**Can SodaStream Disrupt the Carbonated Soft Drink Market?: Teaching Note**

**Synopsis and Position in the Course**

SodaStream is a home soda machine, flavor concentrate, and gas cylinder producer and marketer.  The company’s home soda machines allow consumers to turn tap water into carbonated water by injecting CO2 into a bottle of water.  Consumers then choose from one of about 100 flavor concentrates to make the soda pop of their choice.  SodaStream sells its products in mass retail outlets as well as upscale home stores in 41 countries.

The company was founded in 1903 and enjoyed short bouts of intense consumer interest in the 1920s, 1950s, 1970s, and 1990s only to see consumer interest wane as customers switched to other beverages or fads.   An Israeli distributor purchased the SodaStream company from Cadbury Schweppes in 1998 for $26mm and changed its name to Soda-Club.  After years of disappointing results, Fortissimo Capital bought the company for $6mm in 2007 and brought in CEO Daniel Birnbaum to turn around financial results.  Birnbaum, a P&G and Nike alum, revamped the home soda maker’s product line and image – taking the company public in the US in 2010.

Birnbaum repositioned the product line to capitalize on the “green movement,” and increased consumer health concerns.  He also expanded the company’s distribution to include the $74 billion US carbonated soft drink market and significantly improved the product’s quality and design. SodaStream gained significant consumer attention after CBS banned the company’s Super Bowl ad in 2013.   That year, the company generated revenues of $563 million and operating profits of $49 million – up from $289 million in revenues and $29 million in operating profits in 2011.   On the positive side, SodaStream garnered intense investor interest due to strong operating results and takeover rumors.  On the negative side, skeptics pointed to the possibility that SodaStream’s revenue stream would dry up as consumers moved on to the latest fad as they had in the past and PepsiCo’s public statement that it was not interested in purchasing SodaStream.

The case is designed to be an industry case in which students can employ fruitfully the Structure-Conduct-Performance model, Porter’s Five Forces, and value chain analysis.  The case contains data that will allow students to calculate both the 4-firm concentration ratio and the industry’s HHI.  Historically, the US carbonated soft drink market has been characterized by exceptionally high profits and returns for Coca-Cola and PepsiCo and very low returns for their bottlers.  A classic case of supplier power, similar to the PC market where Intel and Microsoft earn the lion’s share of the profits due to their stranglehold on the semi-conductor and operating system markets; respectively. In 2009, both companies began to acquire their bottlers and forward vertically integrate into carbonated soft drink production and distribution.  As of the end of 2010, both major soft drink companies owned nearly all of their distribution system in the US.  In addition to analyzing the changing industry structure and likely financial performance of the US carbonated soft drink market, students also have an opportunity to determine whether or not SodaStream is a “disruptive innovator.”  Disruptive innovation is a popular and interesting topic to students that instructors can segue way into as part of the class discussion on the future of the carbonated soft drink market.

**Objectives**

1. Review industry structure concepts in a changing industry.  The case illustrates how forces outside an industry (substitutes) can cause major shifts in strategy even in mature, relatively predictable industries.  It also demonstrates how the balance of power between suppliers and buyers can push industry profits largely to one or the other parties.
2. Evaluate strategic responses to long-term changes in product demand.
3. Explore new business models and disruptive innovation.

**Case Study Questions**

1. What is the structure of the US carbonated soft drink market?
2. How has the structure of the industry changed in recent years?
3. What do the changes in industry structure suggest about the likely profitability of the industry in the future?
4. Is SodaStream a disruptive innovator of the carbonated soft drink industry?

**Class Opener**

I have used a variety of ways to open the class including viewing the two banned Super Bowl ads (2013 and 2014).  Both ads are suitable for classroom viewing and can be seen on YouTube.  Note that the 2014 ad features Scarlett Johansson and is a bit sexy, but not explicit.  I like to show the ads and then ask students why CBS refused to run the ads.  CBS refused to carry the spots reportedly because key sponsor, Pepsi reportedly objected to the portrayal of Pepsi as harmful to the environment due to the fact that used Pepsi bottles and cans (along with other drink bottles and cans) often end up in landfills.  SodaStream claims to have kept 4.2 billion bottles out of landfills as of June 2014.  PepsiCo is a major sponsor of the NFL and sponsored the Super Bowl halftime show in 2013 and in 2014.  Also, Coca-Cola purchased two 60-second ad spots in the 2014 Super Bowl.

Another way to open the class is to recreate the “Pepsi Challenge” – Pepsi’s famed advertising campaign from the late 1970s.  I ask a few student volunteers (usually 5) to do a blind taste test of Pepsi and Coke.  I then conduct the same blind taste test with Diet Pepsi and Diet Coke.  While the Pepsi Challenge reportedly showed consumers preferred Pepsi to Coke, many research studies have recreated the test but have not gotten the same results.  Class results show students usually favor Pepsi by a slight margin but nearly always prefer Diet Coke (#2 brand in the US) to Diet Pepsi.  Once we complete the taste test, I tell students about a recent research study that compared Coke, Pepsi, and two store brand (generic) colas.  Cola taster preferences were nearly evenly split between the four products with Coke edging out the others by a slim margin.  However, when identified by brand prior to the tasting, Coke emerged as the clear winner in the test taste with over 50% of tasters selecting Coke as their favorite.  The remaining tasters’ preferences were nearly equally distributed between Pepsi and the two store brands.

In my view, the study clearly shows 1. Coca-Cola’s exceptional marketing capabilities, 2. The company’s strong brand equity, and 3. Coca-Cola’s first mover advantages stemming from former Chairman Robert Woodruff’s distribution strategy.  Robert Woodruff stated in 1923, that Coca-Cola should always be “Within an arm's reach of desire”1.Coca-Cola followed Woodruff’s vision for many years by putting a Coke within reach in any situation in which a consumer might like to have one.  Given the importance of distribution and the distribution system to Coca-Cola’s historical success, SodaStream potentially represents a major threat to both Coca-Cola and Pepsi as the company bypasses the bottling system.  This discussion is a nice lead-in to an analysis of the SodaStream case.

**Teaching Plan**

US carbonated soft drink industry is a mature industry that generated about $74 billion in revenues at retail in 2011.   The SodaStream case is designed to allow students to assess industry structure and the implications of structural changes on the likely financial performance of the industry.  I like to begin the analysis by to reviewing briefly the S-C-P model (in chapter 2 of the text), and then have the students examine the industry structure.  McKinsey & Co. has a terrific interactive video series about the Structure-Conduct-Performance model available for free on the Internet.

**Industry Structure**

The US carbonated soft drink industry meets the conditions of an oligopoly – suggesting that firms can establish competitive advantage, and that industry profitability is likely to be above average.  The two key characteristics of oligopolies are 1. a small number of firms, and 2. costly entry and exit.  The industry is a differentiated oligopoly in which similar, but not identical, products are produced.  The results of a large number of taste tests of colas shows that brand name plays a significant part in product selection despite the lack of discernable differences in taste between the products.  In other words, consumers perceive a difference between products based upon brand name even though the product features are similar.

A calculation of the widely used four firm concentration ratio (C4) based on data from Table 1 in the case shows that a handful of companies control the majority of sales in the industry.  Students can use the data in Table 1 to easily calculate the C4 (concentration ratio of the top 4 companies’ market shares) and begin to draw some conclusions about market structure.   As Table 1 shows, the industry is a highly concentrated one with a C4 of nearly 97% of the market.   Moreover, if National Beverage (#5 in the industry) is included, the top 5 firms control 99.6% of the industry.  Note that industries with high C4 ratios tend to have high profit margins.

**Table 1: C4 Calculation**

|  |  |
| --- | --- |
| **Company** | **2011 Market Share** |
| Coca-Cola | 41.9% |
| PepsiCo | 28.5 |
| Dr. Pepper Snapple Group | 21.1 |
| Cott | 5.2 |
| Four Firm Concentration Ratio | 96.7% |

The industry’s HHI (Herfindahl-Hirschman Index) also points to the likelihood of high profit margins due to a general lack of price competition.  Since the HHI is calculated by taking the sum of the squares of the market shares of each of the top 50 firms in the industry (or the total number of firms in the industry whichever is smaller), it takes into account the distribution of market shares in the industry rather than merely the sum of the market shares of the largest firms in an industry.  Market share distribution is an important driver of competitive behavior.  Industries characterized by high C4 ratios in which the top 4 firms are about the same size are significantly more competitive than industries with high C4 ratios and a dominant player in the market.  The higher the HHI is for an industry, the less competitive the industry.

The HHI for the industry is approximately 3,048 excluding the 0.6% of the market unaccounted for by the players listed in Table 1 of the case. Using the HHI index as follows:

HHI < 100 indicates a highly competitive industry

100 < HHI < 1,500 unconcentrated (fragmented) industry

1,500 < HHI < 2,500 a moderately concentrated industry

2,500 < HHI a highly concentrated, uncompetitive industry

10,000 monopoly

This calculation confirms that carbonated soft drink companies should be highly profitable due to a general lack of competitive conditions within the industry – particularly a lack of price competition.

Barriers to entry in the carbonated soft drink industry include 1. overcoming the sunk costs of advertising; 2. economies of scale in advertising; 3. distribution; 4. purchasing economies; 5. product differentiation; and 6. capital intensity.  Table 2 in the case shows the top 3 companies spent nearly $745 million on advertising in 2012 in the US alone.  Moreover, it displays significant differences in advertising effectiveness as measured by dollars spent per market share point – illustrating Coca-Cola’s enormous lead in economies of scale in advertising.  PepsiCo spent $8.30 per market share point or about 1.4x more than Coca-Cola in 2012. Based upon Coca-Cola’s acquisition of its largest North American bottling operation in 2010, it would cost more than $20 billion to replicate just Coca-Cola’s US distribution system.  Bottling operations are very capital intensive and generate relatively low levels of profitability.

Students are likely to protest that the soft drink industry is characterized by heavy promotions and discounts at retail.  If they do not protest, you can ask them how often they pay “full price” for a 2-liter bottle of Coke or Pepsi or a 12-pack of Coke or Pepsi in a can.  Note the reason for the apparent disparity between “real life” and the S-C-P model lies in the structure of the value chain of the industry.  From the mid-1980s until 2009, Coca-Cola and PepsiCo relied upon a system of independent bottlers to actually manufacture their beverages (see Diagram 1 below).  Due to exclusive contracts, Coca-Cola and PepsiCo have significant pricing power over their bottlers – in effect, Coke and Pepsi have monopolies.  Coke and Pepsi bottlers are prohibited by contractual arrangements from switching to a competing producer’s syrups.  This arrangement allowed Coca-Cola and PepsiCo to increase syrup prices even as retailers pressured the bottlers to keep a lid on prices through promotions.  Declining consumer demand for carbonated soft drinks began to hurt sales volumes for the bottlers in the early 2000’s.  Essentially, the bottlers were squeezed from both sides with the result being low margins and returns.  At the same time, Coca-Cola and PepsiCo increased their demands to the bottlers to produce alternative beverages such as energy drinks, sports drinks, and ready-to-drink teas among others due to shifts in consumer preferences.  Adding new beverages to the line up meant the bottlers had to make investments in production and inventory management processes.  Given the relatively low margins and returns of the bottling industry, many bottlers were reluctant to make those investments.

**Diagram 1: Selected Components of the CSD Value Chain Circa 1986 to Circa 2009**



In a major reversal of its corporate strategy, PepsiCo announced the acquisition of Pepsi Bottling Group and PepsiAmericas in August 2009.  The firm paid $7.8 billion for both of firms combined and received control over 80% of US distribution in return.  At the time of the acquisition, Pepsi’s CEO (Indra Nooyi) stated that PepsiCo expected to save $300 million per year in costs by consolidating the operations and investing in updated equipment and processes.  Coca-Cola followed Pepsi’s lead and announced the acquisition of the North American portion of Coca-Cola Enterprises for $12.3 billion.  In return, Coca-Cola gained control of about 90% of its US distribution (in part from earlier acquisitions as well as the CCE acquisition).  The company announced it expected to generate revenue growth and cost savings amounting to $350 million per year from 2011-2015.  Both firms still worked with many independent bottlers in the US, while controlling nearly all of US manufacturing and distribution in house (see Diagram 2 below).