



# Management Consulting Case Study Workbook

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## Introduction

This Consulting Case Workbook is designed to provide students with the tools they need to succeed at case interviews. It describes the case interview process and details many of the major models and concepts students should be familiar with in approaching cases. While such concepts do not provide case solutions, they do help in developing lines of questioning and probing the major points of the case in a comprehensive manner.

Most consulting firms utilize cases at some point in their interview process. When conducted properly, case interviews can give the interviewer great insight into the student's ability to organize his or her thoughts, pursue a well-reasoned line of inquiry, and assemble theories on possible solutions to the problems presented in the case. It is important to keep in mind that the method is as important as the "answer." In many cases, especially the short type ("How many boxes of Cocoa Puffs were sold in the US. last year?"), the method is all that matters. Knowing the concepts in this workbook will give the student a strong start in understanding and applying various methods in this process.

So, let's start with a sample case:

A Japanese company and an American company had a boat race; the Japanese won by a mile.

The Americans hired a management consultant to figure out what went wrong. After careful analysis, she reported that the Japanese had one person managing and seven rowing, while the Americans had seven managing and one rowing. She then recommended some structural changes. Following her advice, the American company immediately restructured its team. The new team had one senior manager, six management consultants, and one rower.

In the rematch, the Japanese won by two miles. So the American company fired the rower.

Just kidding. Cases in real interviews may not be as amusing. Part 1 provides an overview of both long and short cases, including interviewer styles, a suggested structure, and several insightful tips. Part 2 gives basic definitions of many of the major concepts with which the business school student should be familiar. Part 3, Thought Models, lays out most of the schema which can be used in analyzing the case situations and framing lines of questioning. The fourth and final section is a set of sample long and short cases with key points indicated.

## PART 1: OVERVIEW OF CASE INTERVIEW PROCESS

### *Long Cases*

Most cases can be classified as long cases (e.g. "We have a client in the cosmetics industry. The client has experienced declining profitability over the last two years. How would you go about assessing the situation?"). These cases will generally last between 15 and 30 minutes and are intended to allow you a chance to show how you would structure and conduct an industry/profitability/marketing analysis. The interviewer will be looking for analytical ability, structure, interpersonal skills, intellectual curiosity, and enthusiasm.

It is important to understand that the case will usually proceed in one of three ways, depending on the style of the interviewer. Most common is the interactive case, in which the interviewer will first present the situation and provide additional client/industry information as the interview progresses. The information will usually be either in response to a question from you or as a means to redirect your focus. Another style of case is best described as one-sided, in which the interviewer will present the situation and leave you to walk through your approach to analyzing/"solving" the case. It is particularly important to have a well structured approach in this style of case, as there is less chance to redirect your efforts based on responses from the interviewer. The third style of case is named after the interviewer style: hard-ass. In such cases, the interviewer often challenges your points or assumptions in an effort to see how you might hold up in a difficult client situation. It is important to recognize this style and make every effort to remain calm and be able to support your logic to show conviction. Fortunately, this last style of interviewer does not come around very often!

While every case is different and no one approach will work for all cases, it is critical to have a well-structured analysis. The following five-step process will help to achieve a desired level of structure.

1. **Stop and think.** After the interviewer has presented the case, take a moment to think about the relevant issues, the way in which you will structure your approach, and what thought models (e.g. Five Forces, Cost/revenue) might apply.
2. **Ask Questions.** If you missed any information or if you are unclear about a term or technology, ask for clarification. It is imperative to start your analysis with a clear understanding of the problem.
3. **Outline Your Analysis.** Decide the way in which you are going to structure your analysis and communicate this to the interviewer. It will help the interviewer to understand the way in which you are approaching the problem.
4. **Deep Drill.** Based on your assessment of the relevant issues and your approach, pick the appropriate avenue for in-depth analysis (e.g. if the problem is declining profitability, you should thoroughly examine potential cost drivers and understand

how they might have changed over time). Proceed to deep drill each appropriate area, paying attention to the time provided and seeking additional information along the way.

5. **Summarize.** Where possible, draw preliminary conclusions based on facts or stated assumptions. Summarize your analysis and the approach you used. If appropriate, indicate the likely next steps in further assessing the situation.

The following is a short list of tips for the case interview process. Add to this list when you discover new tips that work..

1. If it helps you to structure your analysis or if the case is quantitative, take notes.
2. Feel free to pause and collect your thoughts at any time (the pause won't seem as long as you think to the interviewer and the time might help you communicate your thoughts more clearly).
3. Think out loud. The main purpose of the case interviews is to show the way in which you analyze a problem, so let the interviewer hear your thought process and any assumptions you make.
4. Have fun. Nervous tension will come across in an interview. Try to relax and think of it as an opportunity to explore the drivers of success for a company or industry. If the interviewer lobs a detailed micro-economics question at you, then you can get nervous!
5. Think about the type of consulting projects the firm does. This might give you insight into the type of case you are likely to get and the way in which you might structure your analysis.
6. Pay close attention to any hints (subtle or not) that the interviewer gives you, particularly if they are trying to steer you back on course.

### ***Short Cases***

Occasionally, consulting firms will give short cases, also called "goofy" cases (e.g. How many boxes of Count Chocula were sold in the US last year? How many rats are there in Manhattan?). These cases generally take only 1-3 minutes to address and are intended to see how you approach an abstract quantitative question. The interviewer is not as much interested in the final answer as the way in which it is derived. It is particularly important to communicate your thought process to the interviewer and state the assumptions you make. Typically, you will want to take a while to think about the question and the approach you will take, communicate this approach to the interviewer, discuss the components of an equation to arrive at a solution, state your assumptions for each component, and calculate your answer. Depending on the nature of the question, these short cases usually provide an opportunity to show the interviewer your sense of humor, so try to relax and have fun with it.

## **PART 2: DEFINITIONS**

### ***Economies of Scale***

Economies of scale are said to exist when the average cost (AC) declines as output increases, over a range of output. In AC declines as output increases, so must the marginal cost (MC) (the cost of the last incremental unit of output). The relationship between AC and MC can be summarized as follows:

$MC < AC$  = Economies of scale

$MC = AC$  = Constant returns to scale

$MC > AC$  = Diseconomies of scale

The paradigm shape of the cost curve is U shaped. The generally accepted explanation for this is that AC initially declines because fixed costs are being spread over increasing output and then eventually increase as variable costs increase. The minimum efficient scale (MES) is the minimum level on the average cost curve. Economies of scale are not limited to manufacturing; marketing, R& D, and other functions can realize economies of scale as well.

### ***Economies of Scope***

Economies of scope exist if the firm reduces costs by increasing the variety of activities it performs. Whereas economies of scale are usually defined in terms of declining average cost functions, it is more customary to define economies of scope in terms of the relative total cost of producing a variety of goods together in one firm versus separately in two or more firms. Economies of scope may be achieved by "leveraging core competencies." For example, it may make economic sense for a manufacturer of tape to get into the business of manufacturing note pads with adhesive backings as there are commonalties in the two businesses at many points along the value chain.

### ***Learning Curve***

The learning curve refers to cost advantages that flow from accumulated experience and know-how, often through lower costs, higher quality and more effective pricing and marketing. The magnitude of learning benefits is expressed in terms of a "progress ratio" calculated as the unit cost after doubling cumulative production divided by the previous cost ( $C_2/C_1$ ). A ratio of less than 1 suggests that some cost savings due to learning is taking place. The median appears to be approximately .80, implying that for the typical firm, a doubling of cumulative output is associated with a 20% reduction in unit costs.



### ***Reengineering***

Popularized as Business Process Reengineering (BPR), reengineering refers to breaking down business processes and reinventing them to work more efficiently, cutting out wasted steps and enhancing communication. Business processes are often replete with implicit rules which hamper the way in which work should truly be done. Further, processes are often viewed as discrete tasks, a habit that prevents management from making frame breaking, cohesive change. Reengineering is defined by Michael Hammer and James Champy in *Reengineering the Corporation* as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality, service, and speed."

### ***Total Quality Management (TQM)***

TQM refers to the practice of placing an overriding management objective on improving quality. Whereas TQM is more of a philosophy than a specific strategy, the stated objective is often "zero defects". A higher level of quality is linked to increased customer satisfaction and thus leads to the ability to charge a higher price at what is often a lower cost. It is important to ensure that the added benefit from incrementally increasing quality outweighs the added cost associated with the quality improvement effort. TQM was initially limited to the manufacturing sector but has more recently been applied effectively to service businesses as well.

### ***Key Success Factors***

Key success factors are those factors which are most critical in determining a firm's ability to survive and prosper. Attributes of key success factors are the following:

- management can influence them;
- they impact the overall competitive position of the firm in the industry;
- they are an interaction of characteristics of an industry and each firm's strategies.

A firm must supply what customers want and survive competition from other firms.

Therefore, management should ask:

- What do customers want?
- What does the firm need to do to survive competition?

Key success factors are those factors which lead to the answers to the above questions. For example, for wood products key success factors are owning large forests and maximizing the yield.

### ***Core Competencies***<sup>1</sup>

A concept popularized by Professors Gary Hamel and C.K. Prahalad, core competencies are those competencies which provide a potential access to a wide variety of markets, make a significant contribution to the perceived customer benefits of the end product, and are difficult for competitors to imitate. The classic example of a company which has effectively leveraged its core competencies is Honda, which has gained a competitive advantage in numerous product markets through its focus on leveraging its skill at making engines.

### ***Vertical Integration***

In some industries, companies find it advantageous to integrate backward (towards their suppliers) or forward (towards their customers). Vertical integration makes the most sense from a management and economic perspective when a company wants greater control of a channel that has major impact to its product cost or quality or when the existing relationship involves a high level of asset specificity (assets that are specific to the relationship the company has with its supplier or customer).

### ***Just-In-Time (JIT)***<sup>2</sup>

The goal of JIT' production is zero inventory with 100% quality. It means that materials arrive at the customer's factory exactly when needed. It calls for a synchronization between supplier and customer production schedules so that inventory buffers are unnecessary. Effective implementation of JIT should result in reduced inventory and increased quality, productivity, and adaptability to changes.

### ***Fixed vs. Variable Costs***<sup>3</sup>

Variable Costs (VC): The costs of production that vary directly with the quantity (Q) produced; these costs generally include direct materials and direct labor costs.

Semivariable Costs:

The costs of production that vary with the quantity (Q) produced, but not directly (typically, these are discrete costs, such as the cost of adding new production capacity when Q reaches certain levels).

Fixed Costs (FC):

The costs of production that do not vary with the quantity (Q) produced.

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<sup>1</sup> Kotler, Philip, *Marketing Management*

<sup>2</sup> This section taken from Philip Kotler, *Marketing Management*

<sup>3</sup> This section taken from Patrick Montana and Bruce Charnov, *Management*

### ***Break-even Point<sup>4</sup>***

Break-even analysis is a managerial planning technique using fixed costs, variable costs, and the price of a product to determine the minimum units of sales necessary to break even, or to pay the total costs involved. The necessary sales are called the BEQ, or break-even quantity. This technique is also useful to make go/no-go decisions regarding the purchase of new equipment. The BEQ is calculated by dividing the fixed costs (FC) by the price minus the variable cost per unit (P-VC):

$$\text{BEQ} = (\text{FC})/(\text{P}-\text{VC})$$

The price minus the variable cost per unit is called the contribution margin. It represents the amount left after the sale of each unit and the paying of the variable costs in that unit that "contributes" to the paying of the fixed costs. To determine profit, multiply the quantity sold times the contribution margin and subtract the total fixed cost:

$$\text{Profit} = Q(\text{P}-\text{VC}) - \text{FC}$$

### ***Net Present Value (NPV)***

The NPV is a project's net contribution to wealth: present value (PV) minus initial investment. The present value is calculated by discounting future cash flows by an appropriate rate (r), usually called the opportunity cost of capital, or hurdle rate. If  $C_t$  represents the cash flow at time  $t$ , ( $C_t$  can be negative, as in the initial investment,  $C_0$ ), the NPV is calculated as follows:

$$\text{NPV} = C_0 + C_1/(1+r) + C_2/(1+r)^2 + \dots + C_t/(1+r)^t$$

### ***Pareto Principle (80/20)***

The Pareto principle refers to the situation in which a large amount of the total output comes from a small amount of the total input. This is typified by the "80/20 rule" which states that 80% of the output comes from 20% of the input. Typically, a Pareto analysis is conducted to determine the areas on which management should focus its efforts. For example, 80% of total downtime on a production line is attributed to 2 out of 10 manufacturing steps. Alternatively, 80% of a company's profits may be generated by 20% of its products.

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<sup>4</sup> This section taken from Patrick Montana and Bruce Charnov, *Management*

## PART 3: THOUGHT MODELS

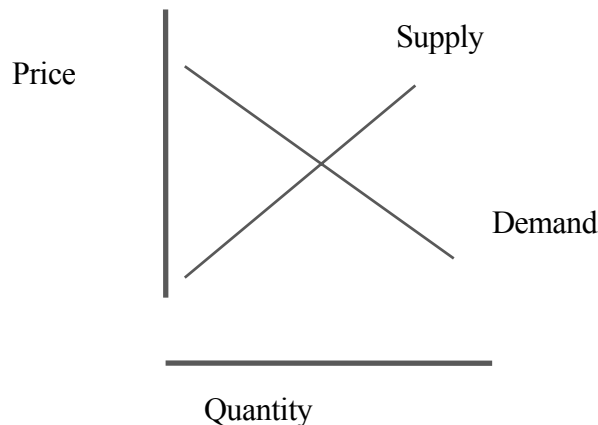
### *4 C's*

Stands for customer, competition, cost, capabilities. Intended to ask the critical questions in understanding the core business of an organization. It is really more of a back-of-the-envelope sketch than a detailed analysis. Filling in these categories can be a first, cursory step in understanding a given company or industry. Although this model is unlikely to produce revolutionary insights, it may help in defining a business by breaking it down into the very basics and looking for conflicting elements. Difficult to use with diversified companies and interests.

### *Economics*

Students should review the basics of economic theory. Many cases, especially the more strategic ones, have a strong backing in basic economics so knowing the fundamentals will give the student a strong base from which to work. Some of the more relevant concepts include:

### *Supply & Demand*



#### The Supply Curve -

The higher the price of a product or service, the greater the quantity of the item that producers will be willing to make available (i.e., supply). Conversely, the lower the price of a product or service, the smaller the quantity producers will be willing to make available.

#### The Demand Curve-

The lower the price of a product or service, the greater the quantity of the item that consumers will be willing to buy (i.e., demand). Conversely, the higher the price of a product or

service, the smaller the quantity consumers will be willing to buy.<sup>5</sup>

### ***Law of Diminishing Marginal Utility***<sup>6</sup>

This concept or economic "law" posits that the level of demand or "satisfaction" derived from a product or service diminishes with each additional unit consumed until no further benefit is perceived, within a given time frame.

### ***Law of Diminishing Returns***<sup>7</sup>

This concept suggests that although additional units of labor may contribute to increased productivity in absolute numbers, each such additional unit contributes relatively less than the preceding unit to this productivity. Why? Because there are fewer machines, tools, or other inputs per productive worker.

### ***Comparative Advantage***<sup>8</sup>

It is in the interest of a nation to import an item from another nation when it cannot produce the item as inexpensively. The concept of comparative advantage goes a step farther, contending that it may be to a country's advantage to import goods from other nations even though they may be able to produce the goods less expensively at home. This is based upon the premise that not producing the item in favor of producing another item which offers better production efficiencies will ultimately benefit both countries (see also economies of scale).

### ***Elasticity of Demand***<sup>9</sup>

The degree to which demand for a product or service can be altered by a change in price indicates the extent of the elasticity of such demand. For example, a person who seeks to purchase a particular brand and model of automobile may decide to shop competitively from dealer to dealer for the lowest price. This would characterize demand that is elastic. However, there are circumstances where the level of demand is not altered by a change in price. For example, a person who is diabetic will probably be willing to pay as much money as he or she has to buy insulin, the medication that would sustain that individual's life. In this case, the demand is inelastic.

### ***4 P's***

This model was developed by Kellogg's Philip Kotler. It stands for product, price, placement (i.e., distribution channels), and promotion. These are the four key dimensions in marketing any product (or service).

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<sup>5</sup> Sobel, Milo, *The 12-Hour MBA Program*

<sup>6</sup> Sobel, Milo, *The 12-Hour MBA Program*

<sup>7</sup> Casler, Stephen, *Introduction to Economics*

<sup>8</sup> Baumol, William and Blinder, Alan, *Economics: Principles and Policy*

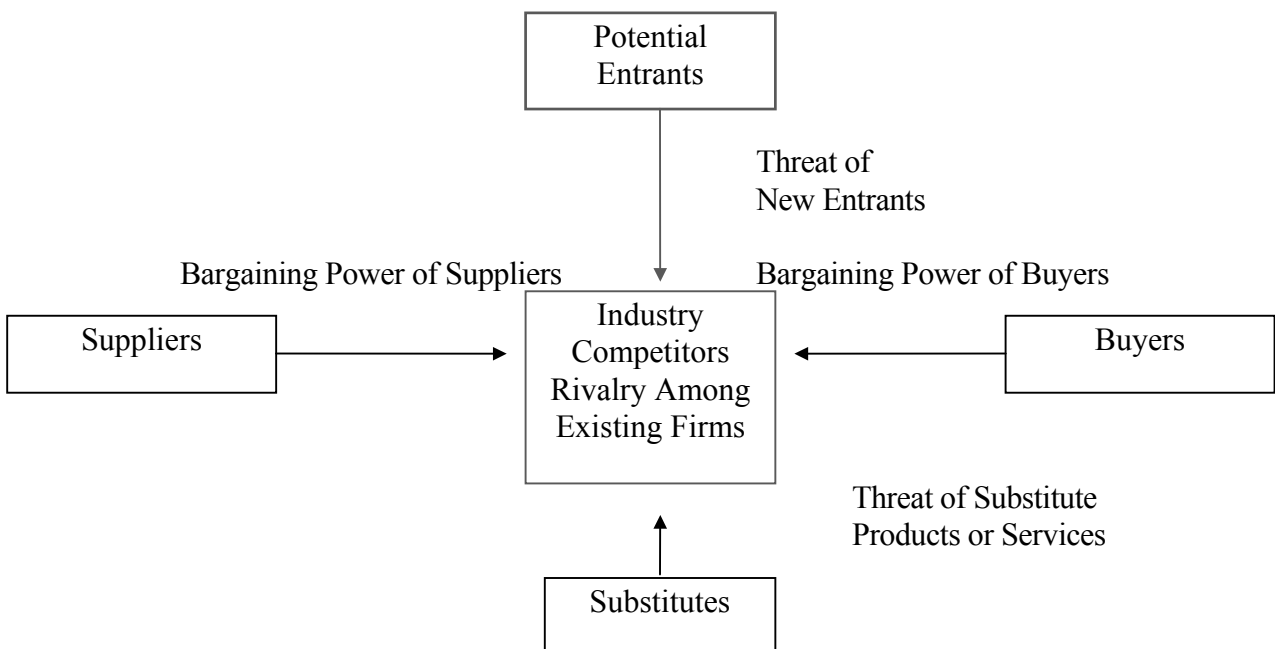
<sup>9</sup> Sobel, Milo, *The 12-Hour MBA Program*

### ***Value Disciplines***

Fred Wiersema and Michael Tracy of CSC Index, Inc. have developed a set of strategic foci called the value disciplines (Harvard Business Review, January-February 1993, pp 84-93). The disciplines are:

- Operational excellence - Provide customers with reliable products or services at competitive prices and delivered with minimal difficulty or inconvenience, with the goal of leading the industry in price and convenience (e.g., Dell Computer).
- Customer intimacy - Segment and target markets precisely and then tailor offerings to match exactly the demands of those niches, combining customer knowledge with operational flexibility to respond quickly to almost any need (e.g., Home Depot).
- Product leadership - Offer customers leading-edge products and services that consistently enhance the customer's use or application of the product, thereby making rivals' goods obsolete (e.g., Nike).
- Companies which push the boundaries of one value discipline while meeting industry standards in the other two gain such a lead that competitors find it hard to catch up.

### ***Five Forces***<sup>10</sup>



<sup>10</sup> Parts of this section are taken from Thompson & Strickland, *Strategy Formulation and Implementation*.

Michael Porter's Five Forces model is utilized in analyzing the various competitive pressures at work in a given industry. The results indicate overall industry attractiveness (i.e., ease of making a profit), as well as the strength and influence each of the competitive pressures have on the firms participating in the industry.

#### Industry Competitors (Internal Rivalry) -

Often, the most powerful of the five forces is the competitive battle among rival firms which are already present in the industry. The intensity with which the competitors are jockeying for position and competitive advantages indicates the strength of this force's influence.

#### Potential Entrants -

The competitive threat that outsiders will enter a market is stronger when entry barriers are low, when incumbents are not inclined to fight vigorously to prevent a newcomer from gaining a market foothold, and when a newcomer can expect to earn attractive profits.

#### Threat of substitutes -

The competitive threat posed by substitute products is strong when prices of substitutes are attractive, buyers' switching costs are low, and buyers believe substitutes have equal or better features.

#### Supplier Power -

Suppliers to an industry are a strong competitive force whenever they have sufficient bargaining power to command a price premium for their materials or components and whenever they can affect the competitive well-being of industry rivals by the reliability of their deliveries or by the quality and performance of the items they supply.

#### Buyer Power -

Buyers become a stronger competitive force the more they are able to exercise bargaining leverage over price, quality, service, or other terms or conditions of sale. Buyers gain strength through size and when the objects they are purchasing are critical to their success (particularly when they could source these items elsewhere with low switching costs).

## *Industry and Competitive Analysis Summary Profile<sup>11</sup>*

### 1. Dominant Economic Characteristics of the Industry Environment

- Market growth, geographic scope, industry structure, scale economies, experience curve effects, capital requirements, and so on.

### 2. Driving Forces

### 3. Competition Analysis

- Rivalry among competing sellers (a strong, moderate, or weak force/weapons of competition)
- Threat of potential entry (a strong, moderate, or weak force/assessment of entry barriers)
- Competition from substitutes (a strong, moderate, or weak force/why)
- Power of suppliers (a strong, moderate, or weak force/why)".Power of customers (a strong, moderate, or weak force/why)

### 4. Competitive Position of Major Companies/Strategic Groups

- Favorably positioned/why
- Unfavorably positioned/why

### 5. Competitor Analysis

- Strategic approach in predicted moves of key competitors
- Who to watch-and why

### 6. Key Success Factors

- Factors that are most critical to success within the industry

### 7. Industry Prospects and Overall Attractiveness

- Factors making the industry attractive
- Factors making the industry unattractive
- Special industry issues/problems
- Profit outlook (favorable/unfavorable)

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<sup>11</sup> Thompson and Strickland, *Strategy, Formulation and Implementation*



## BCG's Growth-Share Matrix<sup>12</sup>

		MARKET SHARE	
		HI	LOW
MARKET GROWTH	HI	“STAR”	“PROBLEM CHILD”
	LOW	“CASH COW”	“DOG”

From *The Experience Curve: The Growth-Share Matrix or the Product Portfolio* (Boston Consulting Group, 1973)

The BCG Growth-Share Matrix provides a framework that enables us to identify and evaluate the company's products relative to market share and the extent to which the market, as a whole, is expanding or contracting. It can also be utilized to analyze a portfolio of companies held by a single organization by classifying each of the held businesses.

Products or businesses may be:

- Star: product with high market share in a high-growth market; every mother's prayer.
- Problem Child: (also called "Question Marks")-product with low market share in a high-growth market; mother is concerned because her child is not growing as anticipated. Another perspective is that mother shouldn't be quite so concerned if the child has carved out a little niche that is impervious to the competition; maybe slow yet consistent growth isn't so bad.
- Cash Cow: product with high market share in a low-growth market. Since the cow is generating milk (i.e., cash), the marketer may elect to "milk the cow dry," so to speak, accelerating cash flow and, not coincidentally, the product life cycle.
- Dog: product with low market share in a low-growth market. In this sense, "dog" is certainly not "man's best friend." Rather, it is analogous to "bomb?" (i.e., something that falls

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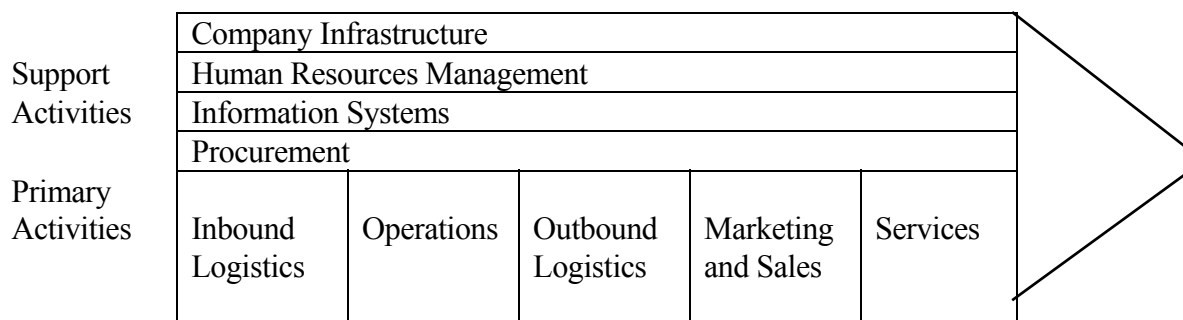
<sup>12</sup> Sobel, Milo, *The 12-Hour MBA Program*, which takes it from Aaker, David. *Developing Business Strategies*

miserably) or to "lemon" (i.e., something that is defective or undesirable). So it would seem that one would want to drop the dog from the product line.

### **Value Chain<sup>13</sup>**

It is important to understand the internal relatedness of the many activities involved in the production of a product or service. Every business unit is a collection of discrete activities ranging from sales to accounting that allow it to compete. Michael Porter calls these value activities. It is at this level, not the company as a whole, that the unit achieves competitive advantage.

#### Value Chain



The value activities are grouped into nine categories, as indicated in the exhibit above. Primary activities create the product or service, deliver and market it, and provide after-sale support. The categories of primary activities are inbound logistics, operations, outbound logistics, marketing and sales, and service. Support activities provide the input and infrastructure that allow the primary activities to take place. The categories are company infrastructure, human resource management, information systems, and procurement.

Value chain analysis is useful in discerning possible synergies among various units of an organization (e.g., shared procurement), determining which value activities are best outsourced and which are best developed internally, and developing greater insight into the flow of activities in the creation and distribution of a particular product or service (e.g., what value is added to the manufacture and sale of gasoline. at each point in the value chain, and by whom?).

### **Strategic Types (Miles & Snow)**

Miles and Snow have divided strategic options into four categories (in contrast to Porter's three Generic Strategies). A company can only pursue one of these strategies at a time, but it is common for a company to shift from one to another as its situation, and its industry, changes.

<sup>13</sup> Porter, Michael, "From Competitive Advantage to Corporate Strategy," *Harvard Business Review*, May-June, 1986 pp. 43-59.

Defender: Those firms which have a leadership share of the market will often concentrate on staving off the competition, moving to erect as many barriers to entry as possible. They are closely related to Porter's low Cost Producers, leveraging their advanced position along the learning curve and their name recognition to maintain a superior market position.

Reactor: Such companies are second-movers, letting the others show them the way to success. They react to the changes in the market and the moves of their competitors and so must maintain flexibility. While this strategy may be profitable in the short run, its long-term value is questionable.

Analyzers: Analyzers pick apart the market very carefully looking for niches and demand and supply gaps. Akin to Porter's Focused companies, these firms are not necessarily

### ***Generic Strategies (Porter)<sup>14</sup>***

Michael Porter suggests that business strategies can be classified as pursuing cost leadership, differentiation, or focus. Each of these strategies is described as follows:

#### **Overall Cost Leadership:**

Here the business works hard to achieve the lowest production and distribution costs so that it can price lower than its competitors and win a large market share. Firms pursuing this strategy must be good at engineering, purchasing, manufacturing, and physical distribution and need less skill in marketing. Texas Instruments is a leading practitioner of this strategy. The problem with this strategy is that other firms will usually emerge with still lower costs (from the Far East, for example) and hurt the firm that rested its whole future on being low cost. The real key is for the firm to achieve the lowest costs among those competitors adopting a similar differentiation of focus strategy.

#### **Differentiation:**

Here the business concentrates in achieving superior performance in an important customer benefit are valued by a large part of the market. It can strive to be the service leader, the quality leader, the style leader, the technology leader, and so on; but it is hardly possible to be all of these things. The firm cultivates those strengths that will give it a competitive advantage in one or more benefits. Thus the firm seeking quality leadership must make or buy the best components, put them together expertly, inspect them carefully, and so on. This has been Canon's strategy in the copy-machine field.

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<sup>14</sup> This section taken from Philip Kotler, *Marketing Management*

### Focus:

Here the business focuses on one or more narrow market segments rather than going after a large market. The firm gets to know the needs of these segments and pursues either cost leadership or a form of differentiation within the target segment. Thus Armstrong Rubber has specialized in making superior tires for farm-equipment vehicles and recreational vehicles and keeps looking for new niches to serve.

According to Porter, those firms pursuing the same strategy direct to the same market or market segment constitute a *strategic group*. The firm that carries off that strategy best will make the most profits. Thus the lowest-cost firm among those pursuing a low-cost strategy will do the best. Porter suggests that firms that do not pursue a clear strategy -- "middle of the roaders" -- do the worst.

## **Part 4: Sample Cases**

## ***CABLE TELEVISION COMPANY***

**Q: Your client is a small holding company that owns three cable television companies in the Northeast: Rochester, NY, Philadelphia and Stamford, CT. Each of these three companies is profitable, and each has been experiencing steadily growing sales over the past few years. However, the management feels that the Northeast is not the fastest growing area of the country, and, therefore, acquired another cable television company in Tucson, Arizona a little over a year ago. Despite every effort of management, the Tucson company's sales have been stagnant, and the company has been losing money. How would you analyze this situation, and what could be the cause of the poor performance of the Tucson cable company?**

### **To be divulged gradually:**

The Tucson area is smaller than Philadelphia, but larger than Rochester and Stamford. Tucson is also growing at 12% per year on average. Per capita income is higher than in Philadelphia and the same as in Rochester and in Stamford.

Operating costs in Tucson are essentially the same as in the other markets. The cost of programming is based on number of subscribers and is equal across the nation. Operating costs are composed of variable items: sales staff, maintenance, administration and marketing. Only maintenance is higher than in the other markets, due to the larger land area serviced. Fixed costs relate to the cable lines, which is a function of physical area covered.

The Tucson company has attempted marketing efforts in the past, such as free Disney programming for one month, free HBO for one month, free hookup, etc. These programs have been modeled after the other three markets.

Cable penetration rates in the three Northeastern markets average 45%. The penetration rate in Tucson is 20%. These rates have been steady over the past three years in the Northeast. The penetration rate in Tucson has only risen by 2% in the past three years in Tucson.

There is only one real substitute good for cable television: satellite dishes. However, many communities are enacting legislation that limits their usage in Tucson. They are also prohibitively expensive for most people.

### **Solution:**

The real error of management results from their failure to recognize another "substitute" good: no cable television at all; television reception is far better in the desert Southwest than in Northeastern cities. The lower penetration rate is most likely a result of different climate conditions and lower interference in Arizona.

## ***CHILLED BEVERAGES***

**You are consulting for the manager of a division of a large consumer products company. Her division produces fruit juices in three forms, all marketed under the same name: chilled (found in the milk section of the supermarket, usually), juice boxes, and frozen concentrate. This division has sales of \$600 million per year. The entire company has sales of over \$20 billion. The chilled segment represents \$120 million in sales per year. While juice boxes and frozen concentrate are profitable, chilled juices are only breaking even in good quarters and losing money in bad quarters. She has received a proposal from upper management to sell the chilled juices business. What would you advise that she do?**

### **To be divulged gradually:**

**Chilled beverages is a \$5 billion dollar industry nationwide. There are two large players that have 40% and 25% of the market, respectively. Your client's market share, 12%, makes her third in the industry.**

**The best available information indicates that the two market leaders are profitable.**

**The two market leaders are able to fund more advertising and more promotion, trade and couponing that your client.**

The market leaders produce pure orange juice and blends that are based on citrus juices. Your product uses more elaborate blends of juices, usually with a base of pear or peach juice (95% of the inputs) and flavored with cranberries, bananas, mangoes, etc. (the other 5% of the inputs). Pear and peach juice are about the same price as orange juice, but the other flavorings cost about twice as much.

The market for chilled juices is essentially mothers with school age children. This is a highly price sensitive market that loves coupons, promotions, etc.

Brand name is important in this market, as in juice boxes and frozen concentrate, as mothers tend to prefer highly reliable products for their children. However, the brand premium must be in line with other branded products. Therefore, all branded juices tend to sell in the same price range.

One plant in California produces all of the product, chilled, juice boxes and frozen. It would be difficult to find another use for the plant without a major conversion.

### **Solution:**

There are three choices:

Sell the chilled juice business. This would, however, affect the juice mix and frozen concentrate businesses, as there are both advertising and manufacturing synergies.

Sell all of the juice business. This may be more feasible, as the buyer could capture the synergies, but would not be too likely to turn the business around. The selling price is likely to be low.

Keep the chilled juice business and rework the ingredients and costs. This turns out to be the most feasible option, as evidenced by the success of the competitors.

### ***DISTILLED SPIRITS***

You are consulting for a major United States producer of distilled spirits. Their primary products are a line of mid-priced vodkas and two brands of mid-range rum. Over the past few years, the business has become less and less profitable. What could be causing this:

#### Other information:

The split of product sold has consistently been 60% vodka / 40% rum over the past few years. The selling prices of the two lines are essentially the same. Overall sales are growing at about 3 to 5% per year, the same as the industry average for these product lines.

#### **An analysis of the costs reveals the following:**

- Production Costs have remained constant
- Advertising Costs have remained constant on average
- Distribution Costs have increased significantly

The products are sold throughout the country. In 27 states, where alcohol is sold in privately managed supermarkets and liquor stores, “open” states, shelf space is extremely expensive and trade promotions are critical. Such stores are also becoming less and less willing to hold inventory, which is increasing distribution costs by requiring more frequent deliveries. In the other 23 states, liquor is only sold through state regulated liquor stores. Distribution costs in these states is much lower, as there are far fewer outlets to service and central warehouses for the state-run stores. Advertising of alcohol is much more tightly regulated, and therefore, advertising spending is lower.

#### Solution:

A greater and greater share of the volume is being sold in the “open” states, with sales in these states increasing at about 10% per year. Sales in the regulated states are actually decreasing.



Because the regulated states are less expensive to serve, and therefore, more profitable, the fact that they represent a shrinking portion of the total has caused total profits to decline.

### ***CHEWING GUM MARKET***

How would you estimate the size of the annual U.S. chewing gum market? Check your answer for reasonableness.

#### A typical approach:

Estimate the number of people who chew gum: of the 300 million population, 15% are between the ages of 10 and 20, the heaviest users, for a total of 45 million. Estimate that these people chew two packs per week, for annual sales of 4,500 million packs. For the other users over age 20, (70% of the 300 million population, or 210 million) estimate a usage rate of one half pack per week, for a total of 5,250 packs per year. Total packs per year is 9,750.

To check for reasonableness, figure the dollar sales that these packs represent: at 25 cents per pack, annual sales would be \$2.4 billion, a reasonable figure.

### ***FRENCH PIZZA MARKET***

**Pizza Hut has recently entered the home pizza delivery business in Paris. The market for home delivery is currently dominated by Spizza Pizza. Pizza Hut has asked your consulting firm to help it analyze issues that will determine its likelihood of success in the Parisian Pizza market. First, what information would you need and second, how would you analyze the pizza delivery market?**

#### Possible Information Needs:

**An estimate of the size of the Parisian home pizza delivery market. This could be obtained by knowing the population of Paris (6 million) and making some educated guesses about factors that determine pizza market size.**

**You may also want to know the size of Spizza, the current competitor, including sales, number of stores, and proportion of Paris that is currently served by Spizza.**

Other useful information: market segments targeted and served by Spizza; market segments that are neglected by Spizza; what type of product do they offer; what do they charge for their product; what is the cost structure of their business and what products are most profitable.

#### Method of analysis:

The best method of analysis would start by determining if any part of the market is not well served currently by Spizza. Determine what are the needs of any neglected market, and understand if your client could profitably serve this market.

Also, try to understand the likely competitive response of Spizza to your client's entry. How will you defend your position if Spizza decides to fight for market share?

### ***GOLFBALL MARKET ENTRY***

You are visiting a client who sells golfballs in the United States. Having had no time to do background research, you sit on the plane wondering what is the annual market size for golfballs in the U.S. and what factors drive demand. Your plane lands in fifteen minutes. How do you go about answering these questions?

#### Typical solution:

Golfball sales are driven by end-users. The number of end users: take the population of 300 million; assume that people between 20 and 70 play golf (about 2/3 of the population, or 200 million) and estimate what proportion of these people ever learn to play golf (guess 1/4) which reduces the pool to 50 million. Now, estimate the frequency of purchase. If the average golfer plays twenty times per year, and requires two balls per time, that's forty balls per person. Multiply that times the 50 million, resulting in a 2 billion ball market.

### ***OVERSEAS CONSTRUCTION***

An overseas construction firm wants to expand by establishing a presence in a growing U.S. regional market. How should it go about doing this? What factors are critical for its success?

#### Suggested framework:

What are the diversifying firm's distinct competitive advantages?

What is its capacity for funding an acquisition?

What is the competitive environment like in the proposed region?

How does this environment differ from the current markets of the diversifying firm?

#### Possible Solution:

Diversification could be effected through joint ventures or through acquisition. Which of these two strategies would prove the most suitable would depend on the availability of funds and upon the nature of the companies operation in the region.

However, the success of the venture would depend not only upon the means of entry. Other critical factors would include:

- The existence of a distinct sustainable competitive advantage. For example:
  - Non-unionized labor might help support a low cost production strategy (but for how long?)
  - Proprietary technology not available to other companies in the region
  - Special expertise in a growth area (such as, for example, hazardous waste)
  - Access to distribution channels

### ***PACKAGING MATERIAL MANUFACTURER***

Your client is the largest North American producer of a certain kind of bubble-pack packaging material. Currently, the company has 80% of the market, and has asked your firm to assess the strategic outlook for this company. How would you begin to assess the future for this client, and what type of recommendations could you make?

#### Information to be divulged gradually:

Costs for the product are broken down as follows: 20% for polyethylene, a plastic chemical. 35% conversion costs, including allocated fixed costs, labor and energy costs 10% distribution and storage, 15% marketing and overhead. Profit margins are 20%. Polyethylene is a commodity chemical. The factory is thirty years old, and the technology used is the same as when the factory opened.

The client had 100% of the market until two years ago. Since that time, a localized upstart company has appeared in the Philadelphia / New Jersey market and has captured nearly all of that market. This factory has purchased technology from a German company. Your client does not have much information about this competitor, but it appears that their factory is extremely efficient. They have also been undercutting your client on price.

#### Solution:

The competitor has used their new technology to produce a lower price product. As evidenced in the Philadelphia / New Jersey market, nearly all customers prefer this product to your client's. Therefore, the future is extremely bleak for your client, and they should be advised to respond to the competitive threat, perhaps by updating their own technology.

### ***AIRLINE EXPANSION***

**A major airline is considering acquiring an existing route from Tokyo to New York. How can it determine if the route is a good idea?**

**Suggested frameworks:**

**Profitability analysis looks like the best approach. Simply determine if revenue less costs equals a positive profit. Then, analyze the factors that go into revenue and the factors that comprise cost to come to a conclusion.**

**Interviewer Notes:**

**Revenues will be determined by occupancy rates and expected prices. Both of these will be determined by expected demand, the competitive environment and the extent to which our client could win over passengers from competitor routes.**

**Operating costs will depend on expected fuel costs, incremental costs for landing rights, etc. It is also very important to estimate the cost of cannibalization on existing Tokyo-LA, LA-New York routes. And, last but not least, it is important to note that losing passengers to cannibalization is better than losing them to competitors.**

***HEALTH CARE COSTS***

**Bill Clinton has just fired Hillary Clinton as Chief of Health Reforms and has appointed you to fill the position. While in his office, you discover that kidney dialysis is a major portion of public health care expenditures. What analytical techniques do you use to determine if this cost can be reduced?**

**Suggested frameworks:**

You can start this case by looking at the cost half of profitability analysis (Costs - Fixed + Variable). Since this is a procedure, rather than a whole industry, it is mostly a variable cost, the sum of which is measured by cost per unit x # of units. Thus, one could look at this problem by analyzing (1) how much it costs per kidney dialysis and (2) how many kidney dialyses occur in the U.S. also, Don't forget the external factors, such as corruption or government regulation, that may play a role.

**Interviewer Notes:**

Analyze the proportion of public versus private health expenditures that are applied to kidney treatment to determine if this expensive treatment is being pushed onto the public health budget by unscrupulous practitioners.

Compare the incidence of kidney disorder in the country with other countries. Is ours higher? If so, can public policy or efforts to increase awareness help reduce it?

If incidence is indeed higher for the U.S, build a model (regression, perhaps) that will somehow determine the factors that are most related to kidney treatment. Perhaps those who are typically covered by public funds (the poor, the elderly) have a higher incidence of kidney problems. Is there room for any type of preventative program for these groups?

### ***LOCAL BANKING DEMAND***

How would you determine whether a location in New York City holds enough banking demand to warrant opening a branch?

#### Suggested framework:

Because this is a demand-oriented question, one should consider a marketing framework, such as the 4 P's.

#### Interviewer Notes:

The demographics of the area surrounding the prospective branch should be examined. Population, business concentration, income levels, etc. should be compared with those of historically successful branches.

Competitor reactions could easily make this venture unprofitable, so it is essential to anticipate them. These will depend on the importance of the area to competitors (in terms of profit, share, etc.)

The client will have to match competitors' incentives to customers and should estimate the cost of doing so.

The client must examine if the new branch would complement their existing competence and strategy (retail or commercial, high growth or high profitability, etc.) and what purpose it would serve. If the need focuses on deposits and withdrawals only, maybe a cash machine would suffice.

### ***FROZEN DESSERTS***

**You are consulting for a small, regional maker of high quality premium priced frozen desserts. (Ice cream and similar products). Though sales have been increasing, the business is barely making a profit and the management is unsure that they will be able to pay their usual dividend this year. They have asked you to help them identify the problem.**

#### Additional information:

**The client sells a complete line of product (ice cream and frozen yogurt) in major supermarket chains in the Northeast. In recent years, as Americans jump on the fitness bandwagon, frozen yogurt has begun to outsell ice cream, and currently represents 55% of product sold.**

**The selling price per pint is the same for frozen yogurt and ice cream. The ingredients are different, however. Ice cream uses locally available milk and cream, and flavorings such as chocolate, pecans, vanilla and coffee. The premium frozen yogurts use more exotic flavorings such as mangoes, kiwis, pineapple and raspberries. All other costs are equal for the two lines.**

Solution:

Margins on frozen yogurt products must be lower than for ice cream, or possibly even negative, due to the higher ingredient costs. Therefore, the shift of sales from ice cream into frozen yogurt is causing the company as a whole to be less profitable.

***DIRECT MAIL RETAILER***

You are consulting for a direct mail retailer that sells ladies clothing. Your client's catalog printing and postage costs have just increased to thirty-two cents per catalog. How can your client decide if the new price is acceptable?

Information to be divulged gradually:

The average response rate for catalogs mailed is 2%. In other words, each 100 catalogs mailed results in 2.5 orders placed. The average order size is \$80. In addition, 25% of customers who order product can be expected to reorder within six months. The fully allocated profit margin (excluding mailing costs) on catalog orders is 15%.

Solution:

For each 100 catalogs mailed, printing and postage costs are \$32. (100 x 32 cents).

Each 100 catalogs will result in 2 orders, plus 2 x 25%, or .5 additional reorders, for a total of 2.5 orders placed per 100 catalogs mailed.

2.5 orders will result in 2.5 x 80, or \$200 in sales. At a profit margin of fifteen percent, these sales will return a total profit of \$30.

The \$30 profit is not sufficient to cover the printing and mailing costs of \$32. Therefore, the client should reject the printing arrangement at 32 cents per copy.

## ***CHEMICAL SWEETENER MANUFACTURER***

Your client manufactures a chemical sweetener used in beverages and other food products. The chemical will come off patent in one year. You have been asked to predict what might happen to the profitability of this product when the product comes off patent.

### Information to be divulged gradually:

This is the only product of its kind, in terms of taste and safety (lack of harmful health effects) as proven in lab tests. The brand name of the product has slowly become a common household word.

The largest two customers (75% of your sales) are two worldwide beverage companies. The companies feature the brand name of your client's chemical on their product, and consider it a sign of quality. In addition, the cost of the chemical sweetener represents 1.5% of their total costs.

The costs to manufacture the product are extremely low (about 20% of the price of the product). Currently, the margins on this chemical are almost 40%.

### Solution:

This is a classic customer analysis problem. While most products that come off patent quickly drop in price (e.g. pharmaceuticals), this product will be able to retain some of its premium due to the strong brand name. Because the major two customers feature the chemical name on their product, and because the chemical represents such a small portion of their total costs, they can be expected to be willing to continue to pay the premium into the future. Therefore, the outlook for the product is good even after the patent expires.

## ***TELECOMMUNICATIONS DIVERSIFICATION***

A Baby Bell company is interested in diversifying into other areas besides telecommunications. They are considering entering the market for electronic home security systems. Would you recommend that they do so?

### Suggested frameworks:

Use an industry attractiveness framework, such as Porter's Five Forces, to determine whether this is a business you want to be in, or at least to determine what kind of returns you can expect to achieve. then, use the value chain to look at where value is added in the home security

business. finally, once you feel you understand the market, determine if the core competencies of the Baby Bell are likely to match the demands of the home security markets.

Interviewer Notes:

The company is a holding company. They have previously made unsuccessful forays into software and into real estate.

The home security business is highly fragmented. The top five players in the industry generate less than 4% of the total industry revenues. This implies that the industry largely consists of small, regional companies.

10% of all residences currently own an electronic security systems.

This is in some sense a razor and razor blade sort of business. The economics are:

<u>Item</u>	<u>Retail Price</u>	<u>Cost / Margin</u>
Equipment and Installation	\$500 - \$1,500	0-10% margin
Monthly Service	\$20 / month	\$5 / month

What strengths / competencies of the Baby Bell company are useful in this market? Consider: Installation expertise, operator services, transmission system (phone lines)

It turns out that the “expensive home” segment of this market is saturated. Growth has been slow in recent years.

Price sensitivity is unknown in “moderate-priced home” segment.

The conclusion is that this business is a reasonably good fit for the company, but that more market research needs to be done to assess the growth and profit potential of each segment of the market.

***ALUMINUM CAN MANUFACTURER***

An aluminum can manufacturer has discovered a way to improve its manufacturing process. As a result, its manufacturing cost has been reduced from \$0.89 to \$0.79 cents. How can the manufacturer best exploit this cost advantage?

Suggested frameworks:

Remember basic economics. The firm can either use a penetration strategy or price skimming strategy. Consider the impact of either strategy on the company and its competitors. Also, don't forget to think about any substitutes for aluminum cans.

Interviewer Notes:



Clearly, the client should either drop price or reap additional profits.

It turns out that the client is the leader in its market with a 40% share and supplies directly to major beverage manufacturers. The number two player in the market has about 30% of the market and the rest is shared by many small competitors.

Aluminum cans have a lower priced substitute, steel cans, which have inferior printing and stamping characteristics. Steel cans are used by customers who do not want to pay the premium for aluminum cans.

If the client drops prices, other competitors will have to follow since this is a commodity market and not following would mean a quick demise. The lowering of prices might increase the client's market share marginally, but some smaller competitors will have to start exiting the industry and larger competitors will have to start investing to discover the client's cost advantage.

At the same time, steel can users will start switching to aluminum cans, thus hurting manufacturers in that market. The resulting growth in the aluminum can market will attract steel can manufacturers to enter it. Since some steel can manufacturers have deep pockets and a strong backing, these new entrants could pose a future threat to our client. In conclusion, it is best to retain prices and generate extra profits for now. The cost advantage may help another day during a price war.

## ***FILM PROCESSING***

The CEO of the largest domestic manufacturer of photo film wants to enter the film developing business. He needs your advice on how to go about evaluating this idea. What would your approach be?

### Suggested frameworks:

This is an industry entry question; look at industry attractiveness with Porter's five forces analysis. Then, think about what part of the marketing mix (4 P's) would be best for film developing. Finally, analyze competitive response.

### Interviewer Notes:

Distribution channels are the key factor in this business. Major discount stores sell the service.

This is a scale economy business in the back-office, so profits are easier with high volume. This makes the business tough to enter.

This company ended up establishing a "store within a store" concept with Wal-Mart.

## ***CONCRETE MANUFACTURER***

Your client, a concrete manufacturer is considering acquiring a small local firm. What factors should be considered? After considering these factors, would you recommend the acquisition?

### Additional Information to be divulged gradually:

The target firm is currently profitable, with margins of 5%. Your client's margin is 15%. Your client attributes its higher profit margin to economies of scale in trucking and mixing, and a stable labor force.

Both companies compete in the geographical market, the Southeastern U.S. Your client's customers are large construction firms and contractors generally in the office and commercial building construction business. The smaller firm sells mainly to other small businesses and contractors. (Swimming pool installation firms, patio builders, etc.)

Additional research shows that the smaller customers for concrete are growing, while the major office building construction market is stagnant. The smaller firm has strong contacts with many local customers, and is often the preferred supplier due to their customer responsiveness.

Your client is not able to fund the acquisition internally, but could obtain bank financing at a rate of 10%. Similar acquisitions generally are made for two to three times current sales of the target firm.

### Solution:

From a financial point of view, the acquisition is not attractive if there are no synergies between the firms. With profit margins of only 5%, the income generated by the smaller firm will not cover the capital charges (interest due to the bank) on the acquisition price. (Acquisition price = 3 x sales. Interest on this amount will be 10% x 3 x sales, or 30% of annual sales. Profits are only 5% of sales. This analysis, of course, ignores the tax shields.)

However, if your client were able to use some of its competitive advantages to improve the financial outlook of the target firm, the acquisition would be advisable. It is reasonable to expect that synergies would arise from economies of scale in trucking and mixing, which could raise the profit level of the target firm, and make the acquisition more attractive.

## ***SHIPPING CONTAINER MANUFACTURER***

Your client is a manufacturer of large steel shipping containers that are designed to hold up to several tons of material for shipping on ocean liners. The container consists of a steel frame, a steel shell and an insulation and waterproofing material that uses a hazardous chemical. The containers are leased by the company to worldwide shipping companies. Shippers can lease the

containers one-way or round-trip. The client has asked you to do an assessment of their strategy. What issues might you examine?

Suggested Issues:

Sales and cost issues: The growth of the shipping container market; your client's share in that market; trends in the leasing terms in the industry; customer power; steel prices; manufacturing costs.

Market issues: changes in the worldwide shipping market (e.g. does the growth of an area like Southeast Asia imply many more one-way contracts than round-trip?); growth of the largest customer industries; new technology in shipping containers; customs and trade agreement trends.

Environmental Issues: Production and disposal of the insulation chemicals; costs of handling the chemicals.

### ***HEALTHCARE COMPANY GROWTH***

A large healthcare company has decided it is interested in substantially increasing the size of its operations. Its goal is to double total sales and profits in less than two years. As a consultant brought in to assist them, what would you do? What issues would you consider? What are some likely alternatives for the company?

Possible issues to consider:

What is the current scope of operations? In what areas of healthcare does the company deal?

What is its current market share in these areas?

What plans has the company already considered?

What is the competitive nature of the industry? What would be the effect on sales and profits of reducing prices and margins?

What potential is there for expansion by acquisition? Do they have the financial capability? Do potential acquisition targets exist? Will the market for acquisitions be competitive?

Possible recommendations:

Naturally, a suitable solution will depend upon the answers to the above questions.

A business can increase profits by:

- Increasing sales
- Increasing prices
- Decreasing costs

However, if the company's margins are found to be consistent with industry norms, it would seem unlikely that either increasing prices or cutting costs represent feasible methods by which to double sales & profits, particularly if the company is operating in a moderately competitive environment.

This leaves only sales increases, which could be achieved by:

- Selling more of the current products to current customers
- Selling new products to current customers
- Selling current products to new customers
- Selling new products to new customers

The suitability of these options will again depend on the particular environment. In the particular example of this case, it turned out that only selling new products to new customers via some form of diversification could hope to achieve the company goals.

You should then consider the potential for increasing sales by means of diversification through acquisition or joint venture. The relative benefits of each will depend on financial resources as well as the existence of, and competition for suitable targets.

### ***REGIONAL GROCERY STORE CHAIN***

A regional chain of grocery stores currently receives its stock on a decentralized basis, i.e. each store deals directly with the various suppliers. The president of the chain is wondering whether it would be better if they established a centralized warehouse through which all supplies would be delivered and then disbursed by company trucks. What are the key considerations to making this decision?

#### Issues to consider:

Would the savings from bulk purchasing more than compensate for the cost of:

- Building and maintaining the warehouse
- Employing additional personnel and trucks
- Opportunity cost of capital tied up in inventory for additional periods

Do the stores buy similar products? (i.e. do purchasing synergies actually exist?)

Will delivery frequency to the stores be better or worse? Consider the costs of stockout and the need for fresh produce.

Will the stores prefer delivery direct from the supplier or from the warehouse? Consider the time tied up in order processing, the flexibility of delivery times and quantities.

Possible solution:

The proposed solution would depend upon your interpretation of the trade-offs both financially and organizationally for the two methods of delivery. For you to propose going with the new method, you need to establish not only that it will cost less, but also that all the affected players can be persuaded to buy into it.

***MAGAZINE DISTRIBUTION***

A magazine publisher is trying to decide how many magazines she should deliver to each individual distribution outlet in order to maximize profits. She has massive amounts of historical data for sales volumes through these outlets and a well constructed internal accounting system. How should she go about computing an appropriate number?

Possible solution:

The best way to tackle this one (without going into a huge Economic Order Quantity quantitative analysis) is not so much to start asking questions as to set out and outline analysis and fill in as you go.

It should be observed immediately that to maximize profits, marginal revenues should be set equal to marginal costs. The marginal revenue for a magazine would be its cover price times the probability that it will be sold. The probability of sale, with an appropriate confidence interval, could be established in some manner from the historical data. The marginal costs could be obtained from the internal accounting data.

A detailed discussion of the application of these concepts from basic microeconomics and statistics may be necessary.

***KNITTING MACHINE DEMAND***

How would you assess the world demand for knitting machines?

Possible Solution:

The world demand for knitting machines basically depends on the world demand for cloth.

In order to evaluate the world demand for cloth, we need to know how much cloth (measured in square meters, for instance) is being purchased per unit time per inhabitant of the world. In order to refine our appraisal, we may segment the inhabitants of our planet per level of personal wealth. Note that this may not be a linear relationship.

Furthermore, you may need to consider other factors:

The current level of the ratio: amount of cloth manufactured per working year / number of machines

The expected usable life of an average machine

The existence of substitutes for knitting machines and the consequences of this on our expected demand

### ***CEMENT MANUFACTURER CAPACITY ADDITION***

You are consulting for the number-one producer of cement in Portugal. This company currently has 45% of the market, and feel it could have more, but is running at 100% capacity of their one plant, located near Lisbon, in Southern Portugal. The CEO has asked you to help him decide if they should build another plant or expand the current plant.

#### Additional information to be divulged gradually:

The cost structure for cement production is as follows:

Raw materials	28%
Labor and allocated fixed costs	16%
Distribution	26%
Sales and overhead	18%
Pre-tax profit	12%

The company's selling prices are set by prevailing market prices in Portugal. Land is available to expand the current factory; there is also a suitable site near Porto, about 200 miles to the north. Approximately 80% of the customers are within 100 miles of the current plant.

Raw materials are purchased from a government-owned company, and prices are set by a yearly contract with the government. The plant is unionized, and extra shifts are not possible. The trucks are owned by the company, and transport all product directly to the customers throughout the country. Customers pay for trucking by the mile. The fixed cost of plant additions is roughly the same as the cost of a new plant of the same capacity.

#### Solution:

As distribution is the second-largest cost item, it makes sense to minimize distribution costs in choosing the site of the next facility. From the data, it is safe to assume customers that are further away are less inclined to buy due to the increased trucking costs. Therefore, location of the plant in the north may increase sales in the north by reducing delivery costs to these customers.

## ***SNACK FOOD COMPANY***

A large salted snack food company has steadily been losing market share over that past two years, from a high of 20% to the current level of 18%. Profits as a percent of sales, however, have been growing. What could be causing this?

### Additional Information to be divulged gradually:

The size of the total salted snack food market has grown from \$15 billion to \$17 billion during these two years; the interviewee's conclusion should be that the client's total dollar sales have actually grown, but not kept pace with the market. The product line of the client has not changed over this period.

The costs for the client have changed over this period: ( % of selling price)

	Current	Two years ago
Raw Ingredients:	28%	26%
Conversion costs:	24%	24%
Distribution:	8%	9%
Marketing:	16%	18%
Sales force:	7%	9%
Pre-tax profit:	17%	14%

The total sales force was cut to reduce costs, though the same number of outlets are still covered by this sales force. The changes in the marketing budget come from reduced trade promotions.

The products are mostly sold through large grocery store chains and convenience stores. The sales force generally visits each customer at least once per quarter. Promotions usually occur at the end of each quarter. Grocery stores and convenience stores require some type of promotion to grant valuable end of aisle displays or advertising space.

The largest competitors are two multinational consumer products companies that feature complete lines of snack foods. Their sales forces are regarded as the best in the industry. Together, these two companies have 55% of the market.

### Solution:

The data show that the greatest change is in the sales force numbers. It turns out that the company went on a cost-cutting spree over the past two years. The sales force was drastically cut and the commission scheme was reworked. The marketing expenditure was also decreased. Most of the reduction came from trade promotions. The product is sold through the same channels as previously: large grocery chains and convenience stores. These channels are

traditionally driven by periodic trade promotions. The reduction in trade promotions brought about a loss of shelf space, which has directly led to the decrease in market share. Also, the product line has not changed in the past two years in a product category where new products and line extensions are routine. In addition, the market has been growing, indicating a missed opportunity for new products in the market. Lastly, the increase in profitability has resulted from the lower costs, but may not be sustainable.

### ***BEVERAGE COMPANY COST STRUCTURE***

RC Cola and Coca Cola both compete in the same industry. Their cost structures are vastly different, however. Using Coca Cola as a benchmark, estimate the likely cost structure for RC Cola. In other words, for which costs would RC Cola be higher, for which would they be lower, and why?

#### Possible solution:

This is a twist on the standard price/cost case that also questions the interviewee's understanding of the cost items. A possible analysis, line item by line item:

Cost of goods sold: RC Cola would be higher due to their lesser power in negotiating price breaks from suppliers.

Distribution: would be higher for RC Cola for two reasons. RC is not distributed in as many outlets as Coca Cola. Therefore, the average truck driver will be driving more miles and spending more time to deliver a truckload of RC than the Coca Cola driver, who will have several stops within an immediate area. Also, the typical order size for RC Cola would be smaller, meaning that more stops would have to be made. In the case of Coca Cola, it is conceivable that one truckload may be delivered to just one customer.

Sales Costs: could be lower for RC, as there are fewer, but more loyal customers.

Marketing: is lower for RC Cola as they are not a frequent advertiser like Coca Cola.

Administration / Overhead: lower for RC Cola as they are more of a "one-product" company than is Coca Cola.

### ***PERMANENT LIGHT BULBS***

A small R&D lab in the Swiss Alps has developed a super-durable filament for light bulbs; with this filament, the light bulb will never burn out. The lab is ready to license this product to a light bulb manufacturer. What will be the effect on the light bulb industry?



Additional Information:

The light bulb industry is dominated by two multinational producers. The two companies sell their products side by side for essentially the same price in similar outlets internationally. There are a several small local players in various regions of the world who produce local brands and some private store brand light bulbs. There have been no technological innovations in light bulbs for many years.

Possible solutions:

One outcome is that one of the two major players purchases the technology. If the technology is patented and exclusively licenced, this player may enjoy an advantage for a limited time. If the producer makes enough bulbs at a low enough cost, all customers will eventually switch over to the permanent light bulb, thereby drying up the industry, putting the competitor out of business and greatly reducing their own business.

Another solution is that all of the players obtain some version of this technology. If that were to happen, the price for this product would decline to the normal industry profit level, and customers would shift to the permanent light bulb. Over time, all bulbs would be permanent and the industry volume would greatly decrease, making the industry more competitive and wiping out industry profits.

***AIRPLANE MANUFACTURER***

Q: You are consulting to a CEO of an airplane manufacturer. In the last couple of years you have gone from being number one in market share to number two. In addition, another company has announced that it will be entering the business and is presently tooling up its plant. As a consultant, what are the concerns your client might face, what additional information might you want to find out, and what recommendations would you have?

Solution:

As a consultant, you are concerned with three key items:

1. The condition of the airplane manufacturing industry.
2. Why the firm has lost market share.
3. How to prevent the new entrant from stealing market share.

The airplane industry's demand is a function of travel among two classes: business and leisure. Business travel increases as a result of globalization. Leisure travel increases with growth of middle and upper classes. Business travelers are primarily insensitive to price, leisure travelers are very price sensitive.

The current competitor: a comparison

Price, service, technology, heritage, safety. It turns out that the competitor's plane is cheaper to operate because it is more fuel efficient. The consultant should ask as a strategic question whether the firm is interested in the manufacture of more fuel efficient planes. The answer would depend on the future of oil prices. Instead, it may be better to try to compete on the basis of price, safety and service.

Prevention of a new competitor gaining share:

Key: Creation of barriers to entry.  
Long-term contracts are pre-emptive.  
High concern, on the part of purchasers, for a proven safety track record.

### ***OIL REFINING INDUSTRY***

Your company has 25% world-wide market share of the oil industry. You generate \$4M annually in revenues through the machinery division of the company, which supplies machinery to refineries (not owned by your company) around the world. How do you assess the current operating status of this division?

#### Approach:

Define "assess...operating status" - most likely in comparison two dissimilar pieces of information: 25% market share and \$4M (but no idea what % of the market this represents). The guide is to request what % of the market \$4M represents. Assume this is unknown. An estimate of the market size is therefore needed to be done. The way to do this is to ask how many oil refineries there are, how much does each cost to build, how long they last (actual life, not dependent life) and what the machinery replacement costs are. From this, one can estimate what the industry spends per year on machinery. Divide the above mentioned \$4M into this and the refining division's market share can be assessed. This % can then be compared to the 25% share of the parent.

### ***MYSTERIOUS AUDIO CASSETTE MARKET***

Q: Your client is the manufacturer of audio cassettes. They have hired you to figure out why they've been experiencing an alarmingly poor sales year. They want you to figure out the root of the problem, and what to do about it.

#### Information to be divulged gradually

Mature market; 5-6 major players; client used to have a steady 30% market share: (second largest in industry). Now, the firm has a 44% share. Your client offers a full range of audio cassettes -- from low bias to high bias/metal. Your client is also using the most sophisticated and quality driven cassette manufacturing techniques.

The firm has been losing sales reps, yet loyal reps claim that sales are at record high levels for them this year.

Firm historically targeted two consumer groups -- older, middle income enthusiasts and high school rock 'n roll stereophiles.

Recently your client has been losing younger target market customers.

Firm has traditionally managed its relationship with retailers well. However, the firm has recently lost several major accounts due to its inability to move your customer's (the firm's) products.

Answer: Audio Cassette Maker

A: The combined market characteristics, recent symptoms and sales decline and increased market share suggest that your competitors are abandoning this market -- likely due to a new and better substitute technology (the compact laser disk, for example.)

Still, your client's historically flat market share suggests brand loyal customers. Moreover, your older target market is loyal -- perhaps less likely to switch to the new technology in the short run. Assuming (1) that your client wants to be a provider of this new technology and (2) has the capacity to manage a primary supplier position in its traditional line of business -- short-term, target your older customers as well as new segments less likely to switch over to CD's; for the long-term, consider resource requirements, opportunities and constraints of developing or acquiring the new technology.

***WINDMILL***

You produce a windmill with an accompanying electric generator (generator harnesses the power produced by the windmill). This may cost you \$10,000 to manufacture. How much are your customers willing to pay for it?

Approach

**Porter's five forces dictate that industry rivalry/potential substitutes, and supplier/buyer power need to be assessed. This could be an appropriate start. To narrow it down, let's assume competition, and a demand/supply level far beyond your capacity. We must examine other components: The \$10,000 cost is irrelevant; you have no idea what this product is worth to anyone. Assessing the value of the product's benefits is perhaps the next step. The closest substitute to the windmill is probably utility produced electricity. Therefore, inquire how the electrical utilities measure and charge for the electricity they provide, convert the Windmill's output along these terms and assert a cost/benefit estimation of how much potential customers**

would be willing to pay for it. Other considerations upon which to discount the value might be reliability, maintenance, etc.

### ***AGRICULTURAL EQUIPMENT MANUFACTURING***

Q: Your client is a large agricultural equipment manufacturer. Their primary product line, farming tractors, is losing money. What questions would you ask of your client to help them solve their profitability problem?

Answer: Agricultural Equipment Manufacturer

A: It is unlikely that there are too many players in this market. You might want to start off by asking how many competitors there are. Suppose the answer is that there are two direct competitors.

What is your client's market share relative to their competitors (your client has 40% of the market, competitor #1: 30%, competitor #2: 15%, with the remaining 15% belonging to many small manufacturers.)

What-are the market share trends in the industry? (Five years ago, your client had 60% of the market, competitor #1, 15%, and competitor #2, 10%. Obviously, your client has lost significant market share to its two competitors over the last few years.)

Do all three competitors sell to the same customers? (Yes)

How is your product priced relative to your competitors? (Your client's product is priced higher than the others.)

Has this always been the case? (Yes)

Are the products the same? (Essentially yes, they all have the same basic features. Of course, tractors are not commodity items and a few differences do exist.)

What are the differences that allow you to charge a premium for your product? (Your client has a strong reputation/image of quality in the market and the market has always been willing to pay a premium for that reputation because it meant they would last longer and need less maintenance. This can be critical for some farmers because they cannot afford to have a piece of equipment break down at a critical time.)

Are sales revenues down? Are sales quantities down? (Yes)

Is the price down? All costs the same? (No, in fact both the price and costs are up.)

Have fixed costs increased? (No, material costs, (variable costs,) have gone up out of sight, and the client has no answer as to why material prices have gone up so staggeringly.)

Do you manufacture your tractor or just assemble it? (Primarily an assembly operation.) Finished part prices have gone up? (Yes)

Raw material prices for your suppliers? (I don't believe so)

Have labor costs Increased for your supplier? (No)

Have you changed suppliers? (No)

Why are your suppliers charging you higher prices for the same products? (Well, they're not, the prices have increased as a result of our product improvement efforts. We've tightened tolerances and improved the durability of our component parts.)

Why do you make these improvements? (Because we strive to continue to sell the best tractors in the world.)

Are your customers willing to pay for these product improvements? (What do you mean.)

Are your customers willing to pay a marginal price which will cover your cost of implementing these improvements? (I don't know, I guess we assume that they will...)

It turns out that prices have been raised to cover the costs of these improvements, but customers do not value these improvements unless they are essentially free --so sales are down. The client needs to incorporate a cost/benefit analysis procedure into its product improvement process. Don't forget though, that you must consider the long-term effects of these decisions.

## ***BANK OF LUKE***

Mr. Check is the Director of Retail Lock Box Services for the Bank of Luke, a medium-sized Midwestern bank. The Retail Lock Box Department consists of 100 clerks and 8 managers and supervisors. Each year, in addition to their handling of retail lock box transactions, the Department generated \$1.5 million of fee revenue processing retail credit card and mortgage payments ("items") for 75 commercial accounts. The bank has many other commercial accounts that use other companies of their item processing. In fact, the Bank recently lost the item processing business for one of its largest accounts to Vader Inc., the largest item processor in the US

The item processing industry has undergone dramatic changes in recent years. Types of items processed include credit card, mortgage, and utility payments (checks), airline tickets, and coupons. In the past, these items were usually processed by the issuing company (e.g., airlines would process their own tickets) or by bank item processing departments like the Bank of Luke's. At banks, the

processing of payment items was done more as a service to bank customers rather than as a profit-making endeavor. Hence, it received little focus from management. Historically, processing was accomplished by verifying the correctness of incoming paperwork and manually sorting, filing, and totaling the items: only the largest banks were highly automated.

Companies specializing in item processing have emerged in the past ten years. Vader, Inc., the largest such company, is a subsidiary of a small bank in Georgia. Each year Vader processes millions of airline tickets and retail payments for hundreds of companies, most of whom are not customers of its hundreds of competitors most of whom are not, customers or its parent bank. Vader uses high-speed processing equipment and is highly automated. Processing time is rapid and processing costs are low. In fact, because of this speed advantage, the parent bank is beginning to profit from the float of checks processed. Although industry wide a majority of items are still processed by the issuing company or by small processors, it is expected that large processors. Within five years, it is expected that most of the business will continue to migrate to Vader and other large processors. Within five years, it is expected that Vader and the large processors will dominate this market.

Vader had a significant cost advantage over smaller operations, such as the Bank of Luke, because of the great economies of scale they gain from processing such volumes of items. In addition, Vader benefits from a more constant workload by processing both airline tickets and retail lock box receipts: airline tickets have few peaks and valleys, whereas mortgage payments always peak early in the month with very low volumes the rest of the month. Mr. Check believes that Vader quotes prices of 20 cents per item to large prospective customers while the Bank of Luke processes items for 40 cents per item.

The President of the Bank, Mr. Kenobi, has asked Mr. Check to evaluate how the retail lock box service can be made profitable; the service lost \$100,000 last year. Mr. Check believes that the bank must offer retail lock box services, and it must price the service to be competitive with companies such as Vader. Recognizing that outside expertise will be needed, the President has given Mr. Check a budget to be used to hire a consulting firm. Mr. Check has asked you to visit his office to discuss the proposed engagement. While walking to his office, you observe that the Bank's retail lock box operations remains primarily a manual system, with limited use of modern, high-speed equipment and methods. Once in Mr. Check's office, you note a picture showing the Department's staff in 1965; Mr. Check was a supervising clerks at that time. After reviewing some background information with you, Mr. Check asks you the following questions:

#### Question #1

What do you see as your (the consultant's) role at the Bank of Luke?

#### Question #2

What steps would you take and what information would you gather to diagnose the problems facing the Retail Lock Box Department and to develop solutions to those problems?

### Questions #3

From what you now know, what are the problems facing the item processing service and what recommendations would have the greatest impact on the performance of the Bank of Luke and the item processing service?

#### Answer

In this case, we want to test the candidate's ability to handle a case in which the events appear hopeless until the end. When an apparently easy solution (automation) is made available. The candidates should challenge the general premise of the case, and not simply believe that the business is necessary just because Mr. Check says so. We also want to test creativity with this case. We purposely leave the case rather vague, not suggesting any particular actions and offering little data. The candidate should be given time to think about this case and propose solutions which are not readily apparent:

- Why not sell the business of these customers?
- Why not offer increased services to justify higher fees?
- What is the strategic plan for the bank, and how does this unit fit into it?
- What does Mr. Check feel his unit should be generating? (after all, \$15,000 per employee is pretty low!)
- Has he considered acquiring other banks' customers to increase the economies of scale in his own operation?

This case can also be used to discuss cost-cutting. Again, creativity and sensitivity to the real issues should be the goals of your probe; cutting 25% of the staff is too obvious and too easy.

### ***CANDY COMPANY***

Q: Your company is a rather successful producer of candy. It originally started as a single product line. The production process consists of two basic activities: manufacturing and packaging. The firm has also expanded its sales through product line extensions. Management is concerned that sales are growing but profits are not increasing at the same rate. What can your company do?

#### Answer: Candy Company

A: This is a revenue vs. cost exercise. Margins are shrinking.

Find out about the critical components of cost: raw material, labor and fixed cost. Raw materials are commodities with cyclical prices which have fallen in recent years but are expected to swing up again (this, as you have guessed, makes the problem worse.) Labor and

fixed capital has increased per unit over-proportionally compared with ten years ago. Find out that the company's controlling system is still focusing on the manufacturing part of production and the cost explosion occurs in packaging (candy is candy, the product line extension is primarily an issue of different packaging.) Controlling schedules manufacturing which is rather efficient already but not packaging, thus causing slack in labor and fixed capital (small batch sizes, high setup times.)

Possible solutions: reduce product line, introduce controlling/scheduling measures for packaging.

Qualifier: Are the company's customers (i.e. retailers) willing to accept the reduced product line?

Find out about revenues:

Revenue killers: concentration of retailers, trade brands, retailers demand large introductory discounts for new products, high failure rate of new products.

Possible solutions: streamline product line, reduce low margin trade brand production, emphasize pull marketing, reduce introduction rate for new products.

(Operational aspect): optimal plant location with respect to transportation.

Possible assumptions:

plant location at  $(x,y)$ , national WHs at  $(x_i, y_i)$ , demand per country given  $D_i$ , cost linear with distance, shortest travel  $d_i$  between  $(x, y)$  and  $(x_i, y_i)$  allowed:  $TC = \sum(x_i D_i)$ ; solution (requires iteration):  $dTC/dx = dTC/dy = 0$

Punch Line: Should the company seek dominance now?

Have the driving forces for fragmentation disappeared? No, the fragmenting factors from the market are still in place. The company has not changed its strategy in the fragmented industry, (dominance makes no sense) but has gained an advantage by operational changes.

### ***CONSULTING FIRM (1)***

You are the managing director in a large international consulting firm. Traditional strengths of your firm have been solving strategy and organizational issues. Recently, you have noticed an increasing number of your firm's proposals are being rejected because of a lack of information technology expertise in your firm. So far, your firm's growth has been strong enough that proposals lost have not



hurt annual earnings. Nonetheless, you are becoming increasingly concerned about the need to develop the firm's capabilities in information technology.

Q1: Assuming your concern is valid, what reasons will you provide to other partners about the need to acquire information technology skills?

Q2: Assuming you are able to convince other partners of the importance of IT expertise, what steps would you take to rapidly build IT capacity in this area?

Q3: What are the major risks in executing an IT capacity-expansion?

Answer. Consulting Firm (I)

A1: Good answers focus on the value of IT to clients: discussion topics include the increasing importance of information in business, strategic value of information and information flows, importance of information systems for implementing new organizational structures and management control systems.

Better answers focus on the costs of losing clients to competitors: discussions included the encroachment costs of having clients talking with competitors about IT problems, risk of losing credibility with clients by not being able to solve a problem.

A2: Good answers will focus on various methods to build expertise: buying expertise by acquiring another firm, by raiding IT practices of other firms for a few key consultants, building capacity through recruitment of IT experts and training them to be consultants, building capacity by training current consultants in IT practice skills, establishing a strategic alliance with a IT boutique firm.

Candidates should discuss the pros and cons of each method proposed; impact on firm's current culture, cost to the firm, time needed to build expertise, etc.

Better answers will realize the importance of stimulating client demand as capacity builds through seminars, articles strategic studies in IT areas...

A3: Good answers depend on the expansion methods discussed, but an important issue is the loss of the firm's focus away from just strategy and organization.

Better answers will focus on the difficulty of implementation in IT; rapid technological changes in the IT industry require significant ongoing training and development costs; new practice cultures may be significantly different from current culture, especially if "external experts" are brought into the organization.

## ***COSMETIC COMPANY IN EUROPE***

Eurocos, Inc produces and sells various cosmetics products in several European countries. The company's different brands are well established in the markets. The various products are quite similar in terms of raw material and production.

The company has been doing very well in the past, however profits have been shrinking in recent years.

The CEO of Eurocos, Inc thinks of changing his strategy in the industry. He asks you is this is a good idea and what they should do?

### Additional information

Many small to medium size companies, few big companies owning several brands many small to medium size brands comprise the market. Eurocos produces all products in all countries; transportation costs are small (see operational part).

### Possible approach/ way of discussion

What is the structure of the industry? Fragmented industry.

### Why?

- low entry barriers (small setup costs,..)
- high product differentiation (many ways of differentiation)
- divers markets: customer needs (language, complexions)
- barriers: tariffs, customs

### How can fragmentation be overcome?

Feasible for Eurocos?

- Create EOS and learning curves--Yes
- Standardize market needs--No
- Separate the product's commodity aspect from fragmenting aspect--Yes
- Changing environment: reduced tariffs

Possible solution: Consolidate production while keeping the marketing and branding nationally decentralized.

Pros: EOS in production (better sourcing, longer runs, quality) optimize location (interest rates, wages, labor)  
Learning curve of running a more complex plant and logistics (see also Cons)  
Keep "fragmented" marketing required in the market

Total inventory decreases (safety stock at original plant locations can be pooled centrally)

Cons: More complex central operation  
Increased logistic complexity  
Transportation costs increase

## ***SEMICONDUCTORS***

The domestic semiconductor industry is beleaguered - brutal price competition from the Japanese, accusations of "dumping" against the Japanese etc. Domestic semiconductor manufacturers are clamoring for protection from Washington, and some of the public policy solutions being proposed are things like research consortia sponsored by the government, trade restraints etc. You are a consultant at a major firm. You are concerned that the public policy debate ignores basic issues regarding industry economics and whether the solutions being proposed will solve any problems for your clients. You know that each generation of memory chips lasts only 4-5 years. What are some of the factors you will consider while looking at the economics and how might they impact the idea of shared research by US manufacturers?

### Approach

These are some of the basic issues to be fleshed out:

What are the cost drivers in the industry? (e.g. the split between fixed and variable costs involved)  
The basic issue to be arrived at is that it costs huge amounts of money to be a player - roughly 250m in research and 600m in plants. This increases exponentially for each succeeding generation of memory chip. High fixed costs. Negligible variable costs. Cut-rate, volume-oriented pricing - marginal cost of an additional chip is minimal. Need access to huge amounts of capital on a continuous basis to survive for the long term. Raise pros/cons/issues of govt. participation in this. Is it feasible? What are the priorities for scarce govt. resources? Will relaxation of anti-trust laws help? Foreigner's access to cheaper capital? Research costs are smaller component. What will shared research accomplish?

## ***AIRLINE INDUSTRY***

The airline industry is characterized by low returns and stiff competition. In the early years after deregulation, discount carriers like People Express sprang up. Years later the discounters have gone out of business. In a price-competitive industry, why is it that the higher-cost carriers were able to survive and the low-cost ones weren't?

### Approach:

These are some of the basic issues to be flushed out:

Characteristics of discounters. Low fares, limited service.

Characteristics of major carriers. Higher fares but better coverage and service.

Hub systems channeling traffic.

Competitive moves by majors.

Innovative use of information technology for yield management and differential pricing.

Basically they priced every seat individually based on continuously monitoring demand/supply. They wooed leisure customers with fares lower than discounts and charged more from business travelers (indifferent to price but sensitive to service and frequency). They stole the discounters' market and forced them out.

## ***OIL TANKERS***

Your rich uncle has just passed away and left you with 3 small oil tankers in the Persian Gulf. How do you determine how much they are worth?

### Approach

**This problem involves the interplay of supply and demand forces to determine the value of the tankers. The nature of tanker supply will be revealed by defining the different tanker types (in layman's terms: small, medium, and large) in the industry and the cost-related prices associated with employing each type. In effect, a step function supply curve results for the industry with each step a different tanker type. Demand for the services of tankers is assumed fairly inelastic due to refinery economics dominating the purchase decision. It will turn out (by carefully creating the supply/demand curves) that at the given level of demand, only large and medium tankers are put into supply. This renders your late uncle's small tankers suitable only for scrap at the present time.**

## ***FERTILIZER***

You are hired by a fertilizer manufacturer to help them out of a difficult situation. Their market share and profits are in a decline and they can't figure out what is happening. What are you going to do?

### Approach

These are some of the basic issues to be fleshed out:

Fertilizer is a commodity. Identify the basis of competition in the industry i.e. competition is on a cost basis.

Who are the major players? What is their cost position vis-à-vis yours? It turns out that your client is the high-cost producer (You will have to find this out with your questions and approach).

Why is your client the high-cost producer? Examine the inputs to the process and analyze each one vis-à-vis your competitors (a long drawn out process). Are there economies of scale and where do you stack up on that dimension? It turns out that you are comparable on all dimensions except for a key raw material (phosphate). You will also do not have any scale advantages. Again, you will have to find this out with your questions and approach.

Examine key issues relating to your disadvantage in raw material supplies? Why is it that you are at a disadvantage? It turns out that you probably can't overcome this disadvantage.

What are your alternatives? (If you got this far you are probably doing fine!). Looks like you could try and explore the possibility of competing on a scale basis. What do you look at to analyze the issue?

## ***SCIENTIFIC INDUSTRY***

A manufacturer of scientific instruments is experiencing declining sales in its major product line. Why?

### Approach

Here are some questions which may help isolate the key issues:

1. Describe the instrument and what it does. (Goal: gather background information on the product).  
Response: The instrument, call it Y, is able to perform elemental mapping; that is, it is able to determine the specific composition of material placed in the chamber for observation. Y is an accessory for larger and much more expensive instrument that functions almost exactly like a microscope, which we'll call X.
2. What other products does our client manufacture? (Goal: gather background information on the client).  
Response: They recently began manufacturing X, and also produce an unrelated product.

3. Can these instruments be used separately, and are they ever sold separately? (Goal: understand the sales process and the potentially interactive role of the X and Y sales forces).

Response: X can be used by itself, but Y is essentially dependent on X for its operation. As a result, except for replacement sales, Y is rarely sold individually. In fact, X's sales force will frequently recommend that a buyer purchase a certain Y while buying an X. Two years ago, over 30% of our clients sales were generated by a manufacturer of X.

4. What is the current %? (Goal: determine whether this could be a cause of the sales decline).

Response: It is currently around 5%

5. Does our product X compete with other manufacturers of X, and particularly the manufacturer that was selling our Y? (Goal: understand reasons for our friendly X manufacturer stopping promotion of our product).

Response: Yes it does compete directly with it, and our client introduced the product about 1 1/2 years ago. (You have discovered a significant portion of the sales decline).

6. How does our product compare to other Y's? (Goal: determine whether others are beating us on technological or other product features).

Response: Our client's product is regarded as one of the best in the market.

7. Is the market for X and Y growing, shrinking or flat? (Goal: a shrinking market could be a good explanation for declining company sales).

Response: Both markets are flat.

8. Who uses X and Y? (Goal: determine market segments).

Response: There are two basic user groups: industry, primarily semiconductor manufacturers, and academia (in research labs). What we've noticed lately is that the specific users in each of these groups, who also happen to be the primary buyers, have become relatively less sophisticated; that is, they are hired just to run the instruments and know less about their technical qualities. These buyers have become even more dependent on the sales forces. What has happened is that our client alienated itself from other manufacturers of X at a time when a strong relationship was becoming even more important than it used to be. The buyers are relying more and more on the X sales force, who is typically called well in advance of the Y sales

force. (The interviewer will not likely give you all of this information at once. Questions about the buying process and changing decision makers would have brought it out)

This is the second part of the main reason for our clients declining sales: in addition to ruining our relationship with a manufacturer of X by producing our own, we happened to do so at a time when relationships became even more important.

### ***RETAIL ADVERTISING PRICING***

You are the new retail advertising manager of a large daily newspaper. This morning you received a call from the advertising director (your boss!). He sounded extremely worried about the retail advertising division's performance. (Naturally he doesn't explain why, assuming that a hot-shot like you would by now be totally familiar with the status quo!). He has to attend a meeting of senior executive convened by the publisher where he will have to defend the advertising department's performance. He also wants to make a big splash by presenting a new "strategic pricing methodology" aimed at achieving "value-based differentiated pricing".

#### Approach

Find out corporate profitability objectives. Assess gap between annual departmental performance and original targets. Examine both revenue and cost issues. (You discover that revenues have gone up steadily over the past few years. Further, costs have not risen significantly. So why worry?) Apparently, corporate pressure to improve bottom-line results has led to steep advertising price increases. A classic demand-curve scenario has led to greatly decreased cumulative ad volume, with potentially serious long-term consequences.

Examine competitor pricing and customer price sensitivity. Discuss heterogeneity in advertising customers based on business size, breadth or product line, price-point etc. Understand advertising attributes of importance to different segments (e.g. color, size, frequency, discounting etc.). Use difference in needs of customers to implement prices based on appropriate advertising service provided.

### ***AUTOMOBILE INDUSTRY***

Your client: one of the big three auto makers in Australia has over the last few years under-performed its competitors as measured by its profitability. All three companies current car models are "badged" Japanese designed cars- i.e. they are products of joint ventures with one of the smaller Japanese auto makers. The Japanese market is much bigger than the Australian market. These cars are then sold both in Japan and Australia, the only difference being the place of

manufacture and the model names (i.e. badges). You have been asked to establish why your client has performed poorly relative to the competition.

### Approach

Explore possible reason for under-performance

- dissimilar product for under-performance?
- different market segments?
- poor sales/ distribution?
- inferior product?
- high general expenses (admin, marketing ...)?
- high cost of production?  
Given that the reason is the high cost of production, establish sources of high costs relative to the other auto makers, using:
- management accounts?
- published financial accounts?
- data from your American holding company?
- reverse engineering?

NONE OF THE ABOVE HELPS!

Don't panic: you know the solution of the problem has something to do with cost so

Determine what makes up cost, and the relative importance?

- labor costs?
- raw materials?
- manufacturing overhead?
- design?

Given that design costs are by far the most important component of costs, explore the relevance of the Japanese connection?

- are the terms of our joint venture different from our competitors?
- it turns out that the terms are all similar.
- what are the terms of the joint venture?
- share of design costs pro-rated between the parties based on number of cars sold respectively?
- does our car cost more to design than our competitors

Even though the answer to the last question is in the negative, the solution is at hand! To recap, your client sells a similar product, in similar amounts, to similar markets in Australia. Similar design costs (in absolute costs) were incurred by your Japanese partner. The key lies in your discovery that design costs are pro-rated, and a line in the description of the problem that mentioned that your client's partner is one of the smaller auto manufacturers in the huge Japanese market. Thus the



design cost defrayed by the Japanese partner's sales in Japan are relatively small, and your clients share thus is significantly larger.

## ***ALUMINUM INDUSTRY***

Your client is a leading manufacturer in the Aluminum industry. Because Aluminum is a commodity, relative cost position is the primary source of competitive advantage, and as part of a strategic review you have been asked to construct an industry cost curve (cost/kg of aluminum produces vs. industry supply), for various plant-to-market combinations. There are five major players in the industry, supplying six major geographic market segments. Your model should be flexible enough to enable various future scenarios to be run.

### Approach

How to estimate competitors cost management?

- financial accounts?
- direct estimates by client management?
- indirect estimates by client management?

How to simulate the market mechanism?

- determine what kind of market structure exists?
- oligopoly?
- perfect competition?

Given perfect competition, how to simulate?

- back of the envelope approach? (there are lots of combinations!)
- linear programming approach?

The use of linear programming allows considerable flexibility as well as provides insight into questions such as:

- is the industry currently efficiently configured?
- if a new plant is added to the industry, which market segment is most likely to be affected?
- what will the equilibrium price be in the future?

## ***INSURANCE COMPANY***

An insurance company pays its sales people a base salary of monthly wages and commission of 25% of new policy sales (2% of renewal). Which is the right way to pay the sales agents?

### Approach

This, in case you have not already surmised, is an organizational behavior scenario. Again, you must define what the "right way is". Assume some generic definition like "the manner by which agents are both motivated and equipped to accomplish their tasks in the interests of the organization..." is applicable. Having set up by definition, the results achieved by the above mentioned composed system are examined. The only factor determining how much the agents paid is their sales \$. In essence, they are motivated to issue a policy to anyone at as high a price as possible. They are not motivated to give consideration to the riskiness of the insured party. The absence of such a consideration (for example) would be detrimental to the company in the long run. A more efficient compensation structure might pay the agent on a sliding scale, depending on how risky (costly) an insured party proves to be.

### ***MEAT PACKING INDUSTRY***

Your client a US firm, owns a meat packing plant in Spain. Over the last few periods profits have steadily declined, despite the fact that sales are growing. You have been hired to figure out why.

### Approach

Porter's five forces are useful. By looking at the suppliers you will know that they are independent farmers with little power against your client. Therefore, the costs of your raw material cannot be the issue. In analyzing the internal rivalry you will discover the market is fairly regional, hence transportation costs and competition have not changed dramatically. Also, your production costs have remained stable. You will also discover that there has been no introduction of a substitute product. Since there are stable costs, and strong sales, the only other alternative is the price of your product. Investigate this avenue, and you will discover the buyer link. Your margins are being squeezed due to the increasing concentration and buying power of your customers.

### ***PIANOTUNERS***

How many piano tuners are there in Chicago?

### Approach

This is a brain teaser case. Its purpose is to test your logical and quick mathematical thinking. There is no right answer, the test is to see if you can come up with an answer based on the information you estimate.

You need to start by asking questions about the key factors. One way to solve it is to estimate the number of households in the Chicagoland area. The interviewer gave this piece of information at 2,000,000 households. Next, you can break the income of the households into four quarters (500,000 each). Make an estimate of 20% of highest income quarter have pianos, 10% of second quarter. 5% of third, and 0% of fourth.

Thus:

<u>Income quarter</u>	<u>Population</u>	<u>% w/ Pianos</u>	<u># of Pianos</u>
1st	500,000	20%	100,000
2nd	500,000	10%	50,000
3rd	500,000	5%	25,000
4th	500,000	0%	0

With 175,000 pianos to tune you can estimate how often these pianos are tuned. You can estimate top income quarter tunes their pianos once a year, second quarter once every three years, third quarter once every 10 years. This gives you  $(100,000 + 50,000/3 + 25,000/10) = 119,167$  or approximately 120,000.

Estimate a piano tuner an do four a day, 250 days a year, therefore:  $120000/250=480$  pianos a day to tune  $480/4 = 120$  pianos tuners needed.

How could you check this? Look in the yellow pages. Would all the piano turners be in there? You can guess half. By the way there are 46 piano tuners listed in the Chicago Yellow pages.

## ***CONSULTING FIRM STRATEGY***

### Case Overview

You are the newest member on the management committee of a well-known top-tier strategy management consulting firm. Eager to be accepted by your more senior peers, you volunteer to study the industry and propose a firm strategy for the 1990's, which you will present to the committee at its next meeting. As you leave the meeting you begin to realize the enormous task to which you've committed yourself.

1. How do you evaluate the consulting environment and determine likely future scenarios?
2. What information do you use in this process? How is this information obtained?
3. What do you believe is most likely to happen in the consulting industry given your present knowledge? How did you arrive at this conclusion?
4. What strategy do you propose to the management committee?

### Proposed Answer

This is one of the most difficult types of cases because the answers are completely unknown and will vary substantially depending upon the interviewee's knowledge of the industry. This is also an interesting case since the salience is likely to be high. As an interviewer you should feel free to add information on an as-needed basis. When information isn't available, ask the Interviewee to develop his or her own hypotheses. What matters here is the thinking process, not necessarily the answer.

1. A good place to begin is to evaluate the industry from a competitive analysis perspective, such as Porter's five forces. The following is an abbreviated analysis.

Rivalry (low to moderate): management consulting is fragmented, with many players each holding relatively small concentration of total market. Firms act as competitive monopolists, and differentiate themselves by specialty, type of customer (Fortune 100 versus Fortune 1000 companies), reputation (McKinsey versus accounting firms), and the resources they employ (top MBAs versus all MBAs). Many companies are relationship-driven with their customers, which limits competition and keeps prices high. Top tier firms in particular are able to have high price points.

Potential Entry (moderate): there are no great barriers to entry into consulting; however, few new consulting firms truly compete in the top tier. It's possible new firms would enter if the industry were earning positive economic profits and if they faced certain imitability (e.g. the ability to recreate what the top tier firms do).

Substitutes (moderate): companies can move the consulting process in-house by hiring exconsultants and bright MBAs.

Buyer Bargaining Power (moderate-high): In the last decade the consulting market has boomed, with supply generally following demand, which lowers buyer power. However, it is appropriate to question effect recession might have on industry. It's possible that demand may decrease as companies quit expanding, which would reduce demand, give buyers more bargaining power, and push prices lower.

Supplier Bargaining Power (low-moderate): Major suppliers are the intellectual capital employed by firm (e.g. experienced consultants who bring in sales and new consultants who provide analytics). Must pay market price or risk losing suppliers.

Other interesting points might explore the key success factors in the consulting industry. What sets top tier firms from middle ones? Do any firms have specific sustainable competitive advantages? How does the marketing mix differ among firms? Does your firm have any specific core competencies or advantages that set it apart from other companies?

Determining likely future scenarios is more ambiguous. There are at least several key point: what effect will a recession have on consulting firms? Will top tier firms suffer differently from others?

How will the mix of products demanded change (e.g. cost-cutting studies rather than market expansion studies)? Will the consulting market continue to expand or suffer a cutback? Or, will certain geographical areas expand (Pacific Rim, Eastern Europe) faster than others? Again, the thought process is more important here than actual answers.

2. Information gathering is a key reason companies use consultants. An interviewee should have a decent understanding of business information sources and how information is gathered.

Information can be broken into two groups: secondary and primary. Usually one begins with secondary material, specifically, a complete review of published literature (a "lit search") pertaining to the study (e.g. journal and newspaper articles, investment bank research, specialized studies, books, etc.). This often points towards other good sources (e.g. industry experts, associations, major competitors, government sources, etc.). Hypotheses are often created from the secondary information. Primary research is then used to focus in on the key issues. This research includes telephone interviews, in-person interviews, mailed questionnaires, focus groups, laboratory experiments, etc.

3. This answer will depend upon the material covered in the first two. Ask the questions: What trends are likely? What is a positive scenario? A negative one? If you had any information at your disposal, how could you get a better handle on this issue?
4. There is no right answer here, so the interviewee may balk. However, you can provide some structure. What are the key success factors to succeeding in the industry? Is there any way to achieve sustainable advantage which cannot be duplicated by your competitors? Can you use non-traditional methods to achieve competitive advantage, such as leveraging through technology? Given your firm's competitive strengths and core competencies, what is the best strategic route?

## ***SKYSCRAPER***

Your client is going to build a skyscraper, but is not sure how many stories to make it. How should he decide?

### Approach

**This is an economic supply/demand mind tease. Clearly you don't want to lose money on the deal. Rebuilding will house tenants, who will pay to reside there. The costs of building and maintaining the structure (both fixed and incremental by story) need to be compared to**

revenue generating capacity of the project. When marginal revenue equals marginal cost you stop adding stories.

## ***CORN FEED COMPANY***

### Question

A corn feed company has eight manufacturing plants located in the Midwest. These plants service the entire United States. Their plot in Ohio is in need of refurbishing. The company has four possible options:

1. Refurbish the existing plant
2. Build a larger plant at the current location
3. Build a similar size plant at a new location
4. Build a larger plant at a new location

Which is the best option for this plant?

### Answer

There are two issues to this decision. The plant size and the plant location should be considered separately.

#### 1. Size of Plant

First consideration is the demand for the product. Corn feed is a commodity product. Pricing on the product is dependent on current corn prices as opposed to the manufacturing process. There are four main competitors - our company is the second largest. All four competitors have similar manufacturing processes and similar cost structure. The proposed largest plant will not have economies of scale not currently present at the existing plant. The capacity utilization is 65% which is industry standard. The current customers buy from all four manufacturers in order to guarantee supply. Currently demand is being met and there are no alternative uses for corn feed.

#### 2. Location of Plant

Transportation cost and perishability are the main issues with location. The transportation cost for the corn stock (raw material) is much higher than the cost of transporting the actual feed. The corn is grown in the Ohio area and the feed is sold to the East Coast. The raw material is perishable whereas the corn feed can be stored for any length of time and is easier to transport. Cost analysis of the transportation cost of feed versus raw materials should be completed. Included in this analysis would be the % of spoilage for longer transportation of corn stock.

### Conclusion

The current plant is located close to the corn fields and this is the best location for the plant from the cost/benefit analysis.

### ***SELECTIVE BINDING CASE***

Your client is a major fashion magazine that has been offered by its printer a proprietary new process called selective binding which enables publishers to customize the pages included in readers' magazines based on demographic data known about the reader. For example, an ad in Better Homes & Gardens for lawn chemical services could be placed only in those issues going to subscribers who live in houses and not to those living in condominiums or apartments. In this way, advertisers can focus their communications on the demographic segment they are targeting. Would you advise your client to take advantage of this new process and offer selective binding to its advertisers?

#### Analysis

This is a pretty straightforward cost/benefit analysis. The Magazine would want to consider offering the service to its advertisers if it would be able to enhance its earnings by being able to charge its advertisers a premium for being able to more exactly and efficiently target the demographic segment they want to reach. Of course the increased revenue from the any premium must be able to offset any revenue lost as advertisers stopped targeting. The interviewee could start the analysis by obtaining the following information from the interviewer:

Q: What demographic breakdowns can be made in the magazine's database?

A: The only breakdown possible on your database is between subscribers who make under \$50,000 and those who make over \$50,000.

Q: What is total readership, the proportion of readers who are subscribers (as opposed to newsstand buyers), and the proportion of subscribers in each demographic category?

A: There are 1 million readers, 80% of who are subscribers. Twenty-five percent of subscribers make under \$50,000, 75% make over \$50,000. The same mix applies to the newsstand buyers according to readership audits.

Q: What proportion of the client's advertisers target each demographic category of readers?

A: Most advertisers are selling high-end fashion products, so 75% of them are targeting the high income group.

Q: What is the cost of the selective binding service and what does the magazine charge for its ads?

A: The service is being offered to your client free for 3 years since the printer wants to promote the service's use by getting a major magazine to start using it. The client charges \$50 per thousand per full-page ad (selective binding can only be offered on full-page ads). Therefore revenue associated with a single inserted page (front and back) in an issue is \$100 per thousand.

Q: What does the client's closest direct competitor for advertisers charge for ads and what is their readership like?

A: The client's closest direct competitor has 500,000 readers, 100% of whom are subscribers. Effectively, all of their readers make over \$50,000. They charge \$70 per thousand for their full one page ads.

Since the printing cost to the client of selective binding is zero, the client simply needs to evaluate cost on the basis of revenue per thousand gained or lost as their advertiser base uses the service to better target their ads to their desired segment. Presumably, instead of 100% of advertisers paying the full \$50/thousand per page, the 25% of advertisers targeting the lower income segment will choose to advertise only to the 25% of subscribers targeting the high income segment will choose to advertise only to the 25% of subscribers falling into that segment and the 75% of the advertisers targeting the high income segment will advertise only to the high income subscribers (75% of subscribers). Assume that all advertisers continue to advertise in 100% of the newsstand copies. The revenue effect of this change can be calculated by looking at the impact the change would have on average ad rate per thousand on subscription readership:

New ad revenue per page = Old ad revenue per page X [(% low income subscribers X % low income target advertisers) + (96 high income subscribers X % high Income advertisers)]

Thus

New ad revenue per page = \$50 X [(25% X 25%) + (75% X 75%)]  
at old rate \$31.25 < \$50

Now the question is, can ad rates per thousand on the selective binding portion of ads sold be increased sufficiently to increase average revenue per thousand over what it is today? To answer this question, your client's ad rates must be looked at from the perspective of their advertisers. If you consider the advertisers targeting the high income group, their alternative to advertising in your client's magazine is to put their ad dollars toward the 100% high-income readership competitor. The cost per thousand high-income readers with the competitor magazine is:



$$(\text{Page rate} \times \text{total readership}) / (\text{portion of readers who are high income}) = (\$70 \times 500,000) / 500,000 = \$70$$

Thus \$70 is the maximum price per thousand the client can charge its advertisers for selectively bound ads before the advertisers would switch to their competitor. Note that currently, the client is a cheaper buy for these high-income advertisers even though they are paying to reach readers they do not want:

$$(\$50 \times 1 \text{ million}) / 750,000 = \$66.67$$

If the client charged \$70/thousand for selectively bound ads, average revenue per thousand to the client would be:

$$\$70 \times [(255 \times 25\%) + (75\% \times 75\%)] = \$43.75$$

Since \$43.75 is less than the \$50 that advertisers are currently paying, the magazine should not offer advertisers the selective binding service.

Of course, there are other issues which interviewees might want to mention such as the possibility of price discriminating between high and low income advertisers, the potential for and cost of expanding the advertising base using selective binding as a selling tool, etc. However, it is important by the end of the interview to have reached a recommendation regarding the initial question posed by the interviewer. To mention these other possibilities and areas for further investigation is certainly worthwhile, but it is also important not to get too far off track or to complicate the issue so much that a final recommendation is never reached.

## ***VIDEO GAMES***

Purpose: To determine whether the candidate is able to structure a basic industry analysis.

### **BACKGROUND**

The CEO of a large diversified entertainment corporation has asked a McKinsey team to examine the operations of a subsidiary of his corporation that manufactures video games. Specifically, he needs to know if he should approve a \$200 million capital request for tripling the division's capacity.

### **QUESTION**

You are a member of the McKinsey team assigned to this project. Assume you and I are at the first team meeting. What are the critical issues we should plan to examine to determine if the industry is an attractive one for continued investment and why?

The following information may be given if requested by the candidates though you should focus on having the candidate identify issues, not obtain more information.

### Market share

Division is third largest manufacturer of hardware in the industry with 10 percent market share. Top two producers have 40 and 35 percent market share. Remainder is divided by small producers. Division sells to broad range of consumers.

### Sales

- Division sales have increased rapidly over last year from a relatively small base. Current estimate is annual sales of 500,000 units.
- Current estimate of industry hardware sales is 5,000,000 units annually. Industry growth has been strong though over last few months, sales growth has slowed.
- Divisions current sales price for the basic unit is \$45 per unit.
- Division remains less than 20 percent of parent company sales.
- Top two competitors also develop, manufacture and sell software/games though division sells only licensed, software.
- Industry growth of software continues to increase.

### Costs

- Division estimates current cost is \$30 fully loaded. Requested expansion should reduce the cost by 5 to 7 percent and triple production of the hardware units.
- Top two computers are estimated to have a 10 to 15 percent cost advantage currently.
- Main costs are assembly components and labor.

### Customers

- Division estimates much of initial target market (young families) has now purchased the videogame hardware.
- No large new user segments have been identified.

### Distribution

Primarily outlets of distribution are top end electronics stores.

### Profitability

Division currently exceeds corporate return requirements; however, margins have recently been falling.

### Product

Hardware standards have been established by the industry leaders.  
Product features constantly developed (e.g., new remote joy stick), to appeal to market segments.

### Note to the Interviewer

The primary issue of the case is to determine if the industry is attractive and, especially, if our client's position in that industry is sustainable. The candidate should identify issues which are necessary for assessing both the industry and our client's position, but should not be expected to solve the problem.

If the candidate begins to discuss too deeply a specific issue, before having covered the key issues overall: bring them back to discuss the Industry more broadly by asking "what other issues must be examined?"

If the candidate is discussing issues which seem irrelevant to the attractiveness of the industry, ask "how will that analysis help to assess the attractiveness of the industry or our client's position". Then, ask the candidate to identify other issues which must be examined.

### MINIMUM REQUIREMENTS

The following issues would need to be covered for the candidate to have done an acceptable job:

1. What is future market potential? Candidate needs to question the continuation of overall industry growth. She/he might ask about the saturation of markets, competitive products (home computers), and declining "per capita" usage.
2. What is the competitive outlook? Should at least recognize the need to examine competitive dynamics. Issue areas might included: concentration of market shares; control of retail channels; and R&D capabilities (rate of new product introductions, etc.).
3. What will be the price/volume relationship in the future? Issues of prices need to be considered.

### BETTER/OUTSTANDING ANSWERS

No bounds on creativity, but better answers would address:

#### Market Potential

- Recognize that there is a relationship between market penetration and growth in new users which,

when combined, yields an industry volume estimate.

- Address the shifting mix of product purchases, in this case from hardware (player unit) to software (video cassettes).
- Seek to look at buyer behavior in key buyer segments, i.e., "fad" potential of product.

### Software

- Recognize technology standards are set by industry leaders. In this situation, the division as a secondary player will have to follow these standards.
- Recognize that different distribution needs may exist for different products (In this case, hardware versus software).
- Discuss the effect capacity additions can have on overall industry price/volume relationships and on industry price levels.

### Company's Ability to Compete

- Should ask what the capacity expansion is designed to do.
- Explore the cost position of the client division relative to that of other competitors.
- Seek to understand reason for poor profit performance of division

## ***CONSULTING FIRM (2)***

Q: Your client is the treasurer in a significantly privately held corporation. She is in charge of managing a portfolio of investments in addition to her treasury responsibilities. Recently, she has asked your advice about the purchase of a large position in company 456, whose stock is listed on the NYSE.

Company 456 is currently selling for \$22 per share. The treasurer's investment analyst predicts that the stock will pay a dividend of \$1.25 for the foreseeable future. Short-term treasury bills are yielding 7 percent, and long-term t-bills are yielding 8 percent. The treasurer is contemplating the purchase of 5000 shares of company 456 and wants your help in determining a fair market price.

How would you go about determining a fair price for company 456?

Answer.: Consulting Firm (2): \$22 per share

## ***STEAM BOILER HOSES***

Profit Improvement

PURPOSE To determine whether the candidate is capable and comfortable with constructing a logical framework which will expose opportunities for profit improvement.

### BACKGROUND

McKinsey was asked by a diversified manufacturing client to help turn around the steam boiler hose division. This boiler hose division provides boiler hoses for both external customers and the client's boiler division. Background information on the client and industry includes:

- Boiler hoses are sold both with original equipment and as replacements.
- There has been increasing price pressure in the industry.
- The client is third of eight industry participants.

The following information is also available in response to questions asked by the candidate: Last year's P&L showed (as a percent of sales):

Raw Material	70%
Labor	20%
Distributed overhead	10%
SG&A	<u>15%</u>
Profit	(15%)

The raw material is a commodity petrochemical.

At least two of the other companies in the industry are making moderate profits.

### QUESTION

How would you structure an analysis aimed at restoring profitability? Where do you expect to be able to save costs?

### MINIMUM REQUIREMENTS

The candidate should avoid getting bogged down in the following areas:

1. Drop the product line (apparently not possible because hoses are necessary for boiler sales).
2. Raw material prices (they are the same as everyone else's)
3. Allocation of overhead (no cash savings and provides little potential)
4. SG&A (standard industry fee paid for independent installers).

### BETTER ANSWERS

Better answers will move beyond the previous answers to consider:

1. Scale economies (client is big enough to achieve scale production).
2. Production technology (client has a modern plant)
3. Labor costs (wages rates and productivity are average for the Industry)
4. Raw material purchasing practices (material are purchased through long term contracts with prices based on the spot market minus a discount).

### OUTSTANDING ANSWERS

The best answers, following a logical progression, should stumble upon the actual answer: the product has been over-designed, requiring excess raw material. The answer should the following organizational implications:

1. How is our product engineering operation wired into the marketplace? (there is little contact between the engineering and marketing/sales organizations)
2. What kind of feedback are we receiving form our sales force? (customers are delighted with our hoses, but require all the product features)
3. Are there other areas in the company where similar problems exist?

### ***POTS & PANS***

A manufacturing company based in Charleston, SC makes high quality pots and pans which are sold throughout the U.S. in specialty and department stores. You are called in because they feel that the \$ 1 million that they spent on distribution last year was way too high. How can you show your client money that he can save money.

#### Approach

Distribution is basically a trade-off between cost and service level. The higher the service level, the higher the cost (more inventory pools, warehouses and shipments). So you need to ask where the

inventory is being held. It turns out that stores, since they sell so few of these pots and pans, hold no inventory and thus require next-day replenishment after a sale. The next thing you need to know is where the warehouses are located, since the closer they are to the stores the cheaper the distribution costs. Your client has three warehouses - one in Charleston, one in Philadelphia and one in LA - from which they cover the whole country.

A quick way to solve this case is to realize that if stores require next day service from these three warehouses, the only way they can do this is by shipping overnight at a premium rate (UPS - no wonder they're spending so much). You can save them a bunch of money by closing down Philadelphia and LA and shipping everything from the plant in Charleston by UPS (negotiate a volume rate). This can be confirmed by asking for the annual sales which turns out to be 10,000 units. When you divide this into the \$1 million distribution cost you discover that they are pay \$100 to deliver a pan to the store. Beat this figure and you've earned your exorbitant fee.

## ***MERGER CANDIDATE IN CHEMICAL INDUSTRY***

TYPE Industry Analysis

PURPOSE To determine whether the candidate is able to structure a basic industry analysis.

### BACKGROUND

One major chemical producer has retained McKinsey to evaluate another major participant in the industry. Both companies are bulk commodity chemical producers. We have been asked to begin our work by analyzing the future prospects of the target company's major product line, a bulk chemical used in the production of plastics. Essential facts included:

Production of this chemical has slowly declined over the last five years  
Prices have declined rapidly

There are 7 to 8 major producers; the largest producer has a 30 percent share; number two has 20 percent; our target company has 15 percent; the rest is divided among other competitors

The two largest competitors earn a small return; target company is probably at break-even; rest are operating at break-even or loss

The largest competitor has just announced construction plans for a major new plant.

### QUESTION

How would you structure an analysis of the target company's future prospects in this product line?

### MINIMUM REQUIREMENTS

The candidate should, at a minimum, address the following issues:

1. What markets use this chemical, and what has been the nature of growth in these markets? (End-use markets are largely automotive-related.)
2. How much overall capacity exists now? (Far too much.)
3. What has been relative capacity utilization of competitors in the industry? (60 to 70 percent for last 3 years).
4. What are relative cost positions of competitors? (related to size/efficiency age of plant; target company has reasonably "good" position.)

### BETTER ANSWERS

Better answers will move beyond the previous answers to consider:

1. How rational is pricing? (Prone to self-destructive cuts to gain temporary share points.)
2. Are there niche or value-added uses for chemical? (Not really.)
3. Does the chemical have a major by-product or is it a by-product? (Not of significance.)
4. How often have companies entered/exited, and how expensive is entry/exit? (Entry expensive; exit cheap for most because older plants are fully depreciated.)
5. How important is this product line to each of the competitors? (Most producers are diversified.)

### OUTSTANDING ANSWERS

The best answers could address:

1. Reasons for announced capacity expansion. (It is a bluff to try and get smaller competitors to shut down.)
2. Is regulation important? (Yes: all competitors have installed pollution control equipment.)
3. What is nature of operational improvements that target company could make? (lots.)
4. How is product sold and distributed? (Economies of scale in marketing and transport are critical.) Is there synergy between our client and target? (not really.)

### ***DIAPERS***

You have been retained jointly by Pampers and a federal commission on waste management to estimate the volume percentage of disposable diapers in the total US household garbage.

#### Approach

Wet your pants/skirts. (No, wait until after the interview for that). This is strictly a mathematical, number crunching exercise. You need a numerator (diapers) and a denominator (total US household garbage). Let's assume this will be done in pounds. For diapers you could take the total \$ sales of disposable diapers and divide by the average price per total unit (box: etc.). Multiply this number by the average weight per unit, yielding the estimate of total diaper weight (numerator).



Figures on garbage tonnage (denominator) are probably available in some obscure federal report.

### ***MACHINE-LOADING CASE***

TYPE Macroeconomic

PURPOSE To determine whether the candidate can dissect a general economic problem

#### BACKGROUND

A client produces a range of synthetic materials in varying widths and lengths. Each material is used for packaging but differs in physical properties in terms of costs, weight, flexibility, and general performance. Each material can be coated with any one of four or five types of chemical coating which make the materials more or less impervious to heat, light, water, vapor, etc.

All of the machines on which these materials are made are housed in one enormous factory location. Each machine is capable of running any one of the various materials and/or coating combinations. The client does not wish to invest in additional equipment at this time.

The client has asked us what combination of products he should run to increase his plant's profitability. How would you go about determining the optimal mix of potential products on these machines?

If asked, you may provide the following information.

#### MARKET SHARE

The industry is highly fragmented. A variety of small manufacturers supply similar products to provide a range of customers. Our client estimates he has less than 1 percent of the total market. No competitor has more than 3 percent of the total market

#### COST

Each product has a different cost to manufacture dependent on materials used and the manufacturing process.

#### PRICE

Each product has a different price dependent on both the client's cost to manufacture as well as the market for the product.

#### Products

Our client's machinery can produce hundreds of different products. Some are unique to meet specific customer requirements while others are used by a wide variety of customer.

### Customers

Our client's customers are primarily consumers or industrial product manufacturers who use the synthetic materials in packaging their own products.

### Suppliers

Our client uses primarily commodity products in the manufacturing process. All can be obtained from a number of sources.

### NOTE TO THE INTERVIEWER

The primary issue of the case is to determine that the profit of the plant will be maximized when the most profitable product mix is produced and sold. The candidate should cover differences for each product in the fixed and variable manufacturing and selling cost and prices, as those must be determined to understand each product's profitability. The interviewee should also address the market demand for each product (to ensure what is produced can be sold at an acceptable price).

If the candidate is discussing issues which are not relevant to the profitability of each product line or to maximizing the profitability of the plant, repeat the question and ask how the issue being discussed will lead to a solution for the client.

### MINIMUM REQUIREMENTS

Candidate should, at a minimum, address the following issues:

1. Are there market limitations to the potential production of any one material?
2. Is there competition for these products?
3. Are there differences in costs in the manufacturing of these materials? For example, do some coatings cost more than others? Do some materials have inherent cost differences?
4. Is there flexibility in pricing of these products?

Additional and observations should include:

1. Are there differences in setup time and cost for various materials or coatings?
2. Do these materials move at different speeds through the machines?
3. Are the machines truly interchangeable or are some better suited to one product or another?
4. Is there unlimited market demand for these products?
5. Are there technological displacement or replacement products on the horizon?

## OUTSTANDING ANSWERS

The best candidates will formulate a profit maximization algorithm. The best algorithm is to maximize the profit contribution per machine hour.

1. Profit contribution is (unit volume) times (unit price minus variable cost).
2. Machine-hour capacity is a surrogate for fixed costs per unit of volume.  
Fixed costs take into account depreciation and standby costs as well as those costs that are independent of the variable costs per pound or ton produced.

An outstanding answer must include recognition of the asset costs and capital implied by that, as well as the income or profit contribution. Also, the potential substantial differences in volume produced per machine-hour and/or the price obtainable in the market demand and competitive actions.

## ***SUPER REGIONAL BANK***

You have recently been assigned to a project with one of the nation's super regional banks. The bank is one of the top 10 largest retail banks in the country. Like most banks in its class it has branches in 8 geographically contiguous states.

Your client has recently concluded that the old "local branch" way of business is no longer viable. Typically, this bank has canvassed its territory with small free-standing branches; however, the new age of electronic banking and commerce is changing all of that.

They are considering replacing many branches with Calling Centers. Calling Centers offer both live and phone automated services that may be accessed by phone. The new Centers would offer virtually all of the services currently offered through local branches plus some additional things.

The question to you is: how would you go about setting up the engagement to determine the viability of this new concept? Specifically, what kinds of things would you investigate? and what hypothesis would you form?

Possible Solution:

This is a very open broad-brushed case. There certainly is no right answer; however this type of case occurs frequently. The following is a guideline of some things you should probably consider:

Market analysis: What kinds of customers would be attracted to this no service? What kinds of customers would be turned off? (Hypothesis: younger people would be heavier users and more attracted than older) Of the people attracted to this new service, how profitable are they? How profitable are the people who are turned off by this service? (Hypothesis: older people have more money and thus are more profitable)

Revenue: What types of new services could be added to increase revenues? Automatic bill payment, Fund transfer, etc.

Cost Savings: How much would it cost to establish a Calling Center and what are the risks involved? Do we have the expertise in-house to do this? How many branches could we close? Can we cut down on traffic to existing branches - thus requiring less tellers?

Summary: It probably is best setup as a cost benefit analysis. The number of new customers times the expected revenue from them plus the additional revenue generated by potential new services plus the cost savings must outweigh the forgone revenue generated by the customers you end up driving away.

## ***CIGAR BAR***

I was sitting in one of Chicago's new specialty "Cigar Bars" around the end of August with a friend. It was a Saturday night and the weather was fair. While enjoying one of the bar's finest stogies and sipping a cognac, I asked my friend how much he thought the bar was worth.

On the back of an envelope, how would you go about determining the value of this bar?

### Issues to consider

We arrived at the bar around 8:30pm. There appeared to be 30 customers already there. By 11pm the place had at least 70 customers. I would estimate the maximum capacity to be close to 100.

The bar sells two things: liquor and cigars. The average cost of a cigar is \$8 and the average cost of a drink is \$7.

There was one bar tender, a waiter and a waitresses. All three were there the entire evening.

The bar is located on one of Chicago's trendier streets with a lot of foot traffic.

The bar is open Tuesday thru Sunday from 5 pm until 2 am.

Possible Solution:

This is a straight forward valuation. To perform a valuation you must estimate the cash flows from the business and discount them back using an appropriate weighted average cost of capital (WACC).

Revenues: One way to project revenues is to estimate the number of customers per day or per week and multiply that by the average expenditure of each customer. Keep in mind that Friday's and Saturday's are typically busier than other days and that people tend to be out more during the Summer than in the Winter.

Costs: There are two components to costs: fixed costs and variable costs. Under fixed costs you might consider: rent, general maintenance, management, insurance, liquor license, and possibly employees. The only real variable cost is the cost of goods sold.

Valuation: Subtract the costs from the revenues and adjust for taxes. You now have the annual cash flows generated from the bar. How long do you anticipate this bar being around? Cigar bars are a trend. In any case pick some number for the expected life (4-5 years). The discount rate should be a rate representative of WACC's of similar businesses with the same risk. Perhaps 20%. This gives you a value of:

$$\text{Value} = CF_1/1.2 + CF_2/(1.2)^2 + \dots + C_f_n/(1.2)^n$$

***NEW MAGAZINE***

Your client is the CEO of a publishing company that produces a line of educational magazines as well as a line of women's magazines. Both businesses are profitable but are not growing quickly. He want's to start a third monthly magazine in the US targeted at 30-50 year old men (eg. GQ Magazine) His stated goal is to generate circulation revenues of \$10 million in the first year. He has hired you to figure out whether this is possible.

Possible Solution:

This is an estimation case. The key here is to clearly define your assumptions, the specific answer is not important as long as you are making reasonable assumptions. For example

### Target Customers

The total US population is approximately 240 million. Based on a normal distribution with the average life span of 80 years, approximately 2/3 of the population falls between 30-50 or about 160 million people. Approximately 1/2 are male or 80 million.

Of the 80 million 30-50 year old men in the country, assume that at least 1/2 would read a magazine or 40 million. Given the wide range of magazines on the market assume that only 10% of magazine readers would want to read a men's journal or 4 million target customers.

### Share

As a new magazine assume that you can generate a 5% share of the men's magazine market in year one or 240,000 customers.

### Revenues

Based on what other magazines sell for (\$2.50-\$5.00) assume a cover price. Lets say \$3/magazine at the news stand and \$2/magazine for a subscription. Now make some assumptions on how many customers will buy on the news stand versus subscription, lets say 50% subscribe (120,000) and 50% buy at the news stand (120,000). This comes out to \$360,000 + \$240,000 or \$600,000. Finally, this is a monthly magazine. For simplicity assume that all target customers buy a magazine every month. This would generate total revenues of \$600,000 X 12 or \$7.2 million.

In this case given the CEO's stated goal of \$10 million in circulation revenues, it would not make sense to launch the magazine.

## ***CASTOR MANUFACTURER***

Q: Your client manufactures castors (the wheels found on the bottom of office chairs) out of a plant in West Germany and One in East Germany. Over the past two years the company's profits have declined by 20% while revenues have been relatively flat. You have been asked to find out what is happening and suggest a course of action to reverse these trends.

### Information to be divulged slowly:

The company operates in three divisions: 50% of sales are to hospital bed manufacturers, 25% are to mop bucket manufacturers, and 25% are to chair manufacturers. The hospital bed and mop bucket divisions are located in the West German manufacturing operation, the hospital bed division is located in the East German manufacturing operation.

Breaking out each division as a separate profit center shows that revenues are up 10% for both mop bucket and chair divisions but down 10% for the hospital bed division. Similarly, profits are down 10% for both the mop bucket and chair divisions but are down 30% for the hospital bed division.

Further investigation shows that labor is the major component of cost in manufacturing castors. In the past two years, wages in the formerly state regulated East Germany have skyrocketed. This is what is driving most of the increased costs. Similarly, the demand for hospital beds (and thus castors) in East Germany has declined as they have become more efficient at managing their health care system.

A:

This is a typical revenue/cost case. We have already been told that revenues are flat which should be a clue to explore the cost side of the income statement. In this case it helps to work logically through both the fixed and variable costs to see if there are any major items. Sometimes the interviewer will provide you with an income statement that will break out the major cost components by percentage.

Case Type: Industry Analysis; Profitability Analysis

## ***LOGGING COMPANY***

Background:

You are hired by a Canadian logging company to analyze its current operations and provide advice on future operations. The logging industry in Canada is regulated by the government. Land is leased to individual companies by the government. The company is making a lot of money and is unsure why. You have been asked to determine: (1) Why they are making money? (2) Is it sustainable? (3) Is it replicable?

Additional Details:

- **Products:** The company produces lumber boards of two sizes 2"x4" and 2"x8". Lumber is a commodity product and as such the company is a price-taker in the market.
- **Leases:** The government leases tracts of land at a annual price that is set to allow for a 12% profit margin for the entire logging industry. Thus, all tracts of land have the same lease price per acre. The leases last for 99 years and the original lessee has the right of first renewal on the lease.
- **Profit Structure:** The profit equation for the lumber industry can be written as: Profit per ft<sup>3</sup> = Revenue per ft<sup>3</sup> - Non-land cost per ft<sup>3</sup> - Lease Cost per ft<sup>3</sup>

- Revenues: There is a revenue advantage for the company due to its product mix. Margins are higher on 2"x8" boards than on 2"x4" boards. The company's product mix is made up of a greater percentage of 2"x8" boards than the "typical" logging company percentage.
- Non-land Costs: The company has a 5% cost advantage in its "tree-to-dock" production process. There is no significant difference between the distribution costs among the industry firms.
- Production Process: The cost advantage is not generated by a better logging process (i.e. better equipment, more skilled laborers) but instead exists because of the exceptional quality of the trees on the particular piece of land that the company leases. The mineral content of the land leads to faster growth of healthier trees which improves both yield and turnover. Healthier trees are straighter and easier to cut, thus reducing costs in each phase of the logging process. These healthier, taller, straighter trees yield more 2"x8" board-feet than is typical and leads to the advantaged product mix. There are no significant economies of scale to the process.

#### Key Points

- The company leases land with a significantly higher quality of trees. This leads to a revenue advantage because more 2"x8" board-feet can be produced per acre of land. Additionally, there is a cost advantage because the higher quality inputs make the logging process easier and increase yields and turnover.
- Since the leases are for 99 years and renewable, the current situation seems sustainable.
- Since it is unlikely that another piece of land similar to this one exists or that another firm will give up advantaged land, the situation is not replicable.

### ***INFORMATION SERVICES COMPANY***

#### Background:

You are hired by a library information services company that provides a computerized article search product on CD-ROM. The product allows users in a library to locate articles by keyword search. The company currently has a weak market share of only 10% of all installed units. The company wants to understand (1) why they have so small a market share, (2) what could be done to improve the situation, and (3) where it should focus its resources.

#### Additional Details:

- Competition: There is a single major competitor which has 50% market share. The client and two other competitors each have 10%; and the remainder is divided among many competitors.
- Market Segmentation: The following table outlines many of the details of the market segmentation and client product data.

Type of Library	Number of Libraries	Client Market Share	Major Competitor Market Share	Competitive Features



Academic	5000	20%	60%	Search Quality, Content Content, Ease of Use Content, Ease of Use Price, Ease of Use
• Research	500	80%	10%	
• Other	4500	13%	66%	
Public	10000	10%	40%	
Secondary Schools	20000	~0%	10%	

- Product: The client sells a CD-ROM based product which is used on a dedicated PC in a library. The product has different versions that are upgraded each year. Each version is marketed to a specific library segment. Libraries are interested in matching the article search to hardboard volumes available within the library. The client's product is considered to have the highest quality of article search.
- Pricing: The client sells its product at a 25% discount to the major competitor and has the lowest prices in the industry. The pricing and profit schedule for each version are shown below.

Library	Client Price	Client Profit per Unit	Major Competitor Price
Academic	\$2000	>\$500	\$2667
Public	\$1500	\$500	\$2000
Secondary School	\$1000	\$100	\$1333

- Competitive Features: Competition within the industry focuses on four dimensions: (1) Search Quality, (2) Content, (3) Ease of Use, and (4) Price. The table above indicates the relative preference for these features for each market segment. There is a trade-off between ease of use and search quality. A better search requires a more skilled approach to keyword usage and often makes the search more difficult. The client's product is considered to have the highest quality search among the competitors.
- Production: the product is created by programmers who seek to match the product to library volumes. Since the principal input is labor, the type of CD-ROM created can be altered relatively easily.

#### Key Points

- The client's product does not match the needs of the large segments of the market (i.e. the client's high quality of search only appeals to a small segment of the total market) ==> weak market share
- The client should reallocate its resources to create products in the larger market segments -- products that emphasize content and ease of use over search quality.

The most profitable segment can be identified by using current client prices which should allow it to gain market share (due to the 25% discount to the major competitor) and calculating the maximum market profit. Academic = 5000 x 500 = \$2.5M; Public = 10000 x 500 = \$5.0M; Secondary = 20000 x 100 = \$2.0M. Therefore, if we realign our product to emphasize ease of use and content, the potential profit is 4500 x 500 + 10000 x 500 = 7.25M ( minimum since profit in academic segment is > \$500 per unit).

## ***PIPELINE COMPANY***

Case Type: Industry Analysis

Background:

You are hired by a large pipeline company to evaluate the current and future potential of the pipeline industry. The pipeline industry sprang up as transportation costs for mineral extraction companies began to escalate. There is currently 20,000 miles of pipeline throughout the U.S. What information would you want to know about the pipeline industry that could help you plot a strategy for a pipeline company?

Additional Details:

- **Industry Structure:** There are many pipeline competitors. Pipeline can be characterized as either common carrier pipelines (~70% of all pipeline miles) which are regulated by the government and proprietary pipelines (~30% of all pipeline miles) which are wholly located on the private property of a firm (e.g. a pipeline from a port station to a near-shore refinery). There are many suppliers of common carrier pipelines. The second group (proprietary) is not regulated by the government.
- **Products:** The pipelines carry liquid and gaseous materials -- crude oil, natural gas, methane gas, liquid nitrogen, refined oil products (gasoline), and chemicals.
- **Cost Structure:** There are exceptionally high fixed costs involved in a pipeline. The variable costs are primarily the electricity to power pumping stations along the pipeline. There are different cost structures depending on the type of product being moved. Pumping crude oil along the pipeline can cost as much as \$2M/month in electricity for a station. Gaseous products require considerably less energy to move.
- **Market Conditions:** U.S. proven reserves are diminishing and foreign imports are increasing. It is expected that for the next 5-10 years demand will be steady.

Key Points: (classic Porter analysis could be used -- This is rarely the case!!!)

- *Threat of Entry* is low because ...
  - there are high fixed costs (high initial investment)
  - pipeline services are essentially a commodity product (commodity markets are slow growth and unattractive)
- *Industry Rivalry* is strong because ...
  - there are many competitors and switching costs are low
  - industry growth is expected to be slow (i.e. market share is important)
  - many competitors use pipeline for in-house uses and only carry other products if capacity is underutilized
  - there are very high exit barriers (i.e. there is a strategic relationship between refining and piping)
- *Substitute Products* are many as witnessed ...
  - by proliferation of tanker cars and tractor trailer rigs for liquid and gaseous materials

- *Power of Suppliers* is not a significant factor.
- Power of Buyers* is not a significant factor because many pipelines are regulated and there are many buyers
- Other considerations:
    - Product Mix: The margins on gaseous products is higher than heavy unrefined products.
    - Government Regulation: Margins are greatly affected by common carrier status. Any future environmental regulations will cut even deeper into margins.
    - Pipeline as a storage medium: For many firms the product in a pipeline can be a significant portion of its inventory and the volume in line must be considered in production. The classic question: Is it better to make product and sell it now at low prices or wait for prices to increase (e.g. crude oil prices)? A large pipeline could be a temporary storage facility.
    - Operations: Maximizing profit means understanding the parameters of pumping -- costs of pumping at less than full capacity; layout of pipeline and pumping stations; products which can share the same pipeline; construction of parallel pipelines.
    - Market Differences: The market for crude oil is very different than the market for specialty chemicals or natural gas. the pipeline manager must aware of these rapidly changing commodity markets to maximize his profit
    -

## ***AUTO MANUFACTURER***

Background:

Your team is hired by a large U.S. automobile manufacturer (GM). They are interested in your evaluation of their \$10B after-market parts business. This business can be segmented into two sets of buyers: dealers authorized to sell GM parts (\$8B) and non-dealer merchandisers (\$2B). This second group can be subdivided into mass merchandisers and “service” providers. Mass merchandisers are of two types -- those which specialize in auto parts (e.g. Auto Zone) and those which sell diverse products including auto parts (e.g. Sears). “Service” providers include Goodyear or Western Auto. GM would like for you to answer two questions: (1) Is there an opportunity to expand this part of the business? (2) How would they go about doing it if they chose to expand?

Additional Details:

- Company Economics: There are tremendous fixed costs in the auto business (including labor). All of GM’s parts manufacturing facilities are fully depreciated and they currently have excess capacity.
- Competitors: While Ford and Chrysler make parts for their own cars, they are not nearly as integrated as GM and tend to focus in specific parts categories. There are hundreds of small parts manufacturers which tend to focus on commodity-like auto parts (e.g. oil filters).
- Products: GM produces a full spectrum of parts classified as either *platform-specific* or *universal*.

	Platform-specific Parts	Universal Parts
Types of Parts	Body panels, brakes, transmissions,	Spark plugs, filters, hoses,

	engines	batteries
Market Characteristics	Sold through dealers under warranty; high margins/low volume	Sold through many outlets; high turnover; strong competition; slim margins/very high volume
GM Sales	\$8B	\$2B

- Growth Rates: The table below provides the basic facts about each market segment's growth rate.

Market Segment	Overall Market Growth Rate	Total Market Size
Dealer-authorized	-35% per annum	\$40B
Non-dealer		
• Mass merchandisers	+65% per annum	\$70B
• Service providers	+15% per annum	\$30B

Key Points: (Porter Five Forces analysis)

- Threat of Entry is minimal for a broad category because the fixed costs are very high. However, a manufacturer could go after a niche play if it were to develop an advantaged cost structure or superior product. Switching costs among consumers is very low.
- Industry Rivalry is important for the mass merchandiser category because margins are slim (meaning price wars are more prevalent). Brand names (e.g. Fram, AC Delco, AutoLite) are important to many consumers.
- Substitute Products are relevant only in the sense that there are many competing products and future technologies such as electric cars could eliminate the need for many types of parts.
- Power of Suppliers is not a significant factor because inputs are commodity raw metal and rubber.
- Power of Buyers is important since there are few mass merchandisers such as Sears or Kmart and they demand full range of products and tremendous volume discounts.

GM's Position: GM may have a cost advantage due to its fully depreciated plants and excess capacity in a fixed-cost environment. Thus its variable costs must be below sales revenue. Also, its brand names are respected and are valuable to merchandisers in maintaining margins. GM's ability to produce a full-range of products is also an advantage. These advantages combined with the high growth rates for the non-dealer merchandisers should motivate GM to expand its business in this segment.. GM should use its cost advantage, brand names, and full range of products to go after the most lucrative market -- the mass merchandisers.

## ***DELI MEAT PRODUCER***

Background:

You have been hired by a producer of deli meats to investigate the cause of its recent decline in market share. The client would like an action plan for resolving the cause of this decrease.

#### Details:

- The Company:
  - Product: The firm produces plastic-wrapped packages of sliced deli meats at all price points (generic, midrange, and premium). The market share loss is primarily in the premium category. The deli meats carry a well-known brand label.
  - Price: Products in the premium category carry a higher price and have slightly higher margins. Although price decreases will garner market share, the competitors have maintained prices during the recent loss in market share.
  - Place (Distribution): The product is sold in grocery stores and delis. Company investigation has shown that grocers have maintained the same amount of shelf facings and space for your product (so the decrease in share was not caused by changes in display or incentives provided to the grocers by competitors).
  - Promotion: Advertising and marketing efforts have been steady during this period of decline and there has been no noticeable change in the competition's efforts.
- The Competition: There are three other competitors in the deli meat industry. Each of these competitors has about 20% of the market share; the client has 40% of the market share. Overall the market (generic, midrange and premium) is growing. The competition uses the same channels to sell its products.
- The Customer: Although the customer buying premium deli meats has not changed, a survey of the customers indicated a variability in the quality of the product produced by the client. Sometimes the product was better than the competition; sometimes not. This was causing customers to change to the competition.

#### Solution:

- Production Process: The client receives chunk meat in bins which meet a certain average quality measurement. Meat is rated on a scale of 1 to 100 (100 being best). The client is in a long-term contract with a supplier for bins at three quality ratings: 40, 70, and 90. Individual chunks within a bin may vary from this average. The premium deli meats are made from a mix of the three bins with the majority coming from the 90-rated bin. Meat in the 90-rated bin ranges from 80-95 while meat in the 70-rated bin ranges from 55-80. The variability in the quality of the premium product is being driven by the variability within a 90-rated bin.
- To reduce the variability, the client could (1) negotiate with the supplier to narrow the range within a bin or (2) sort the meat within the 90-rated bin at his own facility. The impact of the first proposal will depend on the relationship with the supplier. That is, is the client a major buyer; how much longer is the contract set to run.? The second option will add cost to the production process and reduce margins.