Industry Analysis: The Fundamentals

OUTLINE

• The objectives of industry analysis
• From environmental analysis to industry analysis
• Porter’s Five Forces Framework
• Applying industry analysis
• Industry & market boundaries
• Identifying Key Success Factors
The Objectives of Industry Analysis

- To understand how industry structure drives competition, which determines the level of industry profitability.
- To assess industry attractiveness
- To use evidence on changes in industry structure to forecast future profitability
- To formulate strategies to change industry structure to improve industry profitability
- To identify Key Success Factors
The Industry Environment lies at the core of the Macro Environment.

The Macro Environment impacts the firm through its effect on the Industry Environment.
### Profitability of US Industries (selected industries only)

#### Median return on equity (%), 1999-2005

<table>
<thead>
<tr>
<th>Industry</th>
<th>Return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household &amp; Personal Products</td>
<td>22.7</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>22.3</td>
</tr>
<tr>
<td>Tobacco</td>
<td>21.6</td>
</tr>
<tr>
<td>Food Consumer Products</td>
<td>19.6</td>
</tr>
<tr>
<td>Securities</td>
<td>18.9</td>
</tr>
<tr>
<td>Diversified financials</td>
<td>18.3</td>
</tr>
<tr>
<td>Beverages</td>
<td>18.8</td>
</tr>
<tr>
<td>Mining &amp; crude oil</td>
<td>17.8</td>
</tr>
<tr>
<td>Petroleum Refining</td>
<td>17.3</td>
</tr>
<tr>
<td>Medical Products &amp; Equipment</td>
<td>17.2</td>
</tr>
<tr>
<td>Commercial Banks</td>
<td>15.5</td>
</tr>
<tr>
<td>Scientific &amp; Photographic Equipt.</td>
<td>15.0</td>
</tr>
<tr>
<td>Apparel</td>
<td>14.4</td>
</tr>
<tr>
<td>Computer Software</td>
<td>13.9</td>
</tr>
<tr>
<td>Publishing, Printing</td>
<td>13.5</td>
</tr>
<tr>
<td>Health Care</td>
<td>13.1</td>
</tr>
<tr>
<td>Electronics, Electrical Equipment</td>
<td>13.0</td>
</tr>
<tr>
<td>Specialty Retailers</td>
<td>13.0</td>
</tr>
<tr>
<td>Computers, Office Equipment</td>
<td>11.7</td>
</tr>
<tr>
<td>Gas &amp; Electric Utilities</td>
<td>10.4</td>
</tr>
<tr>
<td>Food and Drug Stores</td>
<td>10.0</td>
</tr>
<tr>
<td>Motor Vehicles &amp; Parts</td>
<td>9.8</td>
</tr>
<tr>
<td>Hotels, Casinos, Resorts</td>
<td>9.7</td>
</tr>
<tr>
<td>Railroads</td>
<td>9.0</td>
</tr>
<tr>
<td>Insurance: Life and Health</td>
<td>8.6</td>
</tr>
<tr>
<td>Packaging &amp; Containers</td>
<td>8.6</td>
</tr>
<tr>
<td>Insurance: Property &amp; Casualty</td>
<td>8.3</td>
</tr>
<tr>
<td>Building Materials, Glass</td>
<td>8.3</td>
</tr>
<tr>
<td>Metals</td>
<td>8.0</td>
</tr>
<tr>
<td>Food Production</td>
<td>7.2</td>
</tr>
<tr>
<td>Forest and Paper Products</td>
<td>6.6</td>
</tr>
<tr>
<td>Semiconductors &amp;</td>
<td></td>
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<tr>
<td>Electronic Components</td>
<td>5.9</td>
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<tr>
<td>Telecommunications</td>
<td>4.6</td>
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<tr>
<td>Communications Equipment</td>
<td>1.2</td>
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<tr>
<td>Entertainment</td>
<td>0.2</td>
</tr>
<tr>
<td>Airlines</td>
<td>(22.0)</td>
</tr>
</tbody>
</table>

- Pharmaceuticals: 18.4%
- Household and personal products: 15.2%
- Computer software and services: 15%
- Media: 14.7%
- Commercial services: 15.2%
- Semiconductors: 15%
- Healthcare equipment and services: 14.7%
- Technology hardware and equipment: 14.7%
- Food, beverages, tobacco: 14.7%
- Hotels, restaurants, leisure: 14.7%
- Food, beverages, tobacco: 14.7%
- Capital goods: 14.7%
- Automobiles and components: 14.7%
- Retailing: 14.7%
- Energy: 14.7%
- Transportation: 14.7%
- Materials: 14.7%
- OVERALL AVERAGE: 9%
The Determinants of Industry Profitability

3 key influences:

- The value of the product to customers
- The intensity of competition
- Relative bargaining power at different levels within the value chain.
The Spectrum of Industry Structures

- **Perfect Competition**
  - Many firms
  - No barriers
  - Homogeneous Product
  - Perfect Information flow

- **Oligopoly**
  - A few firms
  - Significant barriers
  - Potential for product differentiation
  - Imperfect availability of information

- **Duopoly**
  - Two firms
  - High barriers

- **Monopoly**
  - One firm
  - No barriers
  - Homogeneous Product
  - Perfect Information flow
Structure- Conduct- Performance Paradigm

Positive correlation between concentration ratio (CR4) and price/profitability. Why?

Higher advertising to sales ratio Correlated with superior profitability. Why?

Multi-market contact correlated with higher prices/profitability.

Tool for antitrust.
Porter’s Five Forces of Competition Framework

- **SUPPLIERS**: Bargaining power of suppliers
- **INDUSTRY COMPETITORS**: Rivalry among existing firms
- **POTENTIAL ENTRANTS**: Threat of new entrants
- **SUBSTITUTES**: Threat of substitutes
- **BUYERS**: Bargaining power of buyers
The Structural Determinants of Competition

THREAT OF ENTRY
- Capital requirements
- Economies of scale
- Absolute cost advantage
- Product differentiation
- Access to distribution channels
- Legal/ regulatory barriers
- Retaliation

INDUSTRY RIVALRY
- Concentration
- Diversity of competitors
- Product differentiation
- Excess capacity & exit barriers
- Cost conditions

SUPPLIER POWER
- Suppliers’ price sensitivity
- Relative bargaining power

BUYER POWER
- Buyers’ price sensitivity
- Relative bargaining power

SUBSTITUTE COMPETITION
- Buyers’ propensity to substitute
- Relative prices & performance of substitutes
Extent of competitive pressure from producers of substitutes depends upon:

- Buyers’ propensity to substitute
- The price-performance characteristics of substitutes.
The Threat of Entry

Entrants’ threat to industry profitability depends upon the height of barriers to entry. The principal sources of barriers to entry are:

- Capital requirements
- Economies of scale
- Absolute cost advantage
- Switching costs
- Product differentiation
- Access to channels of distribution
- Legal and regulatory barriers
- Retaliation
**Bargaining Power of Buyers**

**Buyer’s price sensitivity**
- Cost of purchases as % of buyer’s total costs.
- How differentiated is the purchased item?
- How intense is competition between buyers?
- How important is the item to quality of the buyers’ own output?

**Relative bargaining power**
- Size and concentration of buyers relative to sellers.
- Buyer’s information.
- Ability to backward integrate.

*Note: analysis of supplier power is symmetric*
The extent to which industry profitability is depressed by aggressive price competition depends upon:

- Concentration (number and size distribution of firms)
- Diversity of competitors (differences in goals, cost structure, etc.)
- Product differentiation
- Excess capacity and exit barriers
- Cost conditions
  - Extent of scale economies
  - Ratio of fixed to variable costs
Profitability and Market Growth

ANNUAL RATE OF GROWTH OF MARKET DEMAND

ROI (%)

-5 0 5 10 15 20 25 30
Return on sales
Return on investment
Cash flow/Investment

Less than -5% -5% to 0 0 to 5% 5% to 10% Over 10%
Supplier Power: The Impact of Unionization on Profitability

Percentage of employees unionized

Profitability (%)
Applying Five - Forces Analysis

Forecasting Industry Profitability

• Past profitability a poor indicator of future profitability.
• If we can forecast changes in industry structure we can predict likely impact on competition and profitability.

Strategies to Improve Industry Profitability

• What structural variables are depressing profitability
• Which of these variables can be changed by individual or collective strategies?
Drawing Industry Boundaries: Identifying the Relevant Market

- What industry is BMW in:
  - World Auto industry
  - European Auto industry
  - World luxury car industry?

- Key criterion: **SUBSTITUTABILITY**
  - On the demand side: are buyers willing to substitute between types of cars and across countries
  - On the supply side: are manufacturers able to switch production between types of cars and across countries

- We may need to analyze industry at different levels of aggregation for different types of decision
Identifying Key Success Factors

Pre-requisites for success

What do customers want?

Analysis of demand
- Who are our customers?
- What do they want?

How does the firm survive competition

Analysis of competition
- What drives competition?
- What are the main dimensions of competition?
- How intense is competition?
- How can we obtain a superior competitive position?

KEY SUCCESS FACTORS
Identifying Key Success Factors Through Modeling Profitability: The Airline Industry

**Profitability** = \( \frac{\text{Income}}{\text{ASMs}} = \frac{\text{Yield}}{\text{RPMs}} \times \frac{\text{Load factor}}{\text{RPMs}} - \frac{\text{Unit Cost}}{\text{Expenses}} \)

- Strength of competition on routes.
- Responsiveness to changing market conditions.
- % business travelers.
- Achieving differentiation advantage.
- Price competitiveness.
- Efficiency of route planning.
- Flexibility and responsiveness.
- Customer loyalty.
- Meeting customer requirements.
- Wage rates.
- Fuel efficiency of planes.
- Employee productivity.
- Load factors.
- Administrative overhead.

ASM = Available Seat Miles
RPM = Revenue Passenger Miles
Identifying Key Success Factors by Analyzing Profit Drivers: Retailing

ROCE

Return on Sales
  - Sales mix of products
  - Avoiding markdowns through tight inventory control
  - Max. buying power to minimize cost of goods purchased

Sales/Capital Employed
  - Max. sales/sq. foot through:
    - *location
    - *product mix
    - *customer service
    - *quality control
  - Max. inventory turnover through electronic data interchange, close vendor relationships, fast delivery
  - Minimize capital deployment through outsourcing & leasing
**SUMMARY: What Have We Learned?**

**Forecasting Industry Profitability**
- Past profitability a poor indicator of future profitability.
- If we can forecast *changes in industry structure* we can predict likely impact on *competition* and *profitability*.

**Strategies to Improve Industry Profitability**
- What structural variables are depressing profitability?
- Which can be changed by individual or collective strategies?

**Defining Industry Boundaries**
- Key criterion: *substitution*
- The need to analyze market competition at different levels of aggregation (depending on the issues being considered)

**Key Success Factors**
- Starting point for the analysis of competitive advantage
Ford Case

• Why has profitability in the auto industry declined from 10% from 1965-1972 to 4% today?
• How is the structure of the industry likely to change in the next five years?
• Is the industry going to be more or less profitable in the next five years?
• Which companies are going to be more profitable?
• What should Ford in the next five years?