**Antitrust Division and Federal Trade Commission**

**Joint Section 2 Hearings on Predatory Pricing**

**Washington D.C.**

**Remarks of**

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## I. Introduction

I was the economic expert for the defendants in the last two Supreme Court cases about predation: the first being *Matsushita* (now, that really dates me, I know) and then *Brooke Group*, or what I still call *Liggett v. Brown & Williamson*.

Recently, I was involved in a predatory pricing case: *Spirit Airlines v. Northwest Airlines*. I did an economic analysis for Spirit, a so-called Low Cost Carrier (or LCC). This case had a happy landing for Janusz Ordover at the District Court level, a happy landing for me at the Circuit Court level, and its final destination is still unknown. I hope to make a few remarks about that case later.

## II. Predatory Pricing: The Beginnings of Economic Analysis

When I first started teaching about this subject, there was not much economic analysis embedded in a predatory pricing case. You answered two questions:

(1) Were prices declining in the market? Not necessarily below cost, mind you, just going down.

(2) Did the defendant generate documents with pugilistic or militaristic metaphors: like "we're going to squish 'em like a bug," or "we're going to cut off their air supply."

If I had to pick two events that changed all this, it would be the Court's opinion in *Matsushita*, with its famous warning to the lower courts that, "predatory pricing schemes are rarely tried, and even more rarely successful." That statement was based on the Court's exegesis of articles about predatory pricing that appeared in the economics literature. Almost all of this research suggested that predation would be a strategy that would be difficult to pull off.

The second event was the publication of an article by Don Turner (a former Assistant Attorney General and the first Assistant AG to enlist an academic economist in the front office) and Phil Areeda in the *Harvard Law Review* - the most often cited article in antitrust scholarship - that led to the Areeda-Turner test.

It is unnecessary for me, with this audience, to review the Areeda-Turner test, but let me mention how powerful was the hidden economic logic in this famous case by using an iconic product from *Matsushita*: a 19" black and white portable TV set, a consumer electronics product my students today cannot imagine.

Let's say (and these numbers aren't way off) this set was sold by Toshiba, one of the defendants, to Sears for $95.00, the average total cost was $100.00, but the average variable cost was $90.00. So we have: ATC=$100, P=$95, AVC=$90.

Most everyone at the time believed Toshiba would be "selling below cost." After all, how could Toshiba survive with such a price-cost relationship? It took, again at the time, an instinct for economic reasoning (or a recollection of a price theory course) to realize such a price was above the shut-down point, that it was cash-flow positive, and that Toshiba was better off making the sale to Sears than not making the sale at all.

The Areeda-Turner article convinced a lot of people of something economists have known since Alfred Marshall: that in economics, what happens at the margin really does matter. What was missing from Areeda-Turner was a way of thinking about the period of recoupment.

**III. Recoupment Analysis**

Areeda-Turner set the stage for the more sophisticated economic analysis that the Court adopted, at least in principle, in *Brooke Group*. The court in *Brooke Group* recognized that even if a firm charged a price below cost, *whatever was the cost benchmark*, if the firm could not recover its losses, it was difficult to make a case for antitrust. The aspiring predator would shoot itself in the foot if there was no recoupment. Market forces would discipline the firm.

The economic logic behind plausible recoupment entails two analytical constructs. The first is explicit in *Brooke Group*; the second is not blindingly transparent.

The first is the recognition that predation is like a capital expenditure. In *Brooke Group*, the court cites a paper by David Mills and me entitled "Investment in Predation." Economists always recognized that a dollar invested today requires more than a dollar in future profits because of the time value of money. When it comes to a predatory pricing strategy, there also is an opportunity cost to the investment being made. This means the losses from predation need to be recouped, and not just on a dollar-for-dollar basis.

The second point follows from the first: unless symmetrical entry and exit conditions, the recoupment returns for the aspiring monopolist must be enjoyed for a longer time period than the time frame in which the aspiring monopolist shouldered the costs of the predation strategy.

Put differently, the longer the predation period goes on, the greater is the investment in predation. So a predator wants the below-cost period to be short. And the predator wants the per-unit losses to be small.

In like fashion, the predator wants the period of recoupment to be long. Indeed, if losses and returns were the same each month, the recoupment period must be longer than predation period because of the time value of money. The financial reward a successful predator would enjoy is

the present value of the sum of each period's future reward once its target has conceded the fight.

A business firm presumably has some hurdle rate, or internal rate of return, it expects to earn before it will "sign on" to any investment project. Signing on for a predatory pricing strategy conceptually is no different. The higher is the hurdle rate, or the firm's internal rate of return, the bigger and longer the monthly returns have to be during the period of recoupment.

My first slide illustrates the economics: **(KGE: show first slide)**

In my experience, if one plays with the math behind most alleged episodes of predatory pricing, it is difficult to come up with examples where recoupment is mathematically possible.

**IV. Asymmetry of Entry and Exit Conditions**

The key to the economics of predation lurks implicitly in *Brooke Group*: for predation to be successful, the target firms have to get out quickly, but return slowly, or ideally never reenter. So that means there must be an economic asymmetry between entry and exit conditions in the market. Think about what that means.

In most markets where entry is not hard, exit is not hard. So predation will not work in these markets. In like fashion, in markets where entry is difficult (which helps an aspiring predator), exit is also slow (which makes life hard for an aspiring predator). What the successful predator needs is a market setting where exit is quick, but entry (or supply expansion) is slow.

In the *Spirit/Northwest* case, one of the factors persuading me that predatory pricing was rational for Northwest was because the exit of Spirit, the target airline, took place quickly, but reentry and supply expansion was difficult.

Spirit Airlines pulled capacity out of Detroit quickly when Northwest dramatically cut its fares in the two markets that Spirit served, but Spirit could not enter and expand readily during Northwest's recoupment period because Spirit faced an entry barrier in the form of access to gates at the Detroit airport.

**V. *Spirit v. Northwest* case**

I went into the *Spirit Airline* case as someone from Missouri. But I ended up concluding that Spirit was a victim of a predatory pricing campaign by Northwest.

Parenthetically, this is a case in which Fred Kahn should have testified. Fred Kahn knows more about the economics of airlines than most any group of economists combined. But Professor Kahn was unable to participate – though he was convinced predation took place, as I came to conclude.

The pricing trends in the *Spirit* case are a textbook example of what predatory pricing would look like: Northwest's prices in the Detroit-Boston and Detroit-Philadelphia city pairs are high. Spirit enters, Northwest's prices fall dramatically. Spirit exits, Northwest's prices jump up.

**KGE: show slides: Detroit-Boston and Detroit-Philadelphia price trends**

Now these price trends are suggestive, not dispositive. Once a pricing scenario like this is

observed, there follows the mind-numbing exercise of comparing revenues with variable costs, which is a difficult task in the best of circumstances, and is by no means simple in the airline passenger industry.

In the *Spirit* case, this was a battle between Janusz Ordover for Northwest and Dr. Dan Kaplan for Spirit.

A recoupment analysis also was done by my colleague David Mills. Briefly, from my perspective, one key to the success for Northwest was how quickly Spirit exited and the duration of the recoupment period. That is consistent with the first slide I presented.

Let me check my time.

If time permits, I would like to show the bimodal distribution of the Northwest fare structure before the predation.

**KGE: show fourth slide of NWA pricing**

This slide indicates why I was persuaded there was a price-sensitive market and a price-insensitive market for airline passengers. Professor Ordover is persuaded there is only one market. This dispute is consequential in terms of the price-cost analysis under Areeda-Turner.

Normally, economics would suggest that just because some good or service sells at two price points, this does not mean there are two distinct relevant markets. That's because of either high supply-side or high demand-side cross-elasticities.

But I was persuaded that Spirit could not move into the price-insensitive, business customer, market when Northwest preyed upon it for price-sensitive or leisure customers.

Antitrust always has surprises. Let me close by mentioning the surprise for me in the *Spirit* case. At the last minute, Spirit's attorneys suggested that a price below average total cost could be predatory. And the Circuit Court, at the tail end of its opinion, seems to suggest that at least in the market circumstances of this case, Northwest's conduct may have been predatory even if its fare structure exceeds (as the Circuit Court put it) "an appropriate measure of average variable costs."