel saves 75% net CO₂ emissions.

EUROCONTROL 2021

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Aviation Intelligence Unit
Think Paper #7 - October 2020

Does **taxing aviation** really reduce emissions?

Headlines such as "Airlines have enjoyed a free ride for too long – it's time they paid the price for their role in climate destruction" are increasingly common in the media, and there is growing consensus on the need to tax aviation more in order to reduce emissions to achieve the goal of zero emissions by 2050.

This "Think paper" is to help in the debate, takes a careful look at how best aviation emissions could be reduced, and aims to find answers to the following questions:

Main findings

1. While passenger numbers increased by 40% between 2009 and 2017, CO₂ emissions only increased by 15%, and noise levels remained stable.
2. There is little evidence that taxing aviation per se leads to lower CO₂ emissions; nor do raising fuel prices or ticket prices reduce CO₂ emissions.
3. Economic output is the main factor influencing demand, and hence higher or lower CO₂ emissions.
4. Long-distance air traffic dominates aviation emissions, drives their evolution, and hence must be targeted if a reduction in CO₂ emissions is to be achieved.
5. Decarbonisation measures should be strongly supported with substantial funding over the next 30 years, especially in relation to long-distance flying.
6. If a European tax to reduce aviation's CO₂ emissions were to be introduced, it should be ring-fenced to support decarbonisation measures for aviation.
7. To ensure long-term competitiveness in aviation, Europe should encourage the delivery of global aviation decarbonisation solutions.

■ Do taxes on aviation fuel or air tickets, or equivalent measures to compensate for the environmental impact of the emissions generated by aircraft movements, which are already being applied by many states, effectively contribute to reducing aviation emissions?
 ■ Could aviation taxes help reduce the aviation sector's CO₂ emissions in the current COVID context, given the slow economic recovery?
 ■ To what extent could CO₂ goals be met by decarbonising the aviation sector?

We seek to find answers to these questions by looking at the impact of factors such as travel restrictions, GDP, passenger demand, fuel prices and airfares. The paper analyses some of the instruments already in place that are designed to help reduce CO₂ emissions, as well as the impact that using aviation taxes to decarbonise the aviation sector could have.

EU CO₂ emissions in the aviation sector - Setting the scene

One of the key objectives of the **EU Green Deal** is to allow economic growth while reducing net EU carbon emissions to zero by 2050, including a 90% reduction in transport emissions¹ compared with 1990. In 2016, aviation produced 3.6%² of total EU28 greenhouse gas emissions and, as Figure 1 shows, 13.9% of emissions from transport³.

THINK PAPERS are produced to stimulate debate and look at alternatives. They do not represent the official views of the Agency or its Member States.

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FIGURE 1: SHARE OF TRANSPORT GREENHOUSE GAS EMISSIONS

Source: EUROPEAN ENVIRONMENT AGENCY (EEA)

FOUNDING MEMBER: SESAR JOINT UNDERTAKING NETWORK MANAGER