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

- Strategic Competitive Forces (5)
- Competitive Strategies (2 primary)
- 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
- Bargaining Power of Suppliers
- Intra-Industry Rivalry
- Strategic Business Unit
- 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 of 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” 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 a 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.

Generic Value Chain

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.

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**Simple Value Chain for Manufacturing Industry**

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**Frito Lay Case: Introduction**

*Photo credit: [http://artists.gawker.com/247584/joe-heaps-nelson](http://artists.gawker.com/247584/joe-heaps-nelson)*
*http://www.youtube.com/watch?v=CgpilM8RByzI*
*http://www.youtube.com/watch?v=dNjI2liwWJY&feature=related*

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**FRITO-LAY CASE**

ISM 50
Juan Hernandez
4/13/09
Sources-Authors 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.

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 panels, resource monitoring, emission control.
- Ingredients differentiation rivals
- Direct Sales Delivery for time efficiency

3 Main Ideas
- Strategy Experiments/ Risk Management
- Motivated employees and consumer attitudes
- Innovation leaders (IT)
The Value Chain—Summary

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
  - 1/2 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>
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<tbody>
<tr>
<td>New machinery for a truck</td>
<td>10,000</td>
<td>$3,000</td>
<td>$30M</td>
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<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>
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<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>
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</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!

Organizational Issues

- 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)

Frito-Lay Update

<table>
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<tr>
<th></th>
<th>2008</th>
<th>2007</th>
<th>2006</th>
<th>2008 % change</th>
<th>2007 % change</th>
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<tr>
<td>Net Revenue</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>Operating Profit</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?

Other terms in Chapter 2

- Explicit knowledge
  - That which can be written down
- Tacit Knowledge
  - That which is can not 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?

Total Quality Management

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.

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