Spirit Airlines

> The most potent way of driving out competition is so-called predatory behavior: cutting fares and then flooding a small airline's routes with cheap seats until it is forced to abandon them.[2]
>
> — Laurence Zuckerman, *The New York Times*.

> There is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful.[3]
>
> — Justice L. Powell in *Matsushita*.

Spirit Airlines

In 1990, Charter One, which until then had offered charter services on hired aircraft, took advantage of low-priced aircraft previously owned by the recently defunct Midway Airways and acquired four DC-9 aircraft. Charter One changed its name to Spirit Airlines and started a twice-daily service between Detroit and Atlantic City. In 1993, Spirit earned a revenue of $21 million from flying 275,000 passengers. In 1994, the numbers increased to $56 million and 683,000, respectively.

Spirit's strategy, in the tradition of People's Express and other low-cost carriers, was to trade-off some traditional amenities — frequent flyer miles, in-flight meals — for cheaper, nonrefundable fares. Spirit was also known as an efficient airline, with load factors typically above 80%.

Northwest Airlines

Northwest Airlines began operation in 1926, serving as an air mail carrier between Minneapolis and Chicago. By the early 1990s, it was one of the five largest passenger airlines in the world, with domestic hubs in Detroit, Memphis and Minneapolis; and many international destinations.

Entry, aggressive pricing, and exit

In December 1995, Spirit started once-daily flights from Detroit to Philadelphia, with fares as low as $49 one way. At the time, the Detroit-Philadelphia market was divided between

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Northwest and US Airways in a 70%-30% split. Initially, Northwest did not respond to Spirit's entry. But when Spirit introduced a second daily nonstop flight in June 1996, Northwest dropped its fare to $49 — thus matching Spirit's — and added another daily flight.

Northwest's pricing and capacity strategy shifted demand away from Spirit, whose load factors dropped from as high as 88% to as low as 31%. In August 1996, Spirit canceled one of its daily flights. In September, it exited the Detroit-Philadelphia market altogether. Northwest responded to Spirit's exit by raising its fares and reducing capacity. (See Exhibit 1 for a time plot of Northwest and Spirit's fares during the relevant period.)

In April 1996 (before introducing its second flight to Philadelphia), Spirit added a daily service from Detroit to Boston, with fares starting at $69 one way. By then, Northwest was essentially the only airline serving the route. Northwest's response to Spirit's entry was similar to the Detroit-Philadelphia route: is sharply reduced fares and added two additional daily flights. Spirit's load factor dropped to between 17 and 31%, eventually leading to its exit in September 1996. As in the Detroit-Philadelphia case, Northwest responded by raising fares and reducing capacity.

In 2000, Spirit Airlines sued Northwest, alleging that its practices were predatory and violated Section 2 of the Sherman Antitrust Act. Mark Kahan, Spirit's executive vice president, stated that Northwest's "strategy only made sense if their goal was to push us out of the market." To which Jon Austin, Northwest's spokesman, replied: "Spirit Air is complaining because we matched their prices. That is the central tenet of a free market."

Economic theory and legal practice regarding predatory pricing

From an economic point of view, we say there is predation if a firm lowers its price to induce a rival's exit, thus creating room (monopoly power) for the predator to subsequently increase price. In other words, predatory pricing is an "investment" (forgone revenue during an initial period) whose payoff is given by monopoly profits in the post-exit period. The conceptual test for predatory pricing — known as the Ordover-Willig test — proceeds as follows: would the alleged predator have set higher prices had it known that the alleged prey would not exit? The distinction is important because lowering prices in response to entry is consistent with predatory pricing but is also consistent with a simple competitive interpretation: more competition drives down prices. As United Airlines Cyril D. Murphy puts it, "What kind of competition policy precludes large carriers, or anybody, from selling large numbers of seats at low prices?"

In practice, one must rely on observable data to decide if there is predatory pricing or not. The best known and most frequently used test is the so-called Areeda-Turner test. Roughly speaking, it states that a price is predatory only if it is lower than average variable cost, the idea being that in the "normal" course of competitive events no firm would optimally lose money; that is, the only explanation for pricing below cost is the aforementioned "investment" to drive a rival out of the market. But even a practical test like the Areeda-Turner test has its problems: although conceptually average variable cost is a well defined number, finding its value in a particular situation is no easy task.

Pricing below cost (short-term losses) is a necessary condition for proving predation; but it is not sufficient. One must also show that the alleged predator had the intent of driving the rival out of the market and had a reasonable expectation of recouping short-term losses with long-term gains from increased market power. For this reason, another necessary condition for predation is that market shares be relatively concentrated; otherwise, the alleged predator would not be able to recoup its “investment.”

Average variable cost

Considering now the specific case at hand, the critical step in determining average variable cost per passenger is to decide, for each cost item, whether it is fixed or variable with respect to the number of passengers flown. Northwest classifies its costs into three categories: passenger variable expenses (e.g., in-flight food and beverages), nonpassenger variable expenses (e.g., fuel costs, flight crew), and fixed expenses (e.g., corporate overhead). Dividing passenger variable cost by the total number of passengers, Northwest estimated that their average variable cost was lower than the lowest fares ever set during the period in question.

By contrast, Spirit contented that, in reaction to Spirit’s entry, Northewest slashed its fares to below-cost levels. Spirit estimated average variable costs in the \$53-\$60 range (Detroit-Philadelphia) and \$65-\$85 range (Detroit-Boston). Northwest’s fares of \$49 and \$69 are marginally lower than this. But taking into consideration that Northwest must pay a commission to travel agents, the effective incremental revenue per passenger was estimated by Spirit to be around \$44 and \$62 (Philadelphia and Boston, respectively), both of which are lower than average variable cost.

What explains the differences between the Northwest and the Sprint numbers? Primarily, there were a number of fixed costs in Northwest’s accounting that Spirit considered as variable, including in particular the cost of aircraft. Spirit’s idea was that insofar as aircraft could be re-assigned to different routes they should not be considered a fixed expense.

Monopoly power and recoupment

There are two other important steps in judging whether predatory pricing is a reasonable hypothesis. One is that market shares in the relevant market be concentrated. With 60% of the Detroit-Philadelphia market and over 90% of the Detroit-Boston market dominated by Northwestern, such test would seem to be satisfied; and both parties broadly agreed on this matter.

The second, more complicated step, is the reasonable expectation of recoupment of initial losses. Northwest argued that it never lost money (at the margin) in these routes, and that therefore there was no sense in talking about recoupment. Spirit, in turn, estimated that Northwest was able to recoup its “investment” in a few months (from three to nine months). Northwest rebutted Spirit’s estimate by stating that it was based on the assumption that there would be no additional entry subsequently to the alleged prey’s exit. But in May 1998, nineteen months after Spirit’s exit, Pro Air, another low-cost airline, introduced a service between a secondary Detroit airport and Philadelphia.

The Court’s decision

In 1997, Roger W. Fones, then leading a DOJ antitrust investigation of the airline industry, stated that this was one of the few industries where predatory behavior could be demonstrated to be a rational strategy.However, as the second initial quote suggests, US courts tend to be skeptical about allegations of predatory pricing. In the first case brought by Spirit Airlines, the district court sided with the defendant: Northwest won a summary judgement in March 2003. That is, the district court decided that, even if the facts claimed by the plaintiff were true, the plaintiff would not have a case. However, in 2005 the Sixth Circuit Court of Appeals found that if Spirit could prove certain alleged facts it would prevail. Consequently, the Court reversed the previous decision and remanded the case to the district court for a full trial. The good news for Spirit Airlines were tempered in September 2005 when Northwest filed for Chapter 11 bankruptcy protection (as did other four of the six largest US carriers).

Update

In May 2007, Northwest was cleared by a federal judge to emerge from Chapter 11 bankruptcy protection. A year later, Delta and Northwest Airlines announced they would merge to create a 786-aircraft airline — the largest in the world — under the Delta name. The merger obtained regulatory approval from the European Union in August and from the US Department of Justice in October.[4,5] The Northwest brand was expected to be retired by February 2010. As of August 2009, 120 of NWA's 304 aircraft had already been painted in Delta livery.

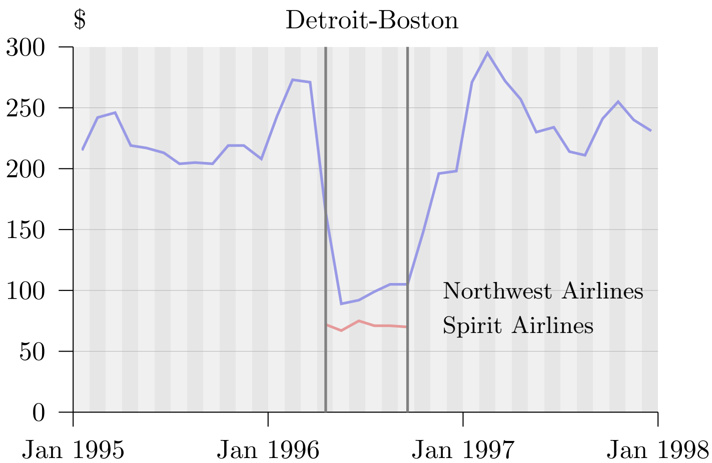
In September 2007, Spirit Airlines announced a new branding image, with visual changes in its aircraft, uniforms, etc (see Exhibit 2). The airline continued and deepened its low-cost brand concept: for example, Spirit planes typically seat 145 where other airlines with the same aircraft fly only 125; and in June 2007 Spirit was the first US airline to charge for checked baggage. Another area of leadership is plane advertising: "virtually every surface inside the airplane can be leased by advertisers, including the aprons on the flight attendants (now brought to you by Bud Light)."[6] Spirit itself continues to advertise intensively, if at times somewhat distastefully. The cost-cutting strategy has come at a cost: In 2008, Spirit received the highest number of complaints per passenger flown of any US carrier (cf Exhibit 6); but it was also the airline with the highest operating margins and lowest unit cost.

Endnotes

1. Kenneth Elzinga and David Mills "Predatory Pricing in the Airline Industry: *Spirit Airlines* v. *Northwest*," in J Kwoka and L White (Eds), *The Antitrust Revolution*, Oxford: OUP, 2009.
2. Laurence Zuckerman, "Business Travel: Open Skies, Closed Markets?" *New York Times*, March 18, 1998.
3. *Matsushita Electric Industrial Co. v. Zenith Radio*, 475 US 574, 589 (1986).
4. "Europeans Clear Delta-Northwest Merger," *The Associated Press*, August 7, 2008.
5. "Regulators Approve Delta-Northwest Merger," *The Associated Press*, October 29, 2008.
6. David Segal, "Don't Come Crying to This Airline," *New York Times*, March 28, 2009.

Exhibit 1

Average one-way fares for true local passengers. Vertical lines mark the date of Spirit Airlines' entry and exit. Source: Northwest Airlines, Spirit Airlines.



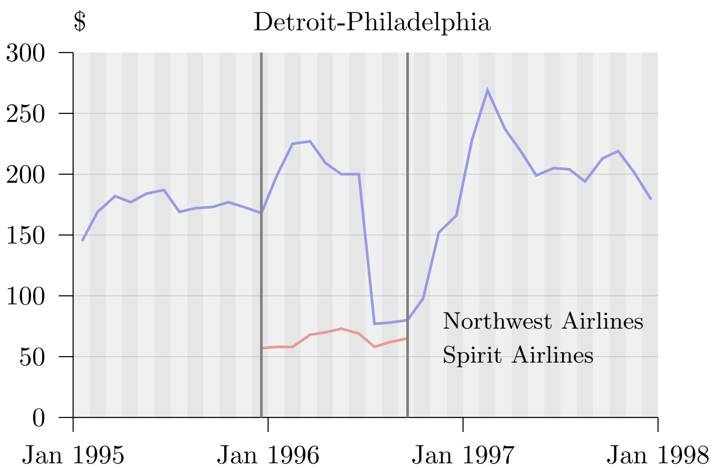


Exhibit 2

Spirit Airlines old and new logo, respectively.

Exhibit 3

Complaints per 100,000 passengers. Airlines operating in the US in 2008. Source: cf Endnote 6.

Spirit Airlines	14.3
US Airways	2.0
United	1.9
Delta	1.8
American	1.3
Comair	1.3
Continental	1.1
AirTran	1.1
American Eagle	1.0
JetBlue	1.0