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BARRIERS TO LAUNCH: UNDERSTANDING HOW REGULATION IMPACTS THE GROWTH OF SUBORBITAL FLIGHT

Abstract

At law, there remains no clearly delimited boundary for where airspace ends and outer space begins. While this ambiguity has been left unresolved for decades to no ill effect, the implications truly manifest in the regulation of suborbital flight, as both the activity and the vehicles used highlight the fundamental differences between air and space law.

Suborbital flight is any flight up to a very high altitude that does not involve sending the vehicle into a stable orbit. These flights will eventually include everything from the up-and-back space tourism model to the point-to-point transportation akin to long-haul aviation.

Suborbital vehicles as a genus are most easily distinguished by the means employed to take off from the earth, and currently fall into two general categories: horizontal and vertical liftoff. However, these central design characteristics potentially impact whether a vehicle will be classified as an “aircraft,” or as a “space object,” and thus what regulatory regime an operator will be subject to. Since there is no global regime governing suborbital flight, how the vehicle is categorized will be wholly dependent on what country the vehicle launches from—with some classifying vehicles based on design, others on the objective of the flight, and others on legislative prerogative. The implications of classifying suborbital vehicles under different regulatory regimes depending on where a flight originates (and in future, terminates) will have substantial consequences for the mission, as well as the viability of the commercial endeavor.

Suborbital flight is a nascent industry; one very much still in its design and testing phase. Subjecting companies that employ different structural designs for their vehicles to different regulatory regimes where they plan to provide the same service will encourage forum shopping. Private operators may seek out suborbital launch sites in locations that can potentially limit their exposure under the different liability regimes with respect to contractual and third-party liability. Others may search for launch sites in countries where they can shape domestic policy and obtain commercial advantages vis-à-vis their competitors.

There is an understandable temptation with emerging technologies to wait and see what actually comes to bear before implementing a regulatory framework. However, the balance struck between the regulatory certainty needed to support substantial incubation periods and investments, and the regulatory flexibility needed to facilitate innovation will likely determine whether suborbital flight is merely a dalliance of the uber-wealthy or the next breakthrough in how people travel.