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Entry and Deterrence in British Satellite Broadcasting

The first three case studies in this book focused on models of competition with fixed product characteristics and production technologies.¹ The next two featured, respectively, competition over new products and processes. This final detailed case study fixes on an even more fluid situation: competition to monopolize a new product market made possible by a process innovation in broadcasting technology.

To be more specific, the analysis in this chapter is motivated by a war of attrition between British Satellite Broadcasting (BSB) and Sky Television over the market for satellite TV in the United Kingdom. Like the two preceding cases, this one could be read as yet another instance of incumbent failure: BSB entered the market first, with an up-to-date broadcasting technology, was surprised by Sky's fast-second entry with an older but cheaper technology, and eventually collapsed into Sky's arms on less-than-equal terms. That is not, however, the principal point of this chapter. Rather, it is to probe, with the case as an anchor, two foundational questions about game theory: Can firms be treated,

1. This chapter is a substantially rewritten revision of Brandenburger and Ghemawat (1994). I am solely responsible for all changes.

as per usual practice, as unitary players out to maximize their own payoffs, and if so, should their interactions be expected to lead to Nash equilibria?

I begin by describing the BSB-Sky interaction and then work backward (as is customary in game theory) through these two questions in the context of product-market wars of attrition. The implications for game theory turn out not to be innocuous; for researchers in strategic management, there are also nontrivial implications concerning the content of effective competitor analysis.

7.1 Case Background

Satellite television involves the transmission of television signals from the ground to a satellite and back down to receivers. The satellite serves as a giant television tower, and the greater its power, the smaller is the size of the receivers required.

The World Administrative Radio Conference of 1977 reserved for each country several high-powered television broadcast channels that could be picked up by satellite dishes small and inexpensive enough to be installed at individual homes. In April 1986 the British government invited applications to provide a commercial service on the U.K. channels and received five serious bids. In December of that year, it awarded a fifteen-year franchise for high-powered direct broadcast by satellite (DBS) to British Satellite Broadcasting (BSB), a consortium of five companies formed to bid on the project.

By July 1987 BSB had completed a first round of equity financing that raised a total of £222.5 million from eleven companies. The bulk of this money was earmarked for buying and launching two high-powered satellites (one for redundancy). BSB estimated that it would install 400,000 satellite dishes by the end of

its first year of broadcasting (fall 1990), 2 million by 1992, 6 million by 1995, and 10 million by the year 2001. Operating breakeven was expected at the 3 to 4 million mark in 1993, but the cost structure would continue to be dominated by mostly fixed (per-period) costs, such as program production and acquisition, marketing, and overhead. As a result the venture's economics would be very sensitive to the size of its customer base and its total start-up costs to its rate of market penetration. Total start-up costs were estimated at approximately £500 million and a second round of financing was scheduled for close to the commencement of broadcasting operations.

BSB's pursuit of these plans was disrupted in June 1988 by News Corporation's announcement that it would launch its own DBS venture in the United Kingdom, to be called Sky Television. News Corporation was a conglomerate, mostly in English-language media, that had recorded sales of about £3 billion and a return on sales of 7.8 percent in the preceding year. Its DBS service, Sky, was meant, like BSB, to be multichannel but was to be broadcast via a medium-powered satellite, Astra. Because of technological improvements, Astra could be received by acceptably small and inexpensive satellite dishes (although they would have to be somewhat larger than the dishes required to receive BSB's high-powered broadcasts).

The target launch date for Sky was in February 1989. News Corporation forecast that if this schedule could be met, Sky would install 1 million satellite dishes by the end of its first year of broadcasting and 5 to 6 million by the end of 1994. Operating breakeven was expected in late 1991 or early 1992 and total start-up costs, which would be shouldered by News Corporation, were estimated to be approximately £100 million. This estimate was substantially smaller than the corresponding figure for BSB because Sky did not need to launch its own satellites and

