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Corporate decisions on sustainable aviation fuel: the cost-sustainability dilemma in business travel

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ABSTRACT

This study examines how the commercialization of Sustainable Aviation Fuel (SAF) can be optimized in the business travel sector, where aviation-related emissions remain high and corporate sustainability goals increasingly demand action. Using an adaptive choice-based conjoint (ACBC) experiment with sustainability managers from European firms, we analyze how companies evaluate SAF offerings based on fuel type, blend level, certification, billing structure, and cost. Our results reveal a strong preference for certified SAF and bulk procurement models in short-haul travel, where willingness to pay often exceeds benchmark prices. For long-haul travel, however, cost remains a significant barrier, with low SAF content frequently rejected in favor of conventional options. The study highlights how procurement structures, budget constraints, and internal decision-making shape SAF adoption, offering practical insights for corporate travel managers, airlines, and SAF suppliers. From a policy perspective, our exploratory findings suggest that regulatory support could play an important role in accelerating SAF demand. Standardized reporting frameworks, recognition of SAF in emission accounting, and pricing incentives may help reduce entry barriers and better align procurement with climate targets. By focusing on the demand side – an underexplored area in SAF research – this paper contributes empirical evidence to inform policy design, promote private-sector engagement, and support the scaling of low-carbon aviation solutions.

1. Introduction

Aviation plays a significant role in global carbon emissions, with tourism-related air transport alone accounting for approximately 1.1 gigatonnes (Gt) of CO_2 in 2019, including 0.96 Gt from direct passenger transport (Sun et al., 2024). Within this broader category, *commercial aviation* – i.e., scheduled airline operations for passenger and cargo transport – generates the bulk of emissions. *Business travel* is a specific subset of commercial passenger transport and is estimated to contribute around 154 million tonnes (Mt) of CO_2 annually – roughly 17% of the sector's emissions (Borko et al., 2020; Graver et al., 2020). This figure reflects the sector-level contribution of business travel to aviation-related emissions. Moreover, frequent business travelers (typically defined as individuals who take six or more business trips per year; Eisenstein et al., 2019) likely make up a considerable share of the top 10% of air passengers who are responsible for more than half of global aviation emissions (Gössling and Humpe, 2020), as travel frequency data show that a small segment of corporate travelers accounts for the majority of trips (Eisenstein et al., 2019, pp. 129–130).

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