

MPRA

Munich Personal RePEc Archive

Airline Price Discrimination

Stacey, Brian

Southern New Hampshire University

6 May 2015

Online at <https://mpra.ub.uni-muenchen.de/69168/>

MPRA Paper No. 69168, posted 03 Feb 2016 05:46 UTC

Airline Price Discrimination

Brian Stacey

Southern New Hampshire University

Price discrimination enjoys a long history in the airline industry. Borenstein (1989) discusses price discrimination through frequent flyer programs from 1985 as related to the Piedmont-US Air merger, price discrimination strategies have grown in size and scope since then. From Saturday stay over requirements to varying costs based on time of purchase, the airline industry is uniquely situated to enjoy the fruits of price discrimination.

Before discussing price discrimination strategies, it is necessary to understand why we would employ them in the first place. The costs of flying airplanes (commercially) are largely independent of passenger load. “The marginal cost of an extra passenger is relatively low. Most of the costs associated with flying are fixed costs.” (Pettinger, 2014) The fixed costs; pilot and crew salaries, landing fees, maintenance, and most of the fuel cost exist regardless of the number of passengers on the plane. Adding additional passengers only slightly increases the fuel and consumable (e.g. soft drinks) costs (marginal cost). The marginal revenue per passenger, however, can be quite large, depending solely on the price they are charged and their willingness to pay said price; this results in a situation where the total cost of operation per flight is almost entirely fixed, thus the total revenue is dependent solely on our ability to maximize per passenger revenue.

Any effort to establish a price discrimination strategy must first evaluate and determine the break-even point per flight. This value will depend on the length of the flight, route, and the equipment used (longer flights have increased fuel and salary costs, heavier and older equipment has increased fuel costs, landing and maintenance fees vary by airport). Once a break-even point

is established it becomes a matter of ensuring that the average flight along that route exceeds break-even.

The most prevalent price discrimination policy currently used in the industry involves varying the cost per seat based on time in advance of flight the ticket is purchased. There are naturally two groups of consumers; Steen and Sorgard (2001) discuss the dichotomy between the business and casual travelers with regard to their price elasticity of demand. The business traveler has a nearly infinite price elasticity, and makes for the perfect target for higher prices for the same product, whereas the casual traveler has a much lower elasticity and will forego travel entirely if their utility gained is exceeded by the cost. Casual travelers are more likely to plan their trips far in advance and are thus more likely to purchase their tickets far in advance. To profit from this, a strategy of offering lower cost tickets the further from departure date they are purchased should be employed. Further discrimination can be achieved between these two groups through differential pricing for the ability to cancel/modify flight plans versus more rigid rulesets. Casual travelers, having planned their trips in advance, are less likely to need or want the ability to change flight plans at the last minute, whereas business travelers, with little advance notice may be required to (Gerardi, K., & Shapiro, A., 2007). Similarly, day-of-week variability in pricing will discriminate these two groups. Puller and Taylor (2012) found that weekend purchasers are more likely to be casual travelers (business travelers being more likely to purchase their tickets while at work) and as a result have a lower elasticity of demand.

Further price discrimination strategies to consider include frequent flyer programs (Borenstein, 1989), versioning through first-class, business-class, & extra leg room, and boarding preference selectability (Steen & Sorgard, 2001). Several of these strategies will help to offset the natural inability to price discriminate in competitive markets. Borenstein and Rose (1994) found evidence that there is a negative relationship between price discrimination and market concentration. Specifically more heavily travelled routes were found to be more popular with business travelers. Business travelers were found to be more loyal; a result of frequent flyer programs (Borenstein, 1989) and corporate purchase contracts locking them into specific airlines, as a result airlines travelling these routes were found to adjust prices more as a result of discriminatory practices and less as a result of market competition. These counterintuitive results indicate that a monopoly is not required to effectively gain revenue through price discrimination, at least within the airline industry. More recent studies (Gerardi, K., & Shapiro, A., 2007) have found that these effects are not as pronounced now as they once were, and that increased competition along a specific route erodes price dispersion, especially at the top price levels, resulting in a more uniform price. It appears as though competition limits the ability of carriers to charge higher prices to the price-inelastic business travelers versus the lower prices charged to the price-elastic leisure travelers. This result, does not prevent price discrimination, along these routes, merely reduces its efficacy, however not to the point of complete ineffectiveness.

References

- Borenstein, S. (1989). Hubs and High Fares: Dominance and Market Power in the U.S. Airline Industry. *The RAND Journal of Economics*, 20(3), 344-344. Retrieved March 1, 2015, from <http://faculty.haas.berkeley.edu/borenste/download/Rand89Hubs.pdf>
- Borenstein, S. & Rose, N. (1994). Competition and Price Dispersion in the U.S. Airline Industry. *The Journal of Political Economy*, 102(4), 653-683. Retrieved March 5, 2015, from <http://economics.mit.edu/files/4321>
- Gerardi, K., & Shapiro, A. (2007). Does Competition Reduce Price Discrimination? New Evidence from the Airline Industry. *Working Papers*, 07(7). Retrieved March 2, 2015, from <https://www.bostonfed.org/economic/wp/wp2007/wp0707.pdf>
- Pettinger, T. (2014, February 5). Airline price discrimination. Retrieved March 2, 2015, from <http://www.economicshelp.org/blog/7767/business/airline-price-discrimination/>
- Puller, S., & Taylor, L. (2012). Price discrimination by day-of-week of purchase: Evidence from the U.S. airline industry. *Journal of Economic Behavior & Organization*, 84(3), 801-812. Retrieved March 1, 2015, from <http://www.sciencedirect.com/science/article/pii/S016726811200203X>
- Stavins, J. (1996, November 25). Price Discrimination in the Airline Market: The Effect of Market Concentration. Retrieved March 4, 2015, from <http://www.mitpressjournals.org/doi/abs/10.1162/rest.2001.83.1.200#.VPm9OfnN8mk>
- Steen, F., & Sorgard, L. (2001, January 1). Price Discrimination in the Airline Industry. Retrieved March 1, 2015, from <http://fagbokforlaget.no/filarkiv/price-discrimination.pdf>
- Vissers, T., Nikiforakis, N., Bielova, N., & Joosen, W. (2014, November 6). Crying Wolf? On the Price Discrimination of Online Airline Tickets. Retrieved March 1, 2015, from

https://hal.inria.fr/hal-01081034/file/Airline_Paper.pdf