International Airline Markets:
On Government and Airline Contracts

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Background: Departments of Transport and Justice around the world have analyzed the issue of codesharing and different policies have been applied. The United States permits codesharing on all complementary networks but antitrust immunity is only granted after careful scrutiny and has never been permitted on domestic codeshare flights. Conditions in the form of carve-outs on certain routes, such as hub-to-hub connections between partners, have been imposed to remedy any competitive concerns or were the market to be left with two or less carriers serving the route. European carriers are free to enter into blockspace codeshare agreements anywhere within the European Union unless they result in a monopoly. The E.U.-U.S. open-skies policy that came into effect in March 2008 permit blockspace codesharing and wet leasing between U.S. and E.U. carriers provided approval would not give rise to competitive concerns. However, whilst the E.U. is more lenient than their U.S. counterpart, they are more likely to impose stringent conditions on alliance agreements, such as slot divestiture, frequency freezes, interline obligations, price constraints and access to frequent flyer programs in order to encourage greater competition in the aviation markets.
In 2009 the Israeli Antitrust Authority reviewed the variety of code share agreements that all local carriers had signed freely with a variety of foreign airlines, after which the law was changed. Under codeshared flights, two or more partners may use mutual terminal facilities, choose gates within proximity to each other and handle baggage automatically. Code share agreements can be categorized into five broad groups: Hard Block, Soft Block, Pooling, Free Sale, and Royalties. Hard block arrangements specify the number of seats in business and economy classes that the marketing carrier purchases from the operating carrier and the level of tariffs. The marketing carrier is then solely responsible for sales of the specified seats and all revenues are retained by them. Often these arrangements are reasonably balanced and may even refer to seat swaps without monetary transfers required. Soft block arrangements permit the marketing carrier to release a pre-determined number of seats up to a pre-specified time prior to the flight. Again the cost of the seats is specified within the agreement. Pooling agreements set a unit fare, often based on the previous year’s revenues collected, and any imbalance between revenues is then transferred to the partner with lower earnings. Frequently the transfer is limited to a maximum percentage transfer. This type of agreement removes competition at the frequency level and also sets a minimum price. A free sale agreement allows a marketing carrier to sell tickets on the operating carrier’s flights using its own code, while the operating carrier controls the seat inventory. The marketing carrier receives a pre-agreed commission on the revenue collected to cover costs such as ticketing, marketing and frequent flyer bonuses. Royalty agreements occur when one airline pays the other airline a percentage of revenue earned on all passengers carried. Royalties of this type simply add further costs to the carrier which is then transferred to the passenger.
These code share agreements entail different levels of cooperation and collaboration between the airlines, based on the contract signed and how the inventory of seats is managed and controlled by the carriers. After assessing the different code share contracts and their impact on competition given social welfare obligations, the Israeli Antitrust Authority chose to cancel the codeshare exemption from six of these agreements. Furthermore, several code share agreements were altered prior to the Antitrust Authority assessment. This series of decisions has provided us with a unique opportunity to evaluate the impact of the different code share agreement types on frequency and pricing decisions made by airlines.

**Data:** we purchased MIDT data that contains itinerary information on travel to and from Israel for March 2008 and March 2010 (characteristics include distance, number of stops, marketing carrier, operating carrier, booking time, travel time and class). After extensive cleaning of the dataset and focusing attention only on travel to and from destinations (cities) served by El Al, the privatized Israeli national carrier, about 300,000 observations remained. Additional data was gathered from the Israeli Civil Aviation Authority on frequencies and enplanements. Complementary data was collected on, among others, distance, airline types (low cost carriers, charter and full service network airlines), the airline quality score (Skytrax), alliance membership, size of the population as well as income. There are a total of 54 city pairs in the dataset and 168 origin-destination-airline triplets.

**Results:** Our results suggest that governments and policy makers should liberalize the international aviation markets in order to increase frequency that stimulates reductions in airfares, and it further suggests that carve outs on the hub to hub links in a codeshare agreement may not need to be enforced, rather restrictions should be imposed on the type of codeshare agreements signed by the airlines. Intuitively, we find that both royalties and pooling agreements
are associated with a large increase in transacted airfares, as those types of agreements lead to de-facto monopoly operations in those markets. Importantly, under hard block contracts carriers essentially create an implicit agreement to split the market. Indeed, carriers are “stuck” with inventory, so they take the risk of not selling, but when they sign the agreement, they simply reallocate seats to the level that effectively soften competition between the two carriers thereby allowing them to increase fares. When carriers sign a soft block contract, they face a higher level of uncertainty and since they face the deadline of returning the tickets to the other carriers and therefore would like sell the tickets before the deadline. Lastly, under a free sale contract, airlines have access to the pool of seats and therefore would like to sell tickets before the other carrier does so.