Airport Congestion and Market Structure: The Case of Variable Passenger Time Costs

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Abstract: Brueckner (2002) develops an analytical framework to show how market structure in aviation markets affects optimal airport congestion pricing. In this paper the Brueckner model is modified such that for a given number of peak flights, time costs resulting from travel in the congested peak period are higher for some passengers than others owing, for example, to their higher time valuation. We find that the modified model tends to predict greater congestion, relative to the social optimum, than Brueckner. As a result, the modified congestion tolls are higher than Brueckner's tolls. Moreover, while Brueckner's prediction – that carriers' internalization of congestion rises as airport concentration rises – still holds in the modified model, airport congestion appears to become less responsive to the change in market structures under the modified model. This might provide an explanation for the inconsistency between Brueckner's prediction and some of the empirical studies, which seem to indicate a more limited power of market structure in explaining observed variations of airport delays.

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