

# EE481: Industrial Economics

## Firms & Game Theory (Case Studies)

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22 August 2018

## Background

- In the early 1990s, the U.S. automobile industry was very competitive.
  - Major players were GM, Ford and Volkswagen.
- Firms give rebates to customers. So, customers wait to buy cars only when firms offer rebates
  - Firms are playing a severe price competition game.
- GM then, turned to the Household Bank and introduced the GM card.
- This helped soften the severely price competition. (How?)

## The GM card

- The GM card is a credit card
- Cardholders can apply 5% of their charges towards buying a new GM car.
  - for up to \$500 a year, with a maximum of \$3,500.
- A lot of GM potential buyers applied for this card.
- From the consumers' point of view, the deal increased the value of GM cars.
- GM could then sell without offering rebates.
- GM stopped offering rebates.

## For Ford and Volkswagen

- Ford and Volkswagen also followed GM.
  - They introduced their credit cards.
  - They also stopped offering rebates.
- All major car companies got themselves out of the severe price competition.
- They then, focused to compete on the non-price aspects
  - such as quality and service.

# Background

- Aspartame is an artificial sweetener (almost no calories).
- It was protected by patents in Europe until 1987 and in the US until 1992.
- Monsanto was the owner of Aspartame and sold it under the tradename of “NutraSweet”.
  - Before patents expired, NutraSweet enjoyed a 70% gross margin.
- Diet Coke and Diet Pepsi were big buyers of this product.
  - Customers trusted the NutraSweet brand. So, Coke and Pepsi put the logo on the products’ containers.

## For Coke and Pepsi

- Coke and Pepsi did not like paying so much for NutraSweet.
- A few years before the Europe patents expired, Coke contacted another sweetener company in Europe.
  - The company's name is Holland Sweetener Company (HSC)
- Right after the patents in Europe expired, HSC started selling generic Aspartame at a lower price.
- Monsanto (owner of NutraSweet) fought back by charging a very low price.
- HSC could not survive
- BUT ... Coke and Pepsi enjoyed the low NutraSweet price forever after.

## In sum..

- The threat of entry or the entry (by HSC) induced competition.
- NutraSweet had to lower its price to drive new competitors out and discourage future entries.
- In the end
  - Coke and Pepsi got to buy NutraSweet at a low price.
  - Coke and Pepsi did not need to switch to other less trusted sweetener producers.

## Reference



Brandenburger A.M., and B.J.Nalebuff. *The Right Game: Use Game Theory to Shape Strategy*.  
Harvard Business Review: July-August, 1995.