Announcements

- **Read**
  - Messerschmitt Ch 2.3 (38-50)
  - Messerschmitt Ch 3.1-3.3 (59-82)
- **Homework assignment 2 due Monday next week (April 20th)**
- **News Folio 1 deadline moved to Wednesday 4/27**
  - (for those of you not assigned a presentation)
Recap: the Importance of Porter Models in Business Analytics

- Porter models are important as a way to evaluate competitive environment and/or internal processes.
  - Porter’s concepts form a common language business professionals use to talk about strategy

- Use Porter strategy terminology in discussing how an industry and companies in the industry compete.
Three Porter Models

1. Strategic Competitive Forces (5)
2. Competitive Strategies (2 primary)
3. Value Chain
Porter Model and Information Systems:

1. Build **barriers** to prevent a company from **entering** an industry?

2. Build in costs that would make it difficult for a customer to **switch** to another supplier?

3. Change the basis for competition within the industry?

4. Change the balance of power between a company and its customers or suppliers?

5. Provide the basis for new products and services?
Porter Competitive Model
(Identify the Industry and the Specific Market Being Evaluated)

- Potential New Entrants
- Intra-Industry Rivalry
  - Strategic Business Unit
- Bargaining Power of Suppliers
- Bargaining Power of Buyers
- Substitute Products and Services
IT and Barriers to Entry

- Technology may make it easier to enter an industry (fewer capital and personnel costs)
- Technology may make it more difficult to enter an industry (proprietary systems from suppliers not accessible to new entrants)
- Buyer switching costs are a barrier to entry
IT and Buyer Power

- More buyers means less power for an individual buyer
- Increasing available information via WWW creates more power for buyers
- Many choices for buyers creates more bargaining power
IT and Supplier Power

- As technology enables more suppliers into the market, bargaining power may decrease (eBay)
- Increasing switching costs may increase supplier power (Amazon)
- Technology-enabled customized products may make switching less attractive
- The equipment independent development MS Windows greatly eased switching PC vendors
IT and Substitutes

- Through the internet many more substitutes are readily available.
- Substitutes may not even be in the same industry (example of computer gaming substituting for other forms of video entertainment, e.g. TV, movies).
IT and Rivalry

- Many rivals within an industry will use the same or similar technology (e.g., airline reservations, package tracking, banking)
- Innovative new technologies impacting business models may provide strategic advantage (e.g. Dell)
Porter's Competitive Strategies

Primary Strategies
- Cost Leadership
- Differentiation

Supporting Strategies
- Innovation
- Growth
- Alliances
“Primary” Porter Strategies

**Differentiation**—customer values the differences that you provide in products, services or capabilities.

**Cost**—become the lowest cost provider. If this is the only primary strategy in the industry, over time there will only one ultimate winner.
Porter Supporting Strategies

- **Innovation**
  - Can reduce costs and or **differentiate**

- **Growth**
  - Help offset fixed **costs**
  - Establish reputable brand (differentiate)

- **Alliances**
  - Achieve more complete solution (differentiate)
  - Integration of each others technology may reduce **costs**
Rules Regarding Strategies

- Must pick *at least* one of the two primary strategies.

- Can pick any combination of supporting strategies.
Porter’s Value Chain

- **Porter’s Competitive Model** deals with the company’s competitive environment.

- **Porter’s Value Chain** tracks progress of a product through organization
  - Starts with idea in research
  - Finishes with delivery to customer.
Value Chain Purpose

- A way of classifying a company's activities and how they help deliver value to customer.

- A framework for evaluating decisions like outsourcing, or deployment of IT.
Things to Remember Regarding the Value Chain

- The ultimate objective is value to customer.

- As a new product and/or services moves through the value chain, it is important to maximize value-add activities and minimize things that do not add value to customer.

- Functional departments must be sure to emphasize the ultimate goal of value to customer and not do things that seem to make them look good but contradict the ultimate objective.
Simple Value Chain for Manufacturing Industry

Research and Development → Engineering → Production and Manufacturing → Marketing → Sales and Distribution → Service
Simple Value Chain for Retail Industry

- Partnering with Vendor
- Buying
- Managing Inventory
- Distributing Inventory
- Operating Stores
- Marketing and Selling
Examples of IT Supporting Value Chain

Support Processes
- Administrative Coordination and Support Services
- Collaborative Workflow Intranet
- Human Resources Management
- Employee Benefits Intranet
- Technology Development
- Product Development Extranet with Partners
- Procurement of Resources
- e-Commerce Web Portals for Suppliers

Primary Business Processes
- Inbound Logistics
- Automated Just-in-Time Warehousing
- Operations
- Computer-Aided Flexible Manufacturing
- Outbound Logistics
- Online Point-of-Sale and Order Processing
- Marketing and Sales
- Targeted Marketing
- Customer Service
- Customer Relationship Management

Competitive Advantage
Frito Lay Case: Introduction

Photo credit: http://artists.gawker.com/247584/joe-heaps-nelson

http://www.youtube.com/watch?v=Cgpl8MRByzI

http://www.youtube.com/watch?v=-orfvZTQMoo

http://www.youtube.com/watch?v=dNjI2liwWJY&feature=related
FRITO-LAY CASE

ISM 50
Juan Hernandez
4/13/09
Sources-Author and Articles

"Frito Lays tries to Enter the Minds of Women" by Steffanie Clifford

- Youtube video “Frito Lay Green profile”
- Pg.95 -116 of the reader from Harvard
Quickfacts

- Frito-Lay brands account for 59% of the U.S. snack chip industry.
- Frito-Lay North America is the $11 billion convenient foods business unit of PepsiCo (owner since 1965).
- 2008: Frito-Lay North America posted 8% revenue growth, and 7% profit growth.
- 1968-1981: 15% to 20% annual revenue growth via geographic expansion, premium pricing, & new products.
- Lowering operation costs via renewable energy innovations such as solar power and biofuels, recycling heat and steam from plants.
- 45,000 Frito-Lay employees in the United States and Canada.
3 Main Ideas

- Strategy Experiments/Risk Management
- Motivated employees and consumer attitudes
- Innovation leaders (IT)
Strategy Experiments/
Risk Management

- Product arrangement: national to regional pattern (micro-marketing).
- Segmentation
- Heavy investment in IT ($40 million - HHC)
- Store door delivery system
Motivated Employees and Consumer Attitudes

- Keep Employees updated on logistics and efficient solutions for clients (quality service fundamental).

- Compensation plans adequate

- Attitudes towards snacking and niches (no trans fat, green energy)

- Wider issues influencing their purchases ($ over quality?)
Innovation Leaders (IT)

- HHC - Hand Held Computer (1987)
  -- information for trade development, control accounting, correct ordering, promotion planning and analysis.
- Solar pannels, resource monitoring, emission control.
- Ingredients differentiation rivals
- Direct Sales Delivery for time efficiency
The Value Chain—Summary relevance
Thanks Juan... Recap: Frito Lay

- **Market: Salty Snacks**
  - Who owns Frito Lay?

- **Competitors:**
  - P & G (Pringles)
  - Anheuser Busch (Eagle Snacks)
  - Borden (Wise Chips)
  - Small Regionals

- **Sales Force**
  - 10000 people
  - Drive around in trucks; sell and deliver snacks
Frito Lay

- **Growth**
  - In the 70s, “double digit”
  - Mid 80s - slowed to single digit.
  - Foreign Expansion?
    - Not for Frito-Lay division, because PepsiCo has a separate international snacks div.

- **Good:**
  - Several top brands

- **Bad**
  - Monolithic national approach
Frito-Lay

- Segmentation policy for sales force
  - Supermarkets vs. “up/down street”
    - Was this popular with the sales force?
- Goal: Regionalized Micro-Marketing
  - Target smaller brands to regional customers
- Hand Held Computer Idea
  - Small computer for each salesperson to carry around; logs sale transaction data.
  - How feasible was this idea?
Frito-Lay HHC Project

3 stated objectives
- Replace optical scanner system used now
  - IBM will stop supporting it soon
- ½ hour per day per driver paper-work reduction
- Marketing effectiveness
  - Detailed sales data
    - will help make regional marketing decisions
    - Negotiate with stores for more shelf space
## HHC Project: Cost Projection

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cost, Each</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>New machinery for a truck</td>
<td>10,000</td>
<td>$3,000</td>
<td>$30M</td>
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<tr>
<td>Data center upgrades</td>
<td></td>
<td></td>
<td>$1.2M</td>
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<tr>
<td>Experienced IT Development Staff</td>
<td>45</td>
<td>$70,000</td>
<td>$3M</td>
</tr>
<tr>
<td>Minicomputers for distribution centers</td>
<td></td>
<td></td>
<td>$7M</td>
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<tr>
<td>Training in use of new equipment</td>
<td>10,000</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>$45M-$55M</strong></td>
</tr>
</tbody>
</table>
Break into discussion groups of 3 or 4

- **Position 1: The HHC is a great project**
  - It will:
    - reduce burden on sales force.
    - replace optical scanner system that we need to replace soon anyway.
    - Give us lots of good data for more effective marketing.

- **Position 2: The HHC is a bad project**
  - It costs $40 million or more (almost 10% of our annual profits!)
  - There is no solid proof that it will increase revenue or reduce costs enough to justify the investment.
  - It might not work properly, wasting the sales force’s time.
  - It is a distraction from our true mission - selling salty snacks!
What was the impact of the multiple reassignments of key Frito-Lay executives? Is there a lesson to be learned?

What was the impact of the segmentation of the sales force?

What was the greatest benefit to the organization of the HHC project?

Key success factors?
Frito Lay

- HHC was a $40+ million project
- What were risks?
- How did they mitigate risks?
- Risk Mgmt
  - Pilot test of technology
  - 3 layer rollout
    - 1) essential systems
    - 2) sales compensation
    - 3) strategic uses of new data (fuzzy)
HHC deployment: what’s the best approach?

- Action plan
  - Region by region?
  - All at once?
  - Weakest or Strongest region first?
HHC deployed to LA area first, a region that won a sales award.

By the end of the 80’s
- HHC deployment completed
- Development of Information Systems to process HHC data to support operations.

Early 90’s re-org to decentralize decision making to different regions

1985
- Revenue: $2847
- Profit $401

2004
- Revenue: $9091
- Profit $2366

Revenue growth ~ 6% per year on average
## Frito-Lay Update

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2007</th>
<th>2006</th>
<th>2008 % change</th>
<th>2007 % change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Revenue</strong></td>
<td>12,507</td>
<td>11,586</td>
<td>10,844</td>
<td>7</td>
<td>8</td>
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<tr>
<td><strong>Operating Profit</strong></td>
<td>2,959</td>
<td>2,845</td>
<td>2,615</td>
<td>4</td>
<td>9</td>
</tr>
</tbody>
</table>

*Source: PepsiCo 2008 Annual Report*
Technology today at Frito-Lay

- Green Technology
- Fuel-efficient 'Sprinter' vehicles
- Integrated packaging operations
- Advanced mobile computing to provide "Precision Execution" for each customer
- Consumer research via simulated shopping
Other terms in Chapter 2

- **Agile Company**
  - Ability to prosper in rapidly changing environment
  - Some good examples in O’Brien ch2
A Virtual Company

A form of organization that uses telecommunications networks and other IT to link the people, assets and ideas of a variety of business partners, no matter where they may be located, in order to exploit a business opportunity.
Virtual Company Positives

- Share infrastructure and risk.
- Link complementary core competencies.
- Reduce concept-to-cash time through sharing.
- Increase facilities.
- Expand market coverage.
- Migrate from selling products to selling solutions.
- Migrate from selling boxes to selling systems.
Possible Negative Factors

• Will the vendor be able to perform the service at a cost sufficiently low enough and still gain a profit?

• Will the people laid off take with them essential skills and insights that the company needs?

• Will the vendor be able to respond to the organization’s new needs for capabilities and flexibility?
Explicit knowledge
- That which can be written down

Tacit Knowledge
- That which is cannot be written down
- Example: How to Ride a bicycle.

Much of a company’s value is in its knowledge
- Patents, documents
- Tacit knowledge in employee’s heads
Other terms in Chapter 2

- **Knowledge-Creating Company**
  - Create new business knowledge
  - Disseminate knowledge throughout company

- **Knowledge Management Systems**
  - Facilitate this dissemination
  - Often, like a search engine on a company intranet.

- Aside: might a knowledge management system affect the negotiating power of employees?
Total Quality Management

How do you say to a long time, loyal, hard working employee that quality isn’t good enough?
1. We are good, but we must continue to improve.

2. Individually and/or departmentally we may be very good but we must be as good in the total efforts of the entire organization.
What You’d Get From 99.9% Suppliers

• At Least 20,000 Wrong Drug Prescriptions Each Year.
• More than 15,000 Newborn Babies Dropped by Doctors or Nurses Each Year.
• Unsafe Drinking Water at Least One Hour Each Month.
• No Telephone Service or Television Transmission for Nearly Ten Minutes Each Week.
• Two Short or Long Landings at O’Hare Airport Each Day.
• Nearly 500 Incorrect Surgical Procedures Each Week.
• 2,000 Lost Articles of Mail Per Hour.
What You'd Get From Six Sigma Suppliers

- One Wrong Prescription in 25 Years.
- Three Newborn Babies Dropped by Doctors or Nurses in 100 Years.
- Unsafe Drinking Water One Second Every Sixteen Years.
- No Telephone Service or Television Transmission for Nearly Six Seconds in 100 Years.
- One Short or Long Landing in Ten Years in all the Airports in the U.S.
- One Incorrect Surgical Procedure in Twenty Years.
- Thirty-five Lost Articles of Mail Per Year.
To Do List

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