Raising Rivals’ Costs through Unbundling: 
The Case of Airline Bag Fees

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The theory of raising rivals’ costs is now a part of established industrial organization theory and antitrust practice. But the theoretical literature, largely due to Salop and Scheffman (1983, 1987) has not been matched by empirical demonstration of the effect or its magnitude. This paper begins to fill that void. We develop empirical evidence on the use of RRC in the airline industry, where the mechanism involves the imposition of fees for checked bags.

Traditionally most airlines allowed passengers to check at least one bag without imposing any additional charge. However, starting in 2008, airlines unbundled their first checked bag service from ticket sales, charging a separate fee for the service. By the end of 2009, almost all major carriers unbundled their first checked bag service. Six years later, JetBlue unbundled as well, leaving Southwest the only bundling carrier thus far.

A small empirical literature has examined the effect of bag-fee unbundling on the fare charged by the initiating airline. That literature reports that the carrier’s fare declines but not by as much as the bag fee, suggesting that the airline succeeds in retaining some fraction of the cost differential. But that literature does not examine the strategic effect of a bag fee. This arises from the fact that consumers are heterogeneous in their valuation of checked bag service, depending on whether or not they have bags. Charging a bag fee will deter low bag-fee valuation consumers from checking a bag, and—crucially--divert checked bag consumers to other carriers that do not charge bag fees. This has the simultaneous effect of raising the rival’s cost while lowering one’s own.

We use a theoretical model of competition to show how unbundling decreases one’s own fare and increases rival’s fare. The model reflects the fact that the mechanism in this case involves exploiting differences in customer valuations. The initiating carrier can then shift high-cost customers onto other carriers and drive a wedge between its own and its incurred rival’s costs.

We estimate the model on airline fares to verify and quantify these effects. In the typical oligopoly airline markets, we find that a bag fee leads to an immediate fare drop by the initiating carrier and is followed by a series of small drops in the following periods. On the other hand, its rival’s fare increases immediately but the hike disappears over time. This latter result suggests the possibility that a carrier initiating a bag fee effectively is raising the operating cost of its rival who absorbs diverted baggage-laden passenger traffic. We also estimate the fare effects in monopoly markets where there is no rival and therefore no strategic effect, so that any effect is due to static unbundling. By comparison with results in an oligopoly context, we can identify the incremental strategic effect.