Survival in a Declining Industry: The Case of Baseball Cards*

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Abstract

The baseball card industry provides a case study of survival in a declining industry. The case study shows how manufacturers have varied their strategic behavior in response to changes that have occurred within the industry in the last 20 years. This is in stark contrast to most of the existing theoretical literature on behavior in declining industries, which assumes that behavior remains constant throughout the decline phase of an industry.

1 Introduction

The phrase "declining industry" is enough to make any business manager shudder. Declining industries often portend profit reductions, plant closings, and layoffs. The picture of declining industries painted by economic theorists is just as dismal. The typical theoretical analysis has firms hanging on until they are just barely profitable, then exiting the market. While this model may fit some industries, it ignores the possibility that firms may change their strategic behavior to stave off the disappearance of the industry.

In this paper, I provide a case study of an industry which underwent such a change in strategic behavior, the baseball card industry. While secondary market values for baseball cards have been used in studies on consumer discrimination,[1] baseball player salaries,[2] and in field experiments,[3] little attention has been paid to the manufacture and release of baseball cards. An early paper, Jones and Warhit [11], focuses on the tieing of baseball cards to bubblegum by the then-monopoly producer of baseball cards, the Topps Company (Topps). Stoller [22] discusses the antitrust case decided in 1980 that led to new competitors in the baseball card industry. He also mentions that the baseball card industry will be an

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[1]See Nardinelli and Simon [19]; Anderson and La Croix [2]; Gabriel, Johnson, and Stanton [5]; and McGarrity, Palmer, and Poitras [16]

[2]See Mullin and Dunn [17] and Gill and Brajer [8].

[3]See Harrison and List [9] and List and Lucking-Reilly [14].

interesting industry to observe, as one of the key aspects in any collectibles industries is rarity. In the early 1980s, manufacturers achieved rarity by producing error cards, which were cards that contained incorrect information, such as mismatched names and photos. Stoller wonders if these "low-quality" goods, as he called error cards, would become the norm in the industry. While manufacturers recognized the importance of rarity, by the early 1990s they had found new ways to create rare cards, and by the late 1990s error cards were almost completely eliminated from products. Jin and Kato [10] discuss one aspect of the manufacture of baseball cards, the increase in the number of insert sets, and attribute this increase to lower search costs provided by online sellers. The period from 1983-1997, which encompasses the expansion and decline of the industry, is essentially uncovered by the previous research. However, it is during this period that most new entrants and changes in strategic behavior occurred. In fact, despite sagging revenues in the early 1990s, firms still wished to enter the market. This fact is irreconcilable with the predictions of the theoretical literature described below.

Theoretical work on exit behavior in declining industries can be traced to Ghemawat and Nalebuff [6], Fudenberg and Tirole [4], Ghemawat and Nalebuff [7], and Londregan [15]. In [6], the authors found that larger firms would exit before their smaller counterparts because smaller firms could remain viable for a longer portion of the decline phase of the industry. Their second paper, [7], extends the first model by allowing firms to change capacities, which firms were unable to do in [6]. They find that larger firms will shrink to the level of smaller firms, and then both will continuously phase out production at the same rate. The results in [15] generalize those in [6] by allowing firms to exit and reenter the market. In [4], they construct a duopoly model where the firms have different per period fixed or opportunity costs. They find that the firm with the higher per period cost will leave the market first. A more recent paper is Murto [18], which incorporates an exit model into the real-options framework. He introduces uncertainty in the path of firm profit, and finds that the size of the firm that will exit first depends on the degree of uncertainty. These papers ignore the possibility that strategic behavior may change over time, either by assuming that firms engage in Cournot competition or by leaving the manner in which the firms compete unspecified. van Witteloostuijn [23] provides a review of this line of literature, and states that the firm's inability to change strategic behavior during the decline phase is a drawback of these theoretical models.

This case study of the baseball card industry shows how changes in the method of competition can sustain an industry. The baseball card industry peaked under traditional modes of behavior, and had manufacturers continued using those methods the industry likely would have disappeared due to high licensing fees. Thus, the paper differs from traditional case studies of exit behavior which focus on obsolescence or the failure to adopt new technologies as the reasons for the decline.

Section 2 of the paper discusses some background information on the baseball card industry, paying particular attention to changes in the number and composition of manufacturing firms. For a more thorough review, see Zillante [25]. Section 3 provides an overview of manufacturer behavior during the expansion era in the industry, and section 4 discusses how that behavior changed as the industry entered its decline in the early 1990s. Section 5 concludes.

2 Background Information

From the late 19^{th} century until World War I, baseball cards were used almost exclusively as a promotional item to sell more of a product, typically tobacco or candy.[4] After World War I, baseball cards were used as a promotional item with a new confectionery product, bubblegum. However, due to the depression and the onset of World War II, the production of baseball cards was temporarily halted. In 1948, the Leaf Company and the Bowman Gum Company were the first to include baseball cards with bubblegum after World War II, but they were soon followed by Topps Chewing Gum Company (Topps). Although baseball cards were still considered promotional items, from 1952-1955 Topps and Bowman competed vigorously to sign Major League Baseball (MLB) players to exclusive contracts to appear on their cards. When Topps purchased Bowman in 1955, this essentially ended the competition for exclusive contracts, although the Fleer Corporation (Fleer) would compete with Topps on a limited basis. In the 1960s and 1970s, various lawsuits were brought against Topps. The Federal Trade Commission (FTC) filed suit against Topps on February 8^{th}, 1962, charging Topps with monopolizing the baseball card industry. Although the FTC action in 1962 failed, Fleer filed a lawsuit in June of 1975 accusing Topps of illegal restraint of trade, citing an inability to enter the market due to Topps' exclusive contracts. Fleer won this case,[5] and was granted licenses by MLB and the MLBPA to produce baseball cards in 1981. Topps' primary claim throughout these proceedings was that they were not monopolizing an industry because there was no industry to be monopolized, as the baseball cards were just an advertising gimmick used to sell more bubblegum.

After the decision in Fleer Corp. v. Topps Chewing Gum, 1980, two new licenses were granted in 1981. Fleer obtained one and the Donruss Company (Donruss) obtained the other, and for that year only, Fleer and Donruss produced bubblegum that was packaged with baseball cards. In 1981, the United States Court of Appeals, Third Circuit, ruled that Topps did have the exclusive right to produce and sell baseball cards with confectionery products,[6] as well as the right to sell baseball cards as a stand alone product. To circumvent this legal finding, Fleer released its baseball cards with stickers in 1982, while Donruss offered a puzzle piece. Thus, the last link between baseball cards as a promotional tool was broken, as the intent of both Fleer and Donruss was to produce and sell baseball cards, not stickers and puzzle pieces.

The baseball card manufacturers are defined as the producers of nationally distributed picture cards of major league baseball players, licensed by Major League Baseball and either the Major League Baseball Players Association (MLBPA) or the individual MLB players. Since firms must be granted licenses by MLB and the MLBPA to produce cards that appeal to collectors on a national basis, entry into the industry is controlled by those two entities.[7] Cards that appeal to collectors have a player's likeness depicted on the card and the

[4]Information on the use of baseball cards as advertising tools in the tobacco and candy industries prior to World War II can be obtained from a number of different sources, including Kirk [13] and most of the annual comprehensive baseball card price guides produced by Beckett Publishing or Krause Publications.

[5]See Fleer Corp. v. Topps Chewing Gum, 1980

[6]See Topps Chewing Gum v. Fleer Corporation, 1981

[7]In the late 1980s and early 1990s, manufacturers such as Classic, Frontline, Action Packed, and Starline were denied entry by either MLB or the MLBPA.

MLB logo of the player's team, past or current. It should be noted that not all manufacturers secure licenses from both sources. One manufacturer, Michael Schechter Associates (MSA), has never acquired a national license from MLB. MSA has acquired licenses from the MLBPA, airbrushing out any part of the team logos on the players' uniforms that appear in the picture so as not to infringe on any of MLB's trademarks. However, these cards are not fully embraced by consumers; as such, MSA and similar manufacturers are not included as a baseball card manufacturer. As for the general terms of the license, MLB has a standard royalty rate of 11% for national retail product licenses, as well as minimum annual guarantees which vary depending on the product classification. The MLBPA has similar rates. The MLBPA also has to approve the final product, and may make suggestions to the manufacturers about the design and price of the product.[8]

2.1 New Competitors

The three manufacturers produced card sets for seven years with little competition. The years 1981-1987 were the beginning of the expansion years of the baseball card industry, fueled primarily by investors stockpiling cards. Although there were numerous unlicensed card sets issued during this time, only Optigraphics, Inc., which produced the Sportflics brand of baseball cards, was granted a license by MLB and the MLBPA. Sportflics was introduced in 1986, and were actually quite different from traditional baseball cards. Sportflics cards have three pictures that appear on the card front depending on the angle at which the card is held. Some of the cards, if moved quickly enough, showed a player "in action", either swinging a bat, pitching, or fielding a ball. Since they were so different from the traditional cards, Sportflics were viewed more as a novelty than a mainstream brand, and their inclusion as a competitor to Topps, Fleer, and Donruss is borderline. However, in 1988 Optigraphics produced the Score brand of baseball cards, adding a fourth manufacturer and a fifth brand of cards, as they continued to produce the Sportflics brand in 1988.

In 1989, MLB and the MLBPA granted licenses to a fifth manufacturer, the Upper Deck Company (Upper Deck). Upper Deck was the first company created solely to produce sportscards. Upper Deck revolutionized the hobby by introducing high quality cards as a mainstream product. From 1989 until 1995, the baseball card industry would consist of five producers: Topps, Fleer, Donruss, Pinnacle (formerly Optigraphics), and Upper Deck. An additional license was granted to Pacific Trading Cards, Incorporated (Pacific) in 1993, but it was not a full license. Pacific could only produce cards that were bilingual (English/Spanish) in nature, and Pacific released at most two brands a year from 1993 to 1997.

In April 1996, Pinnacle acquired Donruss, which reduced the number of fully-licensed manufacturers from five to four. In May 1998, Pacific was granted a full license to produce cards, returning the number of fully-licensed manufacturers to five. However, Pinnacle would file for bankruptcy in July 1998, reducing the number of manufacturers to four, and the brand names of Donruss and Leaf would be acquired by a non-licensed company, Playoff, Incorporated (Playoff).[9] Although Playoff was allowed to release two products that Pinnacle had already manufactured in 1998, it was unable to purchase the license to produce cards,

[8] This process is discussed in O'Shei [20].

[9] Although Playoff was not licensed by MLB and the MLBPA, it had been producing cards for other sports, primarily football.

and it was not granted a license by MLB and the MLBPA until February 2001. However, the number of fully-licensed manufacturers did not return to five in 2001 as Pacific did not renew its license to produce baseball cards. Thus, the number of manufacturers has remained relatively stable at 4 or 5 since 1989.

2.2 Revenue Trends

The time period from 1981-1991 is generally viewed as the expansion era in the sportscard industry, which was fueled by a few factors. The primary factor was the significant spike in prices of cards from the 1950s and 1960s. The price spike for the older material arose due to an increase in demand, as baby boomers, now entering their peak earning years, sought items from their youth. Additionally, supply of the older material was restricted as large quantities of cards from the 1950s and 1960s were lost in spring cleaning and bicycle spokes. Due to these factors, returns on sportscards, particularly baseball cards, could easily reach triple digit percentages. The fourth column of table 1 lists the book value for one of the most popular post-war baseball cards, the 1952 Topps Mickey Mantle. The price in the table is for a card in near mint condition,[10] taken from the Sportamericana Price Guide for 1978, 1979, and 1981, and from the October issue of the Beckett Baseball Card Monthly magazines for 1986-present. As the table shows, the Mantle card posted large returns until 1992, peaking around $33,000. While the Mantle card is the most notable, many older cards posted returns that were equally impressive, attracting investors and speculators into both the vintage card market as well as the new card market in the 1980s. Due to the increase in consumers in the mid-to-late 1980s and early 1990s, production of the new products increased. This increased production would lead to depressed secondary market values for products from the late 1980s and early 1990s. With secondary market values depressed, the investors began to exit the market.

Table 1 shows the estimated revenues of new product sales for the sportscard industry from selected years from 1978-2001, taken from Ambrosius [1]. Note that revenues from new card sales increased from 1981-1991 even as competition increased over this time period. While this figure is for the entire sportscard industry, the general trend holds for the 3 major individual sports (baseball, football, and basketball), although the sports may have slightly different peaks and troughs due to different periods of peak interest and labor strife in the sport. Estimates from [1] state that baseball card sales constituted 85% of the sales in 1989, 60% in 1994, and 40% in 1995. Thus, it appears that baseball cards are falling at a faster rate than other sports, although that trend may have begun to reverse recently.

Although profit levels for manufacturers and the industry as a whole are unavailable, the data in table 1 suggest that profits are declining. First, total revenue is declining. While this does not necessarily imply that profits are falling, the third column of table 1 shows how the number of sets has changed over time. The increase in the number of sets means that more photographs must be taken, more border designs for the cards must be created, and the printing presses must be changed more often to accommodate more sets. In addition, the quality level of the cards has improved over time, which has also increased costs.

[10] Note that the price is not for a professionally graded near mint card as the professional card grading industry did not exist for a portion of this time period.

Year	New card sales[a]	# of brands	Revenue per brand[a]	1952 Topps Mickey Mantle Price
1978	\$9	5	\$1.8	$\approx$ \$100[b]
1979	\$10	5	\$2.0	\$500
1981	\$30	7	\$4.3	\$1,500
1988	\$250	8	\$31.3	\$6,500
1989	\$450	12	\$37.5	\$6,600
1990	\$800	24	\$33.3	\$7,500
1991	\$1200	35	\$34.3	\$20,000
1992	\$1100	46	\$23.9	\$33,000
1993	\$850	58	\$14.7	\$25,000
1994	\$800	81	\$9.8	\$26,000
1995	\$700	111	\$6.3	\$25,000
1996	\$575	137	\$5.1	\$25,000
1997	\$500	151	\$3.3	\$24,000
1998	\$450	148	\$3.0	\$23,000
1999	\$425	185	\$2.3	\$18,000
2000	\$400	210	\$1.9	\$18,000
2001	\$350	212	\$1.7	\$18,000

a In millions of \$, unadjusted for inflation
b Card prices for 1978 are not listed for individual cards, but rather by the card's series, so this is an approximate value

Table 1: Estimated sportscard industry revenues from new card sales for selected years from 1978-2001

There has also been a surge in insert cards over the past 10 years, which require even more printing press changes since insert cards are typically designed differently and produced at a lower rate than regular cards. Two important types of insert cards were created in the 1990s. One was the certified autograph, first used in 1990 by Upper Deck. The second was the game-used memorabilia card, which is a card that has a piece of the pictured player's memorabilia (jersey, bat, cap, glove, etc.) embedded into the card. Game-used memorabilia cards were introduced by Upper Deck in 1997. Both of these types of cards increase the costs to the manufacturers, both in material costs (the autograph or the memorabilia), and in production costs.

3 Expansion Era Industry Behavior

From 1981-1983, Topps was viewed as the industry leader. All three firms had a suggested retail price (SRP) of \$0.30 per pack in 1981, although Fleer and Donruss offered 17 and 18 cards per pack, respectively, to Topps' 15 cards per pack. For 1982 and 1983, all manufacturers included 15 cards per pack with a SRP of \$0.30. A card pack is the smallest unit of a manufacturer's product available for sale in most retail stores that do not specialize in sports cards. During those years, all manufacturers essentially engaged in Bertrand competition by following a "print to order" business plan, where they would continue printing cards until there was no remaining demand. In 1984, both Fleer and Donruss improved the quality of their card sets, and also restricted quantity. This quantity reduction may be viewed as an attempt at Cournot competition by Fleer and Donruss, although the SRP of their packs of cards did not differ from Topps'. While it is difficult to pinpoint exactly when this Cournot competition ended, current secondary market values for products from 1989-1992 are among the lowest valued and most equal across manufacturer in the hobby, suggesting that a return to Bertrand competition may have begun in 1989.

This return to Bertrand competition was driven by consumer behavior during this time period, as the investment frenzy was peaking. Lots for 50 and 100 of the same card were bought and sold regularly, almost as if the cards were shares of stock. Although near the end of the expansion period, the February 4, 1991 issue of *Baseball Card News & Price Guide* has 8 full or half page advertisements with dealers offering 50 and 100 card lots for dozens of different cards. That same issue contains two segments that convey the investment mentality common during this time. Pietruska [21] is an article about how to invest your money in baseball cards. Brecka [3] is an investment guide, which offers tips on which products from 1960-1990 are most likely to increase in value in the coming years, and why these products should increase in value. This investment guide differs from typical price guides, which show lagged market prices for cards.

A change that occurred near the end of the expansion era was improved product quality. While product quality improvement was occurring slowly throughout the 1980s, it was the introduction of Upper Deck in 1989 that launched the onset of premium and super-premium brands. Premium and super-premium brands were typically printed on high quality card stock rather than cardboard, and most premium and super-premium brands were coated with some type of finish (e.g. ultra-violet coating) to give the cards a glossy look and feel. Other manufacturers, perhaps reluctant to change their basic brands, launched second and third product lines in an attempt to produce at least one product in the basic, premium, and super-premium categories. In response to this, Upper Deck, which is viewed as a premium brand, began releasing a slightly lower quality brand in 1994, Collector's Choice, to compete with the other manufacturers' lower quality brands.

Another change that occurred during the end of the expansion period was the introduction of insert sets into products. An insert set is a set of cards which can be found in a specific product, but which (typically) has a production run lower than that of the primary set. While the insert concept was not new (Topps had inserted items such as coins and posters in the 1960s), the type of cards included as inserts was. Upper Deck inserted a special 10 card insert set of Reggie Jackson for its 1990 product. It also inserted 2,500 serial-numbered copies of an autographed version of a Reggie Jackson card. Both the serial-numbering AND the autograph were important innovations. The serial-numbering assured collectors that only a specific quantity of a card existed, at a time when there was speculation that some companies were overprinting certain cards with high secondary market values.[11] The autograph simply added to the appeal of the card. Over the next few years, other types of inserts, such as game-used memorabilia cards, which feature a piece of a player's game-used equipment embedded into the card, would be introduced into products. One key feature of the market is that any successful concept can be quickly copied by other manufacturers, creating a very short window during which the innovating firm can capture economic profits.

[11] See Williams [24] for a discussion of these accusations against Upper Deck.

Thus, while these innovations may lead to a short-term profit increase, they typically cannot be used to increase long-term profits.

The expansion era industry behavior is similar to other industries, as existing firms engaged in traditional Bertrand or Cournot competition, and additional firms attempted to enter the market. In addition, manufacturers began to compete on other margins, such as quality, during the expansion period. What sets the baseball card industry apart from other industries is the manner in which behavior changed during the decline era, discussed in the next section.

4 Decline Era Industry Behavior

As table 1 shows, the decline in revenue began around 1991, when the investors/speculators began to exit the market, and was exacerbated by the MLBPA strike in 1994. These two factors left the manufacturers with a small core of consumers as their customer base. With the exit of the investors, most remaining collectors had no use for lots of 50 or 100 of the same card. Thus, changes had to occur within the industry for the manufacturers to fulfill their licensing agreements. Two primary changes occurred in the industry due to the decline. One change was that manufacturers increased the prices of their products. Perhaps the most important change was that manufacturers cut production runs of each product and began issuing multiple products throughout the year. These changes are discussed below.

4.1 Price Increases

One change that has occurred in the market is that the SRP of packs has increased. According to Keifer [12], improvements in card quality and increases in costs of production are two possible reasons for the price increase. A third reason may be that after the MLBPA strike in 1994, the consumer base of baseball cards shrank significantly, as fans with merely a passing interest in baseball turned to other hobbies. Due to this exogenous factor that caused consumers with elastic demand to exit the market, manufacturers could raise prices and not lose the remaining consumers, as those consumers who remained in the market had inelastic demand.

Figure 1 shows the SRP for a pack of the Topps brand of cards and the SRP per card per pack, with the left axis corresponding to SRP and the right axis to SRP per card per pack. The Topps brand is used for two reasons. First, the brand was produced each year from 1980-2004. Second, SRPs are readily available for all years, as Topps pre-printed SRPs for packs on its boxes of cards for the early years, and then on the packs of the cards in the later years. Although some SRP data is missing for other manufacturers, the SRP for their products follows a similar qualitative pattern.

Throughout the 1980s, Topps' pack price either remained constant or increased in increments of 5 cents each year. The SRP per card is approximately 7% of the SRP from 1980-1993, as Topps typically included 15 cards per pack in each of these years. The largest increase in SRP is from 1994 to 1995, as the SRP jumped from 79¢ to $1.29, an increase of 63%. The increase in SRP per card is even higher, as Topps also decreased the number of cards per pack by one, causing a 78% increase in SRP per card. After this large jump,

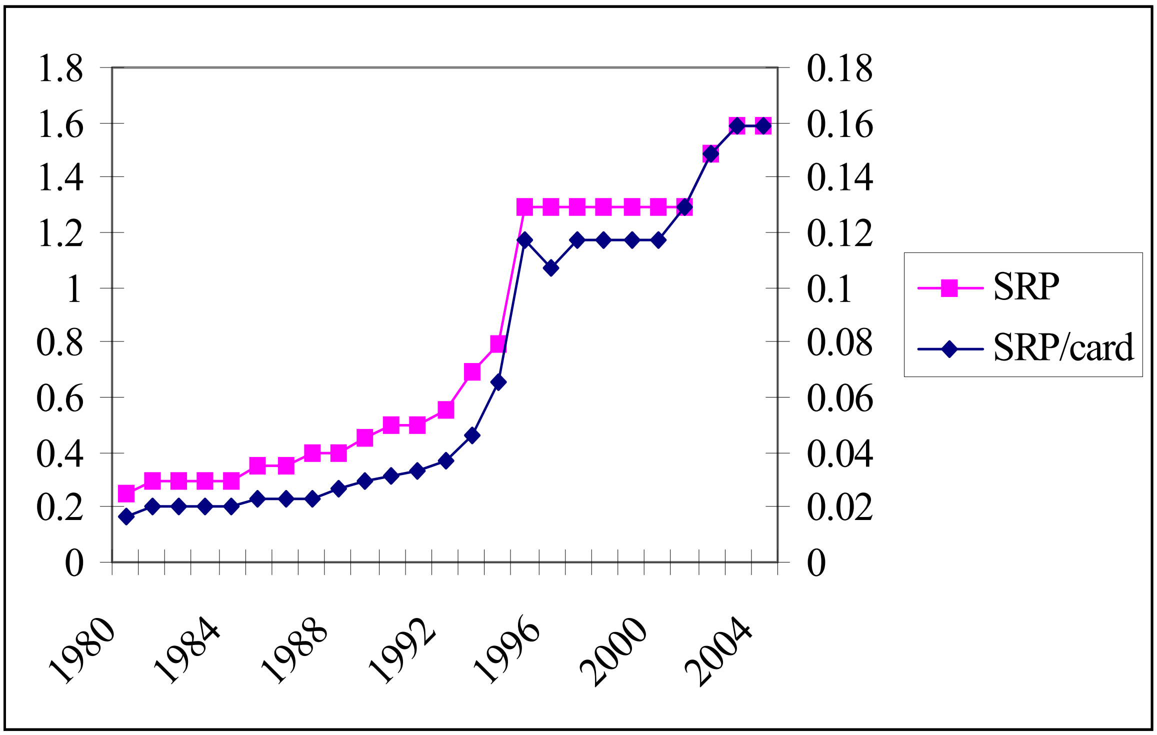

Figure 1: SRP and SRP per card for a pack of the Topps brand of baseball cards from 1980-2004

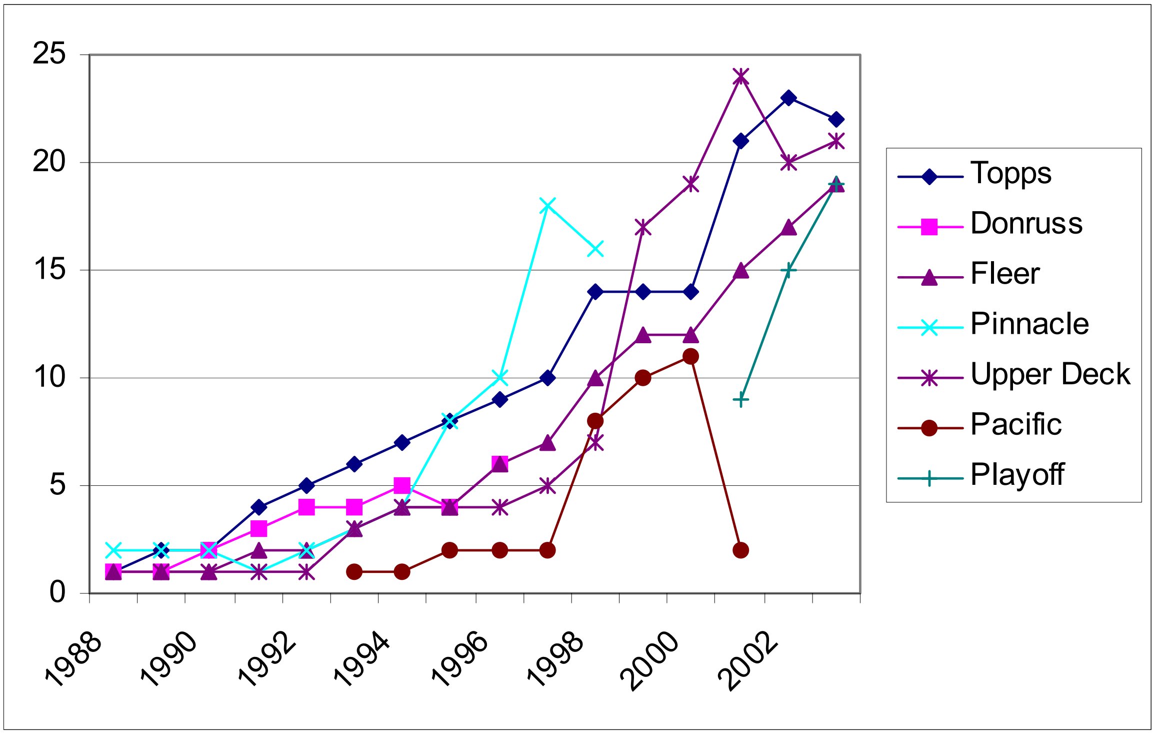

Figure 2: Number of brands produced by manufacturer, 1988-2003

both SRP and SRP per card remain relatively constant until the year 2000. While this stagnation may have occurred due to the fact that consumers with low valuations returned to the market, their return may not be the only reason. As the next section shows, the number of products produced by each manufacturer was increasing, allowing manufacturers to price discriminate among consumers.

4.2 Number of brands increase

The key behavioral change in the industry was in the number of products each manufacturer released over the course of a year and when they released the products. Figure 2 shows the number of brands each manufacturer released from 1988 to 2003. Only brands available for sale in wax packs and wax boxes are included in the figure; brands available only as boxed-sets are not counted, although their inclusion will not change the qualitative nature of the picture. Boxed sets are excluded because they typically appeal to a different type of consumer than the primary consumer type in the market, which is the wax pack or wax box purchaser. Also, most boxed-sets currently produced are also available in wax pack or wax box form. For completeness, during the time period from 1981-1987, the 3 major manufacturers, Topps, Donruss, and Fleer, all released one brand per year.[12]

The general trend is that each manufacturer gradually increases its number of brands

[12] The end of the season Traded, Rookies, and Update brands were only available in boxed set form in the early 1980s, and thus are not included.

over time. There are a few large changes in the number of brands released, which are easily explained. Between 1996 and 1997, Pinnacle went from producing 10 brands to 18 brands. This increase was due to the purchase of the Donruss and Leaf brand names. In 1998, Pacific increased their number of brands from 2 to 8 because they were granted a full license in 1998. Pacific's decline from 11 brands in 2000 to 2 brands in 2001 was due to their decision not to renew their MLB license. The other two large increases, Upper Deck from 7 in 1998 to 17 in 1999 and Topps from 14 in 2000 to 21 in 2001, stem from an increase in demand for MLB-related products following the pursuit of the single season homerun record in MLB by Mark McGwire and Sammy Sosa in 1998. Upper Deck's increase in its number of brands is almost certainly related to that increase in demand, and Topps' increase in brands in 2001 is likely a combination of renewed demand for MLB-related products and the fact that 2001 marked Topps' 50^{th} anniversary as a manufacturer.

4.3 Timing of product releases

In addition to increasing the number of products, the manufacturers also changed the timing of the releases. During the expansion period, when each manufacturer released one product per year, the product was typically released between the end of one baseball season (October) and the beginning of the next (April). During the expansion, there was some competition among manufacturers in their release strategies, as each manufacturer attempted to be the first one to market with its product, and release dates for products moved closer towards October. As the number of brands increased, manufacturers spread the release of these brands over the calendar year. In a sense, manufacturers began to engage in a type of temporal Hotelling game, where the object is to release a product at a point in time that did not coincide with another manufacturer's new product release. If the manufacturers play the temporal Hotelling game "perfectly", then each product release will be equidistant from the previous product release as well as the product release that follows it.

Figures 3 and 4 show the release patterns by manufacturer for the calendar year 2002.[13] Figure 3 shows the releases from January 1, 2002 to June 30, 2002, while figure 4 shows the releases from July 1, 2002 to December 31, 2002. All releases are included, whether they are labeled 2001, 2002, or 2003 products by the manufacturer. Any releases labeled 2002 that occurred before January 1, 2002 or after December 31, 2002 are not included in the figures. Points that are set slightly above the others correspond to packs with SRPs greater than $9.99, which are currently considered the high-end products.

The 2002 calendar year is not a special case; the other years from 1998-2004 show similar patterns. I focus on the 2002 calendar year because I have complete data for that year; other years are missing between 1 and 4 product releases, and the data prior to 1998 is difficult to find. Also, 2002 is the year during which the products are least equally spaced. This may be due to a few factors, such as Playoff being a competitor for an entire year, as well as the threat of a strike by the MLBPA in August 2002.

Over the 2002 calendar year there were 82 products released by the four manufacturers.[14]

[13] Most release dates were taken from Sports Collector's Digest (SCD), a weekly sportscard publication. For those that were unavailable from SCD, dates from Beckett Publications' magazines and online site were used.

[14] There are a few instances where the same manufacturer released more than one product on the same

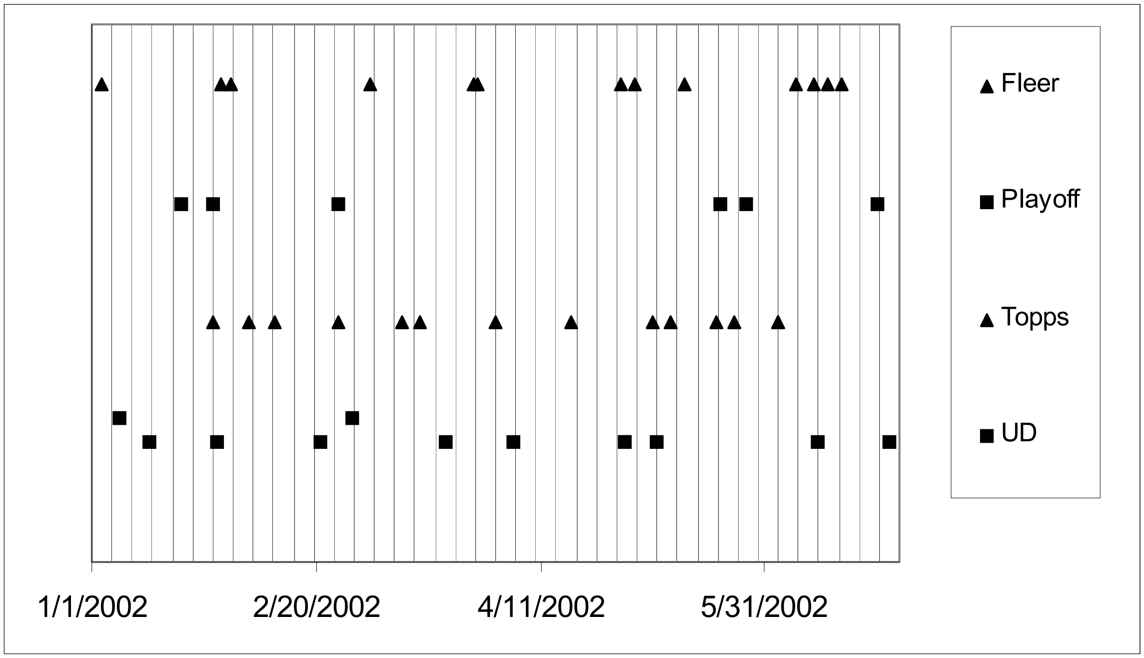

Figure 3: Time series of product releases by manufacturer from 1/1/2002 – 6/30/2002

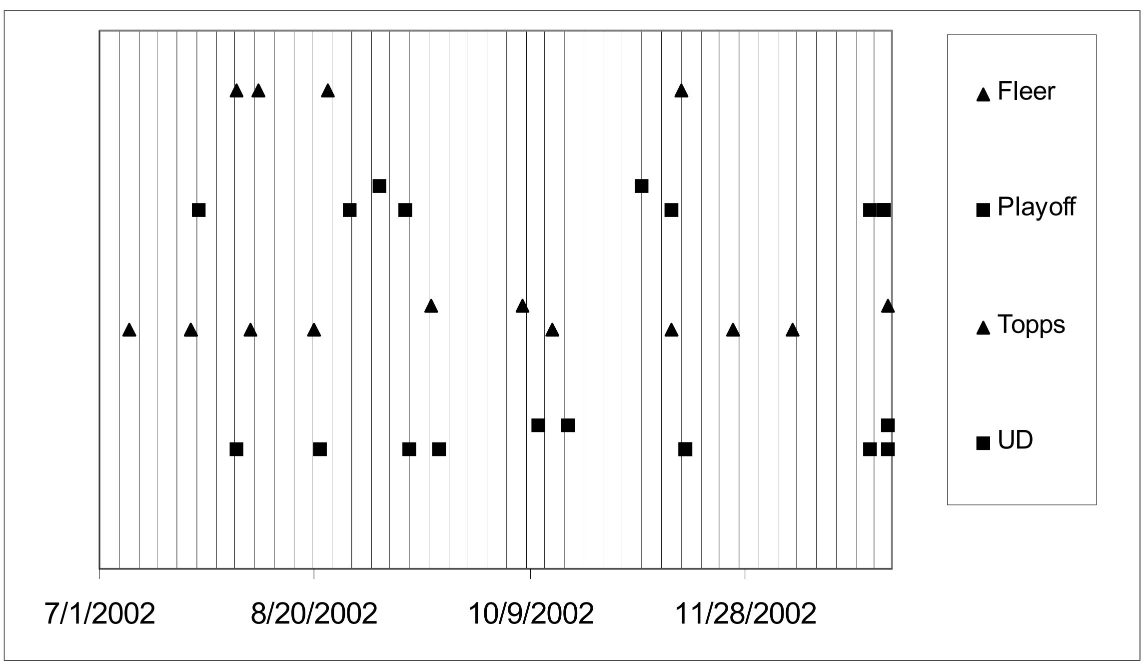

Figure 4: Time series of product releases by manufacturer from 7/1/2002 – 12/31/2002

The gridlines on the figures are set at 4.5 days, which is approximately the average amount of time that passes between releases. If the temporal Hotelling model is followed exactly, this implies that the releases would be perfectly spaced, with one release between each set of gridlines. While this is not the case, the general pattern is that firms are attempting to space their releases over time. Some of the clusters have simple explanations. In June, Fleer released 4 products in a little over two "market periods". As mentioned, there was a threat of a strike by the MLBPA in August 2002. Fleer was the manufacturer which responded to the potential strike by pushing up its release dates. Note that Fleer released very few products in figure 4. There are two other periods when all manufacturers tend to release at the same time. One is mid-November, which is when all manufacturers typically release their first products for the just completed season. Thus, those products released in mid-November in figure 4 are the first 2003 products to hit the market.

The second time that all manufacturers clustered was at the end of the calendar year. This clustering occurs because of the demand for players' rookie cards, which was an important factor in determining product success during the expansion era of the industry, and is an important factor for determining success in some products since behavior has changed. Although the definition of a rookie card has changed over time, it is generally defined by the hobby as the first nationally distributed card of a player in a brand of cards, as long as that player has not had a card in a brand of cards from the manufacturer of that brand or another manufacturer in an earlier year. The end of the calendar year represents the last point in time at which a manufacturer can release a product that can contain a player's rookie card for the current calendar year. As an example, if the first card of Player A was produced in 2002, any product released in 2001 or 2002 and labelled a 2002 product by the manufacturer would be considered a rookie card, but cards of Player A in products that are released in 2003 would not be. Thus, there are two reasons for the late year release. One is to include rookie cards of players who already have rookie cards in other brands throughout the calendar year, and the other is to possibly release a card of a player who did not yet have a rookie card. If Player A had not had a card produced in a prior year, and his first card was released in December of 2002 in a product labelled 2002 by the manufacturer,[15] this would likely be the only rookie card of Player A ever produced, giving that product a distinct advantage in the market over other products, particularly if Player A was a young player considered a high-level prospect.

5 Conclusion

The theoretical literature on declining industries portrays gloom and doom for such industries. While this may be the case for industries in which leaders remain stagnant, there are cases where innovation in strategic behavior slows, and perhaps stops, the decline phase of the industry. The baseball card industry provides one such example of changes in strategic behavior, as manufacturers moved from each releasing one product at the same point in time

day or on consecutive days, resulting in slightly less than 82 releases on the figures.

[15] The labeling is an important point, as some of the products released in November and December of one calendar year are actually considered the next calendar year's products due to the designation by the manufacturer.

in the year to each releasing multiple products throughout the course of the year.

The facts presented about the baseball card industry show how quickly manufacturer behavior changed during a twenty year time period. Initially, the strategic behavior of manufacturers can be explained by the traditional industrial organization models of Bertrand and Cournot behavior. Even as new entrants entered the market during the expansion era, those models seem applicable. However, after the MLBPA strike in 1994, the Bertrand and Cournot models do not seem as appropriate, as manufacturers increased the number of products in the market, and began to release them over the calendar year, rather than all at the same time. Faced with the problem of a shrinking consumer base, manufacturers adjusted their behavior in an effort to capture more dollars from those consumers still in the market.

This case study shows that theoretical models that attempt to explain behavior in declining industries should begin to focus on the behavioral assumptions of the firms in the industry. Perhaps models from evolutionary game theory can be used as a starting point. While the task may be difficult, an understanding of when an industry may need to switch behavior could have a significant impact in industries entering a decline phase.

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