Tuck Consulting Club

1999 - 2000 Guide to Case Interviews

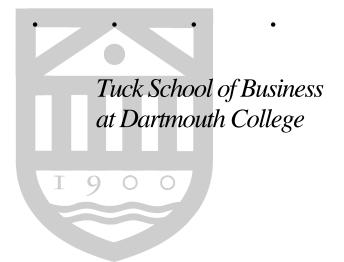


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A Note From The Editors...

"When it comes to case interviews, the cliché 'practice makes perfect' works."

This book is a compilation of cases which Tuck students and alumni have received during interviews. The best way to use this book to prepare for interviews is to partner up with other students and practice the cases with each other. Suggested frameworks and analyses follow the case questions. While these suggestions should help give you some direction, do not limit your analyses to the frameworks recommended with each case. There is not usually a "right" way to analyze the case, nor is there a "right" answer. Often, interviewers are more interested in how you structure your thinking than in what "answer" you come up with. Use the frameworks you have learned in conjunction with your own personal, creative insights.

Great thanks to everyone who has contributed to this guide. Special thanks to the following individuals for their work on the guide over the years:

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We in the Consulting Club sincerely hope that this guide continues to serve well the Tuck community.

Allen Gove T'00, Parag Desai T'00 & Mary Beth Keiller T'00 1999 Editors

Some Thoughts On Case Interviews...

Professor Phil Anderson

A Note On Frameworks

By the time you begin your case interviews, I would like you to feel very confident that you can listen to a description of a situation, and rapidly put together a systematic, logical way of analyzing it. I want you to be able to say to yourself, "I've practiced this for several weeks; I know I can do this."

A framework can guide your intelligent questioning of the interviewer, lets you lay out your analysis in a coherent manner, and lets you apply your experience to the case by pointing out how the case is an instance of a more general problem to which your experience applies.

I cannot overemphasize that this is a skill developed through practice. There is no substitute for confronting a case, building your own systematic way to analyze it, then improving your model through discussions with others. Never be afraid to expose your model to others for fear that it is crude, incomplete, or wrong. All frameworks have holes in them. That's the whole point of practicing—to learn how to improve your initial models so that by December or January, you will have a richer and more sophisticated set of organizing schemas to draw upon.

And they will be original. How many times do you think the average interviewer has heard someone apply a five forces model or a 2x2 matrix to the same problem?

What is a framework?

The world is confusing, and to understand cause-effect relationships, we have to distill most problems to their essence. That's what theory does, highlight the most important aspects of a situation that account for most of the variance between specific instances of the situation.

You might call these important aspects "drivers" or "critical success factors" or "independent variables." If our model of the world is almost as complex as the world itself, it is not very useful—models help us understand and predict only when they strip a problem down to something we can grasp, a small set of key driving forces that we can focus on while ignoring other things that have far less explanatory power. If you give a manager a checklist of 37 things to focus on, s/he simply cannot grasp the essence of the problem. If you can highlight a much smaller number of drivers and articulate the relationships among them, s/he not only can grasp the problem but can apply those insights to other, similar problems.

Frameworks—or call them models, analytical schemas, analytical lenses, conceptual maps, etc. —show the key cause and effect relationships that you think a person should focus on to approach a given situation. They apply to a general class of problems; each case is a specific instance of a problem class. The acid test of whether a framework is useful is that it both

explains and predicts. It helps you understand what is going on in this case and draw appropriate analogies to other cases that exemplify the same problem class. It helps you predict what will happen if the client takes a given course of action, and test your prediction by seeing how other cases in the same problem class turn out. These predictions are hypotheses—they are insights into what would follow if the world worked the way your model suggests.

I cannot overemphasize that this is a skill developed through practice.

You should not try to follow a recipe when constructing frameworks. There are many, many ways to organize an approach to a problem, identify the key drivers, and articulate the relationships among them. However, some of these organizing structures are weak. I will give you a few suggestions here purely to stimulate your thinking, not because they represent the "best" frameworks.

Checklists. The weakest framework is the checklist. Simply telling managers, "Here are some things to think about," does not help much. A checklist does extract some elements from the problem for managers to focus on, but it does not provide much insight into the nature of the problem, nor does it show the relationship among the elements.

SWOT Analyses. One step up from a checklist, and still a weak framework in my humble view, is a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. This is basically a checklist supplemented by "pros and cons." Again, it does not provide a lot of insight into the cause-effect relationships in the problem, and it does not show a relationship among those elements.

The Familiar Frameworks. Let me pause for a moment here and suggest that I do not think much of the "7S" framework McKinsey used (that is in the heart of In Search of Excellence) when it is used simply as a checklist. Similarly, it is a misuse of Porter's five forces model simply to use the forces as topic headings. Porter lays out many causal connections between each force and industry structure; it is the causal connections, not the list of five forces in and of itself, which is of intellectual value.

Articulating the three generic strategies (cost leadership, differentiation - broad market, and differentiation - narrow market) is not very interesting; what is interesting is the notion that being "stuck in the middle" does not work. Breaking a problem down into business processes of value chains represents progress only if you can articulate something about the interrelationships among those processes or links.

Matrices. A popular framework that is often misused is a matrix, from the hoary 2x2 to the sophisticated multi-dimensional matrices. Drawing a matrix does not in itself constitute building a framework. What matters is whether you can articulate how the cells are different in some systematic way.

"Fit" Frameworks. Somewhat more sophisticated is a "fit" framework. For example, you were exposed to the Tushman-Nadler diagnostic model in Organizational Behavior. The idea is that the organization works only when it achieves congruence between its internal structure and the environment, and congruence among its internal elements. For example, and "organic" structure may represent a better fit in a turbulent environment that a "mechanistic" structure, which works better in more predictable environments.

Similarly, a low-cost producer cannot afford heavy R&D investments, while a firm pursuing first-mover strategy cannot compete on the basis of efficiency. To use this kind of framework, you need to spell-out the elements and what kinds of congruent configurations they can form.

Decision Trees. An excellent framework is a decision tree. You have had considerable practice constructing these during your first year, and decision trees have a good deal of rigor and value, especially in forcing you to identify contingencies. Those of you interviewing with McKinsey will find that decision trees are looked on with great favor there.

Causal models. An often less formal framework than a decision tree is a causal model, that essentially shows the cause and effect relationships between a set of drivers. These models tend to oversimplify contingencies, but nonetheless can add considerable clarity to your thinking. The most formal kind of cause model you could propose is a multivariate equation, which with absolute precision and clarity specifies what you think the drivers are, how they affect the outcome, and what the functional form of their impact would look like.

Some causal models specify the dynamics of a situation, often by uncovering interlocking cycles of a behavior over time. Again, the point is not that such models are perfect over time, but cyclical behavior is very common in the world, and powerful insights can be gained from identifying interlocking cycles that dampen and/or reinforce one another.

With imagination and insight, you will create other types of frameworks. What all good frameworks have in common is that they identify the drivers of a situation and specify both the interrelationships among those drivers and how they affect important outcomes.

Preparing For Case Interviews

Pavan Chahal T'94

A Look At The Case Interview

Most consulting firms conduct case interviews. The primary purpose of these interviews is to get an idea of how well you break a problem down and then logically try to solve it. Due to the nature of the interview, they also get to see how you think on your feet and how well you keep your composure. At times, they also get to see how quickly you bounce back after making mistakes.

In addition to problem solving ability, interviewers make judgments about your ability to work in teams and lead at client sites. Usually, the last question the interviewer has to answer on the evaluation form is "Would you like this person to be on your team tomorrow?"

Doing well at case interviews requires skill. Like all other skills, this one can be learned by practice. To help you down the learning curve, I suggest the following:

- Practice the sample cases in this book with a partner
- Get together with second year students and ask them for the case questions they were presented with.

Usually, you will start to feel comfortable after about eight to ten practice cases.

Anatomy of an Interview. An interview typically begins with a few minutes of resume-based discussion. During this part of the interview, the interviewer asks the usual set of questions, such as "Why consulting?," "Why did you choose Tuck?," and so on. Following these questions, the interviewer presents the case.

Your analysis will probably be guided in the direction your interviewer wants you to go, so do not ignore comments or instructions. With each additional insight, the interviewer will probe deeper and push you to the next issue.

While there is no right answer to any case, you will generally be expected to take a stand (state a hypothesis) at the end. You should base your position on what your analysis reveals, any assumptions you want to make, and any input the interviewer gives you.

To find out what a typical case interview is like, watch the videotaped presentation made by Bob Atkinson in October 1993. This is available in the Career Resources Library. In addition, you may want to review the handouts from the briefings on case interview techniques. It steps through the case interview process and provides specific hints for each step.

General Tips. While each case interview is unique, here are some general tips that should serve you well in most of them:

- Bring a pen and a pad of paper. It helps to scribble and doodle while thinking-through and presenting your analysis. At times, drawing a picture (like a decision tree) will help communicate your thoughts to the interviewer and will help structure and guide your analysis. Lastly, it is often much easier to do basic calculations on a piece of paper than in your head—remember, you will probably be a little nervous and addition errors do not inspire confidence.
- **Feel free to pause**. After being presented with the case, feel free to tell the interviewer that you need a minute to structure your thoughts. Reflect over the case presented and do not be uncomfortable with the silence that follows.
- There is never a reason to panic. Do not panic if you know nothing about the industry the interviewer is asking about. Ask questions to get clarifications. You are not expected to know about all industries, but rather the underlying principles that are common to all. Some interviewers will answer one or two questions and then abruptly ask you to present your analysis. Do not let this rattle you; make assumptions and proceed.
- **Structure your analysis before you begin.** Before presenting your analysis, outline what you are going to say by presenting what you think are the key issues. Structure is extremely important.
- **Be clear about your assumptions.** If you feel your analysis has led you to contradict something you assumed or said earlier, do not be bashful about admitting it. Incorporate the new information in your analysis and proceed.
- When hopelessly lost, ask a question. If you get stuck at any time during the interview, do not hesitate to ask for clarification. What do you have to lose at this point? By getting right back on track, you will greatly enhance your ability to impress the interviewer.
- **Silence can be golden.** It is better to be silent and think than it is to ramble pointlessly or ask irrelevant questions.

It may at first appear to be a vicious recruiting monster that lurks at Tuck in January and February, but the case interview can be conquered. Practice with sample cases, develop your own style and frameworks, and understand the expectations of the interviewer and you will become completely at ease with the cases you receive.

Strategic Tools & Frameworks

General marketing, strategy and operations concepts for use in case interviews

General Tools For Case Interviews

When preparing for case interviews, you will hear repeatedly, "Learn the frameworks," and "develop the analytical tools." The problem is for most people that nobody ever explains exactly what frameworks and tools they are talking about. The list presented in the following sections, though not exhaustive, covers most of the standard tools you will use in case interviews. Use these tools to think about the key issues and to lead you from the facts to a conclusion.

As you look at these tools, though, remember that no framework or tool is as good as an original framework or tool. Play with these ideas and frameworks until you develop a set of your own frameworks that you feel comfortable using.

Finally, in addition to judging your analytical abilities, most interviewers will also consider how logically you structure your answer. This is a bit more straightforward to learn than the frameworks, but is no less important. An example of a structure for your interaction is:

- 1. State or restate the problem.
- 2. Identify the key issues for further investigation.
- **3.** Apply the relevant frameworks.
- **4.** Summarize and provide a recommendation. It may also be useful to discuss implications of your recommendation such as competitive reactions and acceptance within the client organization.

The Five Forces

Michael Porter's "Five Forces" Model for industry structure and attractiveness analysis is a classic analysis for cases that involve a decision as to whether to invest in or enter a given industry. The five forces are:

Threat Of New Entrants
Threat Of Substitutes
Supplier Power
Buyer Power
Industry Rivalry

Threat Of New Entrants. This force measures the ease with which new competitors may enter the market and disrupt the position of other firms. The threat that outsiders will enter a market is stronger when the barriers to entry are low or when incumbents will not fight to prevent a newcomer from gaining a market foothold. In addition, when a newcomer can expect to earn an attractive profit, the barriers to entry are diminished.

Threat of Substitutes. The threat posed by substitute products is strong when the features of substitutes are attractive, 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. Suppliers also have more power when they can affect competition among 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 their sheer size and when the purchase is critical to the seller's success.

Industry Rivalry. Often, the most powerful of the five forces is the competitive battle among rivals that are already in the industry. The intensity with which competitors jockey for position and competitive advantages indicates the strength of the influence of this force.

Although this model can provide a lot of insight into an industry, beware of becoming too dependent on Porter in your case interviews. Also, make sure you understand the underlying drivers of the forces, and why and how they create varied competitive environments. In addition, you may wish to add to this framework any external impacts from government/political factors and technology changes.

The Three Cs (Or Is It 7?)

This simple framework can be helpful for marketing cases as a simple way to begin looking into a company's position in the market. The first three C's rarely get to all of the issues, but they do provide a broad framework to get the analysis started. The last four C's may be useful additions to further your analysis. As you practice cases, begin to develop a series of potential questions related to each "C" that will help you to "drill down" further towards the root causes of the problem at hand. Some examples are given for the first 3 C's below.

Customer

- What is the unmet need?
- Which segment are we/should we target?
- Are they price sensitive?

Competition

- What are strengths/weaknesses?
- How many are there and how concentrated are they?
- Are there existing or potential substitutes?

Company

- What are its strengths/weaknesses?
- Where in the value chain do we add value?

Cost

Capacity

Culture

Competence

The 4 Ps

This framework is suitable for marketing implementation cases. It is not usually appropriate for beginning the analysis, but it can be very helpful when you discuss implementation to make sure that you cover all of the issues.

Product

Promotion

Price

Place (distribution channel)

Value Chain Analysis

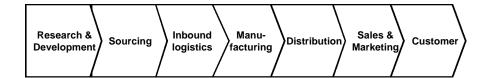
This analysis can provide a good outline for analyzing a company's internal operations and the value of each step in making a product or service go from raw materials to a finished good or service. Value chains vary dramatically for every industry, but here are two examples that can be customized:

Support Activities		Human I	pany Infrastru Resource Mar ormation Syst Procurement	nagement ems		
Primary Activities	Inbound Logistics	Operations	Outbound Logistics	Marketing & Sales	Services	

Value chain analyses step you through the company's processes and help you understand how much value each step adds. Through this type of analysis, you can discern possible synergies among various units of an organization and determine which value activities are best outsourced and which are best developed internally. It can also show you where there may be potential to remove a step in the process that adds little value. Finally, it may uncover where a company is weak and thus vulnerable.

Primary Activities. Create the product or service, deliver it to the market, create a demand for the product, 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.



Vertical Integration

Some companies find beneficial to integrate backward (towards their suppliers) or forward (towards their customers). Vertical integration makes sense when a company requires greater control of a supplier or buyer that has major impact on its product cost or when the existing relationship involves a high level of asset specificity.

SWOT Analysis

This is another basic framework that may be helpful in structuring an analysis about a company's position and the external environment.

Strengths
Weaknesses
Opportunities
Threats

As with the three C's, this framework provides a start, but is rarely sufficient to analyze thoroughly a case.

BCG Matrix

This matrix, sometimes referred-to as the growth/share matrix, is named after its originator, the Boston Consulting Group. It provides insight into the corporate strategy of a firm and the positioning of each of its business units. The two variables being analyzed are market share and industry growth. The matrix often looks like the following:

		Market Share	
		High	Low
Industry	High	Star	Question Mark
Growth Rate	Low	Cash Flow	Dog

The strategies associated with this matrix are to hold stars, build question marks, harvest cash cows, and divest dogs. In other words, as a corporation looks at its business units, it should use cash cows to provide funds to build its question marks and to maintain its stars. It should sell its dog businesses to keep them from dragging-down the others.

This framework can be easily overused and oversimplified, but it can provide some insight. For example, if a company has a cash cow among its business units and it is investing a great deal of money in that business, you may conclude that they should use the money elsewhere. Likewise, if a corporation is mostly a collection of dogs, then you may conclude that it has a rough future ahead.

One caution: do not forget common sense when using this framework. For example, it may be neither profitable nor possible to sell a "dog."

McKinsey 7-S Framework

This framework can help you analyze how well a change can be implemented in an organization or can give you an idea of the general well being of the organization. Problems arise when these seven components do no reinforce one another.

Use this framework with caution, though, because it can be misused as a checklist and it is very easy to forget one of the S's during the interview. The seven factors are:

1. Strategy	2. Systems	3. Structure
4. Style	5. Staff	6. Skills
	7. Shared Values	

Product/Market Expansion Matrix

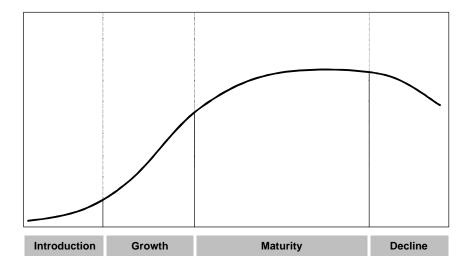
This framework can structure a discussion about growth options for a company. The options are whether to grow in current or new markets and/or products. Each strategy carries different risks, with the diversification strategy being the riskiest and the penetration strategy the most conservative.

		Products	
		Current	New
	Current	Market Penetration	Product Expansion
Markets	New	Market Development	Diversification

Product/Technology Life Cycle

This concept takes into account the passage of time when discussing the sales of a product or technology. Both tend to go through four phases: introduction, growth, maturity, and decline. If drawn in a diagram, the life cycle curve is S-shaped; thus, the name "Product/Technology"

S-Curve" is sometimes used for this idea. Each stage requires a different strategy and management style. The model can be especially useful when discussing the sales patterns of a new computer or other technology. The following figure is an example of a generic S curve.



Core Competency Analysis

C.K. Prahalad and Gary Hamel brought core competencies to the forefront of business strategy. Very briefly, one of their ideas is that by analyzing which processes a firm executes very well, you can determine how they may be able to expand their business into new, and sometimes unexpected, areas.

An example is Honda, who translated their core competency of engine building into cars, lawnmowers, boat motors, motorcycles, etc. When in a case interview, think about what processes a company executes particularly well and determine whether these processes could be valuable in different businesses. This framework is often useful in analyzing the value chain of a business.

Relative Cost Position

The relative cost position of a firm can be determined by stacking up the variable costs and allocated (as best possible) fixed costs of a unit produced by one firm to the costs of a unit produced by a competitor. The key insights from this analysis can be (1) whether a company is more or less competitive with its competition and (2) whether the company with the largest market share has the lowest unit costs. All else equal, this should be the case because of experience curve effects. If it is not, the market leader may be vulnerable to price competition by smaller firms.

Synergies

This idea is used in many settings, but it can be especially useful in analyzing the potential benefits of mergers or acquisitions (a popular case interview topic). Synergies can come in many forms, but here are a few to look for:

Spreading fixed costs over greater production levels

- Gaining sales from having a larger product line and extending brands
- Better capacity utilization of plants
- Better penetration of new geographic markets
- Learning valuable management skills
- Obtaining higher prices from eliminating competition (beware of antitrust, though)

If a merger or acquisition offers none of these benefits and few others, you may wonder if all the transaction is accomplishing is the creation of a bigger, not better, corporation.

Porter's Generic Strategies

Michael Porter developed three generic business strategies that can provide a broad framework for looking at the proper strategy a firm should take and comparing that to the strategy actually taken. The two variables in this framework are scope of market (broad or narrow) and cost (high or low). Porter believes that a firm should choose one of the three strategies, cost leadership, differentiation, or focus, but never get "caught in the middle."

Cost leadership implies a low-cost product and ever decreasing unit costs (see Experience Curve and Relative Cost Position). Differentiation implies a focus on unique value added. Focus can either be cost leadership or differentiation, but it must be done on a narrow scope. Sometimes, this is called a "niche strategy." The following figure displays the generic strategies in matrix form.

		Cost	
		Low	High
Market	Broad	Cost Leadership	Differentiation
Scope	Narrow	Focus	

Decision Trees

Decision trees provide a general structure for almost any kind of analysis. In fact, they are the basis of many of the tools presented above. If you get a case that does not appear to fit any of the frameworks or concepts mentioned, simply structure the problem in a tree format and work from there.

Decision trees are most effective when you start with the core problem then break that into three to four mutually-exclusive, collectively exhaustive (MECE) sub-problems. Keep going until you determine the root cause. They are also effective in thinking of solutions. For example, "Profits will go up if our revenues go up and/or our costs go down." It is a simple idea, but it covers all of the possible issues.

Framework For Operations Strategy

Use this framework to understand a company's manufacturing strategy and whether or not this strategy fits in with the strategic goals of the company.

Four operational objectives can help a company achieve its mission:

Cost. Low, competitive or high

Quality. High or low. Has multiple dimensions like performance, reliability, durability, serviceability, features and perceived quality.

Delivery. Has two dimensions: speed and reliability

Flexibility. Has three dimensions: volume-ability to adjust to seasonal and cyclical fluctuations in business; new product-speed with which new products are brought from concept to market; product mix-ability to offer a wide range of products.

Once you have defined the manufacturing strategy in terms of Cost, Quality, Delivery & Flexibility mentioned above, there are 10 management levers you can use to pursue your goals: facilities, capacity, vertical integration, quality management, supply chain relationships, new products, process and technology, human resources, inventory management and production planning and control.

Learning Curve

The learning curve, also developed by the Boston Consulting Group, is a model that shows that as a firm gains experience in producing something, they are able to produce it more and more cheaply. The learning curve refers to the cost improvements that flow from accumulated experience through lower costs, higher quality and more effective pricing and marketing. The magnitude of learning is expressed in terms of a "progress ratio." The median ratio is approximately 0.80. This implies that for the typical firm, a doubling of cumulative output is associated with a 20% reduction in unit costs. For example:

Unit Produced	Unit Cost
100	\$1.00
200	\$0.80
400	\$0.64
800	\$0.52
1600	\$0.42
3200	\$0.34
6400	\$0.28

Two important ideas can come from learning curve analysis. First, all else equal, the firm in an industry with the largest market share should have the lowest per unit costs. This is because it has the most experience and should see the resulting benefits. Second, the steeper the curve (the lower the percentage), the more cost-competitive the industry. For example, the personal computer market has a very steep curve due to technological innovation and obsolescence while the plate glass industry has a much flatter curve due to its oligopolistic structure.

Just-in-Time Production

The goal of Just In Time (JIT) production is a zero inventory with 100% quality. In other words, the materials arrive at the customer's factory exactly when needed. JIT calls for synchronization between suppliers and customer production schedules so that inventory buffers become unnecessary. Effective implementation of JIT should result in reduced inventory and increased quality, productivity, and adaptability to changes.

Pareto Principle (80/20 Rule)

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 phenomenon 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 two out of the ten manufacturing steps. Alternatively, 80% of a company's profits may come from 20% of its product lines.

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 that 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" or "Six Sigmas." 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.

Market Sizing

At times, interviewers may also ask questions that are different from those presented so far, but try to evaluate you along much the same lines. There are no specific frameworks for these types of questions. Start at a high level and walk the interviewer through your logic. Use "easy" numbers when calculating (e.g., 10% not 8.5%; 1/4 not 1/6; \$1MM not \$1.3MM).

You should have some basic (and estimated) statistics on the top of your head. The population of the United States is approximately 270 million. The population of Canada is about 26 million, while the population of Mexico is about 80 million.

There are 105 million households in the United States.

Age distribution of the United States' population:

Age Group	% of Population
0 - 15	22%
15 - 25	14%
25 - 35	14%
35 - 45	16%
45 - 55	13%
55 - 65	9%
> 65	13%

"Baby Boomers" are those born between 1946-64, i.e. between the ages of 36 to 54. If you define a generation as 30 years, then the "Echo Boomers" are people between the ages of 5 to 24—which is about 28% of the population.

Some Closing Thoughts

In general, it might be useful, and show more breadth of thought, if you can formulate an analysis from two sides of the question. A simple way of doing this is to analyze the situation from the point of view of the producers, and alternatively, from the side of the consumers.

Do not worry if some of these concepts look foreign. There is no need to use all of them in your interviews. Rather, understand the intuition behind them and choose the frameworks you feel comfortable with to analyze a case. If you want more, the following supplementary reading has been found to be useful by those taking case interviews:

Marketing Management. Philip Kotler. (Chapters 2 and 13)

The Strategy Process: Concepts, Contexts, and Cases. Mintzberg & Quinn

Competitive Strategy. Michael Porter. (Chapter 1)

Strategic Cost Analysis: The Evolution from Managerial to Strategic Accounting. John Shank and Vijay Govindarajan (Chapter 3 - Value Chain Analysis)

A Note on Operations Strategy, David Pyke.

Economics Frameworks

Economics concepts for use in case interviews

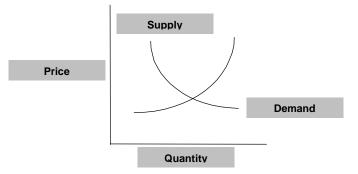
Profitability Analysis

This framework is simple, but can be very helpful in understanding exactly where a problem lies. It follows the most basic concepts of accounting.

- Profits = (Revenue) (Costs)
- Revenue = (Units Sold) x (Price)
- Units Sold = (Number of Customers) x (Frequency of Purchase x Amount Per Purchase)
- Costs = (Fixed Costs) + (Variable Costs)
- Total Variable Costs = (Cost Per Unit) x (Number of Units Produced)

This basic framework can be used as follows: if a company is having poor profitability, it may be because its revenues are too low or its costs are too high. If it appears to be more of a revenue problem, then it could be that it is selling too little or not getting enough per unit sold. If it is, in fact, a problem with the number of units sold, then you can analyze why the company is selling fewer products. And so on...

Law of Supply & Demand

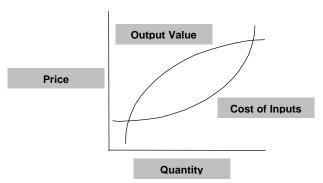


Supply Curve. The higher the price of a product or service, the greater the quantity of the item that will be produced, all other things being equal. Suppliers will be willing to make more available. Conversely, the lower the price of a product or service, the smaller the

quantity producers will be willing to make available. In theory, as the supply of one product increases, the supply of another product will decrease. (We live in a world with finite resources but infinite demand.)

Demand Curve. The lower the price of a product or service, the greater that demand for the quantity consumers will be willing to purchase, all other things being equal. Conversely, the higher the price of a product or service, the smaller the quantity of goods consumers will be willing to purchase.

Law of Diminishing Marginal Utility



This law of economics states 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. After the last unit of consumption, additional consumption brings no more benefit to the consumer and can actually have negative value.

Law of Diminishing Returns

This law of economics states that additional units of labor may contribute to greater productivity in absolute numbers, but each additional unit contributes less than the preceding unit.

Fixed vs. Variable Costs

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

Fixed Costs (FC): The costs of production that do not vary with the quantity produced: these costs generally include overhead costs.

Semi-variable Costs: The costs of production that vary with the quantity produced, but not directly. (Typically, these are discrete costs, such as the cost of adding new production capacity when quantity reaches certain levels.)

Breakeven Point

Breakeven 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):

$$BEQ = FC/(P-VC)$$

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

$$Profit = Q x (P-VC) - FC$$

Finance & Accounting Frameworks

Finance and accounting concepts for use in case interviews

Capital Asset Pricing Model (CAPM)

The first step in arriving at an appropriate discount rate for a given investment is determining the investment's riskiness. The market risk of an investment is measured by its "beta" (\$\mathbb{B}\$), which measures riskiness when compared to the market as a whole.

An investment with a beta of 1 has the same riskiness as the market (so when the market moves down 10 percent, the value of the investment will on average fall 10 percent as well). An investment with beta of 2 will be twice as risky as the market (so when the market falls 10 percent, the value of the investment will on average fall 20 percent).

Once the consultant has determined the beta of a proposed investment, he can use the Capital Asset Pricing Model (CAPM) to calculate the appropriate discount rate (r):

$$r = r_f + \boldsymbol{b}(r_m - r_f)$$

Where r is the discount rate, r_f is the risk-free rate of return, r_m is the market rate of return and \mathbf{b} is the beta of the investment

Weight Average Cost of Capital (WACC)

The interest rate you use will be the WACC Weighted Average Cost of Capital (I)

WACC is composed of the cost of debt and cost of equity.

WACC = (Debt *(Cost of Debt)/(Debt + Equity)) + (Equity *(Cost of Equity)/(Debt + Equity))

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Net Present Value (NPV)

The NPV is a project's net contribution to wealth. Net present value is the present value (PV) of all incremental future cash flow streams minus the initial incremental 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. Ct represents the cash flow at time t. (Ct can be negative, as in the initial investment, Co.) The NPV is calculated as follows:

$$NPV = C_0 + C_1/(l+r) + C_2/(l+r)^2 + C_3/(l+r)^3 + ... + C_1/(l+r)^t$$

If the net present value of the project is greater than zero, the firm should invest in the project. If the net present value is less than zero, the firm should not invest in the project.

Cost Driver Analysis

This analytical tool can help you understand what makes a particular kind of cost go up or down. These areas will be covered in Managerial Accounting, but here is an overview:

Cost	Drivers
Materials	Commodity Prices Product Formula Scrap Level
Direct Labor	Labor Policies Wage Rates Throughput Rate
Indirect Labor	Size Of Staff Wage Rates Plant Output
Overhead	Capacity Utilization Allocation Methods Staff Size Office Expenses

Accounting Basics—Income Statement

Net Income
- Cost of Good Sold (COGS)
Labor
Materials
Overhead/Delivery
Gross Margin
- Depreciation
- Sales, General & Administration (SG&A)
Operating Profit
- Interest Expense
Earnings Before Taxes (EBT)
- Taxes
Net Income

Accounting Basics—Balance Sheet

Assets

Cash

Accounts Receivables

Inventories

Investments

Property, Plant & Equipment

Intangibles

Total Assets

Liabilities

Accounts Payable

Short Term Debt

Long Term Debt

Other Liabilities & Reserves

Shareholders' Equity

Common Stock

Retained Earnings

Total Liabilities & Shareholders' Equity

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Sample Cases... An Introduction

example and a range of case questions that Tuck students have received.

become a good case interviewee is to:

- 1. Familiarize yourself with the tools listed in the previous section.
- 2. View the case interview videos in the Career Resources Library.
- **3.** Try the example yourself, saying the answer aloud.
- **4.** Get in a group of four to five people and divide the cases. This will give you experience from the interviewer's perspective while simultaneously offering

The suggested framework(s) under each case are hints that can help you to structure your answer. If you are stuck, look here to get yourself back on track. Also, as an exercise, practice

words, before you dive into the analysis, tell him or her what you think the "suggested framework" should be. You may not want to be as explicit in real interviews, but for now it

The interviewer notes accompanying each case describe relevant case facts and a possible outcome. Interviewing partners should use these to familiarize themselves with the case and

correctly the case facts. Rather, they are available to the interviewee should he or she ask a question for clarification.

interviewees never reach these conclusions without prompting. That is okay for now, because the idea is to learn the process, not to memorize answers to business situations. Keep in mind

mean that you necessarily analyzed it well.

Since we have put them together from memory, few deal with numbers extensively as such details are difficult to recall. In general, interviewers want to see if you can work with

is tested.

While cases can be based on almost any business situation, most belong to the following categories:

- Market Entry
- Cost reduction/profitability
- Pricing
- Capital investments/expenditures
- Acquisition
- Deregulation

In addition to thinking of the correct tools, try to get an idea of what kind of case you are being presented. This will help you channel the analysis to what the interviewer had in mind. Below is a partial list of some questions by case type that can get you thinking along the right track. These questions also show how different frameworks can be intertwined to get to the heart of the matter.

Market Entry

What are the relevant markets?

What kind of growth have they experienced? Is it sustainable?

What is the current profitability of the competitors in the market?

What is the potential future profitability (the million-dollar question)?

What does demand look like? What will it look like?

Who are the customers?

What does the competition look like? What are their relative cost positions?

With answers to these questions, you now have a solid base to begin a standard Five Forces or other industry-type analysis.

Profitability

Sometimes the basic profitability framework will get you to what the interviewer is looking for. Other times however, a more holistic approach that incorporates an analysis of the entire marketplace is better.

Who are the customers? Are they price-sensitive, motivated by quality or service, or brand conscious?

What does the competition look like in terms of cost, market share, exploited niches, substitute products, etc.

Who has the most power in the industry value chain? (i.e. suppliers, buyers, distributors...)

Remember that price, volume, and costs are all interrelated. A change in one will affect the others. Companies need to find the best mix of the three to fit with their long-term strategies.

Pricing

Is the market a monopoly, an oligopoly, or does it exhibit near perfect competition?

Monopoly—set prices to maximize profits, but be careful about attracting too much competition and/or regulation.

Oligopoly—resist the urge to cut prices to gain market share. Most likely, your competition will follow and you will both lose.

Perfect Competition—without significant differentiation, you will be a price taker.

Are customers price-sensitive?

Can you differentiate your product to charge a price premium?

Is there any way to price discriminate?

Will pricing too low hurt brand image?

Capital Investment/Expenditures

What is the timing of capital outlays?

Can you estimate the net present value?

Will resulting profits be sustainable?

Is this a defensive investment (i.e. it must be done to compete in the market)

Will the investment allow you to differentiate, cut costs, or expand into new markets?

Would it be better to exit the industry at this point?

Answers to the above questions will provide a good backdrop to start a framework such as profitability analysis.

Acquisition

It might be helpful to think of these cases as a combination of a market entry and a capital investment case. Your line of questioning should follow those two main streams, i.e.:

Are there any synergies with this company?

Is the new market attractive?

Can economies of scale or economies of scope be leveraged?

Will the investment be profitable/feasible from a financial perspective?

Deregulation

These cases have been somewhat rare in the past, but they are also harder to solve using the standard frameworks. There are at least two general ways to think of them:

Can you draw analogies to other recently deregulated industries?

Can you imagine this industry in a competitive environment? In this environment, what characteristics would a successful firm have to demonstrate?

Remember that above all, the case interview is meant to give the interviewer a sense of how you solve problems and how you communicate those solutions to others. Do not get so caught-up in the analysis that you forget that there is someone else in the room. Think about the issues, construct a framework to analyze and present them, present a possible solution, and, above all, interact with the interviewer.

Sample Case & Suggested Solution

An overseas construction firm wants to establish its presence in a growing regional US market. What advice would you give them?

The basic issue is whether or not the firm could be profitable in the new market by either acquiring an existing company or starting a new venture in the region. In order to answer this, it is necessary to first get an idea of the competitive environment and then determine how the client would fit into it. I would use the basic Five Forces model in addition to an internal company analysis to do this. If I were unfamiliar with this industry, I would first outline a quick value chain to get a better understanding of it. Once I get my plan together, I will lay it out for the interviewer. There is no need for s/he to have to guess where I am going.

Let us start with the basic framework. Below is an example of a value chain analysis:

Inputs: Inputs are building materials and machinery that are commodities supplied by a large number of suppliers.

Input Channel: A large firm would probably procure inputs directly from manufacturers.

Firm: A firm adds value by contacting customers, investing in equipment and working capital (inventories, payables, receivables, etc.), hiring labor and carrying out the construction. The firm has substantial fixed costs, and since labor is probably unionized, it too can be counted as a fixed cost. Variable costs will be made up of materials and consumables (fuel, etc.).

Output Channel: A firm could be sub-contracting to larger, more established firms or could be selling directly to the customer.

Customers: These would typically be private real estate developers, end users (businesses), or government.

Environment: I would imagine that there are many construction firms in the market so price, quality, delivery, reputation and relationships would be of paramount importance in selling. Demand would depend on the local economy.

Next, the Five Forces/internal analysis:

Ease of Entry: Are there likely acquisition candidates? If not, the initial capital equipment costs could be substantial, but unlikely to be enough to deter entry. A second possible barrier could be the labor unions.

Ease of Exit: This would depend on whether equipment would be leased or owned, and the scale our operation would have to be on to be competitive.

Supplier Power: This is a function of the number of suppliers and how important your business is to them.

Buyer power: Similarly, this depends on the number of buyers and the importance of your business to them. Would you be sub-contracting to larger companies, or selling directly to individual customers?

Industry rivalry: Who are the major competitors in this market? Is the industry dominated by a few giants, or are there many small players? If this region is truly growing, other new entrants may be imminent.

Customer/Market: Why have we been successful in our current markets? Can we use these same tactics overseas? What is the reason for the current growth? Can one expect it to be sustained or will it die down soon? Are there any current or foreseen regulations that might lock an overseas competitor out?

After exhausting all the issue areas, present a logical option for the construction company. However, before recommending an option, try to make sure it can be implemented.

General Interview Questions

Questions You Can Expect To Receive When Interviewing With Consulting Firms

Why you?
What are your selling points?
What are your strengths?
What are your weaknesses?
Why should I not hire you?
Why consulting?
What does a consultant do?
What was your typical day in your last job before Tuck?
What was your greatest challenge at your last job?
What were some of the toughest decisions you had to make in that job?
And how did you arrive at your decision criteria?
What are the three most important events of your life?
What do you see as your greatest setback?
What do you see as your greatest accomplishment?
Give me an example of what you did when faced with a problem. How did you frame the problem? Resolve it?
Why our firm?
What do you hope to gain by working for our firm?
Where in our firm do you see yourself?

What do you bring to our firm?

Do you have any questions about our firm?

What are your career plans over the next five years? Next ten years?

What do you enjoy outside of work?

Are you willing to give them up for a demanding job?

Why did you decide to get an MBA? Why did you choose Tuck?

Where else did you apply? Where were you accepted?

Describe a situation where you persuaded someone to do something.

Give me an example of a leadership position you have held?

Give me an example of where you applied your overall business skills?

What new goals have you established for yourself?

Tell me about yourself.

How would your friends describe you?

Describe yourself to me as a candidate.

You had some unusually varied work experience before you went to business school.

Why do not you tell me a bit about your career path and some of the decisions you made about what direction to take?

Tell me about one of the most interesting or challenging projects you have worked on in business school.

What are two or three of the essential lessons you gained from your involvement in that project?

Perhaps in managing projects or expectations?

If you had the chance to work on a similar project again, how would you handle things differently?

How do you think your role in that project prepared you for consulting?

Having worked in that industry, what can you say about the forces that are driving it today?

If you were a CEO in that industry, what might be some of your critical concerns?

Profitability Cases

Case One

A medical equipment manufacturer in the southeastern US has called you in because it feels its working capital requirements are much higher than those of its competitors. How will you help it solve its problem?

Suggested Frameworks

This problem calls for a recollection of financial accounting. Remember that working capital consists of cash + inventory + accounts receivable (current assets) less accounts payable + short term debts (current liabilities). Look at each one to determine where the problem lies.

- Going through the list of items that increase working capital (i.e., current assets) reveals that the client's inventory levels are inordinately high.
- The client organization is made up of three divisions. The inventory problem can be traced to a division that was acquired by the client about two years ago. This division manufactures equipment for orthroscopic surgery, namely capital equipment and blades (something like razors and razor blades, only much more expensive).
- It turns out that the technology for this equipment has been changing rapidly and the rate of obsolescence of inventory is extremely high. As earlier sales forecasts had been overly optimistic, the client now finds itself loaded with obsolete finished goods inventory.
- As a corrective action, decide on the appropriate level of inventory by adjusting forecasts, getting an idea of manufacturing lead times, and determining customer expectations of order lead times.
- After appropriate levels of inventory are determined, it turns out that the
 client has 2.5 years of capital equipment inventory while none needs to be
 carried since these items can be manufactured after receiving the order. To
 help take the finished goods inventory off the books, finished goods could
 be dismantled and sold. Also, idled manufacturing capacity could be
 adapted to make other goods if the facilities are flexible enough.

Case Two

Your client is a telephone company trying to reduce the costs and improve performance in the repair service operation. How do you approach the problem? How would you go about implementing your solution?

Suggested Frameworks

Begin with the three C's to flush out information about your client and the nature of the competition in the industry. Ultimately you can go through a profitability analysis to try and drill down to the root cause of the high costs in repair service. Do not forget to outline a process to follow to implement your solution.

Additional Information

The company has five regional centers in five different cities and a corporate headquarters. You have been brought in through a process improvement initiative currently underway at corporate. The regional centers are not aware that their repair service is being examined.

- This is a regulated industry with a unionized labor force that will play a large role in your analysis.
- Generally, utilities have faced very little competition for local service and have thus had almost no need to institute and track performance measures with its management control systems. You will almost certainly have to develop new baselines for measuring performance in the repair service department within the company. Some possible measures could be: time to repair, time to dispatch, customer satisfaction expressed through callback, etc.
- If these baselines are new to the company, your team will need time for these baselines to generate information that can be compared with other "best-of-class" companies in this industry.
- The profitability analysis should touch upon recent capital expenditures, deteriorating infrastructure, high wages, escalating repair materials costs, low productivity in the department; anything that might contribute to high costs in repair service.
- Do not forget the implementation part of this question. Basic ideas here
 include developing a pilot program to test your solution and selecting a pilot
 site, getting buy-in and cooperation at the regional level, establishing
 objective measurements to gauge the success of the pilot, and finally,
 developing and presenting a corporate-wide rollout of the changes.
- Changing the culture of the regional centers is going to be a huge barrier to success in this project. This component is largely the function of the "Change-Management" area of the firm. Issues here might be union wage pressures, job security, changing the demands on the workforce, gaining commitment from informal leaders that can champion your solution.

Case Three

You have been called in by a Big 5 accounting firm that is experiencing declining profitability in its auditing operation. What levers would you push to help improve profitability?

Suggested Frameworks

Whenever you hear "declining profitability," start with basic profitability analysis. Determine whether this is a revenue problem, cost problem, or both.

Additional Information

The entire industry is in a slump. Competition is intense as firms try to fight to survive.

- To improve profitability, the firm should either increase revenues or reduce costs.
- Increasing revenues would imply increasing volume or price. The only way
 our client can raise prices is by differentiating itself or using promotional
 incentives. However, it has to consider competitor reactions, which will be
 strong and prompt, since all are fighting for survival. To increase volume,
 our client probably has to drop prices. The only way it can do this is by
 cutting costs.
- To reduce costs, one must look at the cost structure of the firm. Fixed costs
 are offices, equipment, and personnel. Variable costs are general
 consumables, travel, etc. As with most service organizations, the single
 largest component of cost is personnel.
- Reducing personnel cost would imply either cutting salaries, cutting staff, or raising staff productivity. The best course of action is probably to increase productivity and resort to other alternatives later.
- To increase staff productivity, you could ask staff to work longer hours or
 you could utilize them more efficiently by asking partners (who cost more)
 to spend less time on projects while using associates (who cost less) to do
 most of the work. This way, you will utilize the partners better and will bill
 the customer less (since you incur lower costs for a project) thereby
 reducing your price.
- Alternatively, you could reduce the number of partners or reduce the amount of profit per partner. Both these ideas would be very difficult to implement since partners share ownership in the firm and are not likely to follow any advice that reduces their profits.

Case Four

The client is the largest package delivery service in Canada. Over the past 30 years, the firm built a network that allows it to deliver parcels to "every address in Canada." Until last year, competition was non-existent and profits were very strong. Starting about 15 months ago, a new company began parcel pickup and delivery to three (and only three) Canadian cities—Montreal, Toronto and Vancouver. Although overall parcel traffic has declined by only 10% for our client, profits have declined by almost 30% from last year. Outline your hypothesis for the profitability decline.

Explain what analytical measures you would use to diagnose the problem and what data you would gather to perform your analysis. What approach would you offer to our client for the restoration of reasonable profits and what strategy would you employ to prevent further deterioration of profits?

Suggested Frameworks

Start with a profitability analysis to pinpoint where the problem lies. Then, use the three C's to see what about the market is causing the problem. Finally, look at the costs of this industry: does one of these firms have an inherent advantage? Are certain customers better off than others? This is a complex case, so take your time and keep digging.

Additional Information

The new entrant has a fleet of older semi-trailer trucks that run between the three cities. Our client has a very new fleet (more efficient) that services all of Canada. The client's fleet mix has been optimized such that efficiency and capacity utilization are high considering the network of locations covered. The new entrant charges approximately 50% less than our client for delivery between the three cities that they cover. Our client and the new entrant charge by the lb.-mile. One pound carried one mile is a lb.-mile.

- The new entrant has initiated service in the three markets where economies
 of scale are present. Because of the volume of packages between these three
 cities, larger trucks and efficient distribution centers make such limited
 service very profitable.
- An important facet of this case is how the interviewee reaches this conclusion. He/she should use a cost measure like \$/lb.-mile to explain that the major city routes have always subsidized delivery to smaller locales.
- Realize also that our delivery to all addresses in Canada is a tremendous advantage to our client. Businesses that ship to customers outside of the major cities can not afford to lose our service.
- Employ a new pricing strategy that will increase charges for rural delivery.
 Note that this may invite the new entrant to begin rural delivery. Develop
 long-term contracts with major business clients who use our rural delivery
 capability. Offer a flat delivery rate only when the business agrees to use
 our client for rural and city delivery.
- Search for synergies with other companies that also deliver to rural areas (this client actually paired with several grocery/beverage/snack delivery companies in the most rural areas).

Case Five

Your client is in the trucking industry. Their profits are declining, and they have already determined that their cost structure is comparable to competitors. What is the problem?

Suggested Frameworks

This is a profitability question. Since we can assume that the problem is not costs, you should focus immediately on the revenue side. After diagnosing the problem, proceed with a three C's analysis to understand the client's positioning in the marketplace. Finally, end with a four P's analysis to suggest possible solutions.

- The company operates within North Carolina and hauls commodity items and specialty items.
- The company has 5% market share.
- The company competes on service quality rather than on prices.
- The trucking industry is highly fragmented and has undergone consolidation.
- Think about segmenting the market. Margins are different for hauling furniture versus hauling small commodity items.
- The company has experienced decreased business due to bigger companies
 who are more price competitive in the commodity item business. Therefore,
 the company has lost business on the back-haul in which trucks transport
 goods back to the original distribution point.
- The company probably cannot compete effectively in both market segments and should probably focus on hauling specialty items.

Case Six

You have an airline client who is concerned about volatile revenue streams. How would you approach this problem?

Suggested Frameworks

You could first think of this problem as a profitability question, focusing mainly on the cost structure. Then you could think of the competitive dynamics in the industry.

- Airlines have huge fixed costs.
- Growth rates for the airline industry has been flat.
- The airline industry has excess capacity.
- The product is a commodity.
- Consequently, the only way to gain market share is to compete on price.

Case Seven

Over the past few years, our client, a retail bank, has gone from one bank in one state to eight banks in eight states. Although some of the banks are profitable, the company as a whole is losing money. Specifically, four individual banks are losing money. How would you analyze this problem?

Suggested Frameworks

This is a profitability question. After pinpointing the problem, you could do a three C's analysis then a four P's analysis. The key question to answer in this case is, "Is bigger better?"

- All of the eight banks are operated autonomously.
- Through expansion, the bank has increased its customer base almost tenfold, but its costs per customer have also increased substantially.
- Remember that under current banking regulations, you have to operate banks in different states as autonomous units.
- On the costs side you should look at scale issues. Economies of scale are
 important, especially in the BackOffice and in advertising product lines.
 The increased costs of having a corporate headquarters in addition to
 individual state/bank top management must be recovered in cost savings
 through scale economies for this to be a good venture on the cost side.
- On the revenue side, you should look at product lines and margins. Given
 new competition from investment managers, mortgage banks and credit
 card banks, it is important that the bank have a wide range of products
 available for its customers. Size could potentially increase brand equity and
 trust, which could then be leveraged over a wide product line.

Case Eight

Our client is a book publishing and distribution company. Three years ago they started a new division to sell customized textbooks to colleges. The customized textbooks use on-line information that has been digitized to provide information tailored to any course. The company uses a direct sales force to sell both their standard textbooks and the new customized textbooks. The new division last year had revenues of \$3 MM and a net loss of \$5 MM. How should the division get its profits to at least break even and what should they do to realize the full potential of the business?

Suggested Frameworks

Profitability analysis is the best place to start. A quick customer analysis (one of the 3 C's and 4 P's) should be next.

- The cost side of the profitability analysis shows that the cost per customized book is double that of a traditional book. The added costs are due to the extra cost of paying for the special copyright fees for using the most current information from a number of different sources. In effect, the division is paying royalty fees to many different authors.
- On the revenue side, the price per book charged is a premium. It is
 important to understand who is ordering the books (professors) and who is
 buying the books (students). It is unlikely that the price can be raised any
 further.
- To look at the full potential of the business, look at how the direct sales force is selling. It takes 2 to 3 times as long to sell a customized book compared to a standard textbook. The direct sales force is paid a commission based on sales. It is taking too long to sell the customized books and the sales force is not making enough money on them.
- Also, look at who is buying these textbooks. Lower level standard courses such as Psychology 101 and Math 101, where enrollment is large, do not need the most current and up-to-date information, and the standard textbook is OK. The only professors who want these books are those teaching the upper level and advanced classes where innovative information is needed. However, enrollment in these classes is much smaller than the lower level classes.
- The quantity of books being sold is also less than was first expected and the order quantities are for very small lots.
- The low order lot sizes add to the cost and reduce potential profits. Paying
 the sales force a higher commission on customized books might get them to
 spend more time trying to sell them, but the product will most likely not be
 profitable with current demand and costs
- In the absence of scale economies, you must reduce the cost burden by over 40%; is this reasonable? Close it down!

Case Nine

A regional fast food chain, serving a menu of mainstream products (e.g., hamburgers, fries), is experiencing wildly variable profits among its many locations. What factors should the chain consider?

Suggested Frameworks

Begin with a basic profitability analysis to determine whether costs or revenues are driving the variations in profitability. Then, a very thorough three C's analysis should yield a whole host of relevant issues. Alternatively, starting with a basic industry analysis could set up a good understanding of the dynamics unique to this market.

- Urban vs. rural differences exist, including taste preferences, attractiveness of substitutes, and types of competitors.
- The two key driving forces are quality of location and strength of restaurant management.
- It is best to sell restaurants that are in poor locations. Poor management can be replaced. Do not compete head on with the big players like McDonald's—find a different niche. Offer product bundling (value meals) and/or strategic relationships (e.g., with Toys R Us) to create excitement.

Case Ten

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 US. Also, do not forget the external factors, such as corruption or government regulation, that may play a role.

- 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 this 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 US, 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?
- If the cost of the procedure seems high in comparison with similar medical
 procedures, it could be due to professional fees, consumables, or capital
 equipment costs. Professional fees could be cut by limiting the amount of
 government compensation. Employing new technologies could cut
 consumables and equipment costs.

Case Eleven

Your client is a medical products division of a large health care company. The division, formerly the market leader with near—monopoly power, has seen its profits and market share shrink dramatically as new entrants proliferate. You are charged with stemming share loss while providing shareholder value in the division. What do you do?

Suggested Frameworks

A number of frameworks are applicable here. A quick Porter's five Forces might give you a better idea of the nature of the medical products industry. The 3C's will help you ask more questions to understand your company's structure and the nature of its product offerings. The 4 P's will narrow your focus to the key product(s) that have been victimized by increased competition and allow you to brainstorm ways to improve them. This is a wide open marketing case, so do not get bogged down running any one framework. Instead, use this opportunity to impress your interviewer by approaching this case with a range of frameworks.

Additional Information

 The medical products division produces a range of surgical supplies and equipment. Their products usually compete in the high-price, high-quality niche in the marketplace. This division uses a separate dedicated sales force and distribution channel.

- Increased competition in this industry has probably eroded margins in a division with "near-monopoly" mentality. They have never had to be cost conscious and do not quite know how to compete on margins.
- Try to understand why we are losing to the competition. Are competing products of higher quality? Lower cost? Are these products becoming commodities? Are the competition's distribution channels more efficient?
- Who are our customers? Is heavy consolidation among hospitals affecting
 our relationships with our customers? Quite possibly, we are still targeting
 surgeons, but the procurement departments are becoming increasingly
 price/performance sensitive as their order volumes grow. If so, we will need
 to change our customer's perceptions from premium product to best value
 for the money.
- What about manufacturing costs? Are our overheads and raw materials in line with our competition? Is our manufacturing strategy (high quality and reliable delivery) in line with our marketing strategy (commodity products, best value for money)? If not, do we know what to do to align them?
- In an effort to cut costs, are we capturing all the value from synergies with other divisions in the company? We could move to a shared workforce and distribution channels if it makes sense to do so.
- And finally, in an effort to preserve shareholder value, should we concede
 the market and work on an exit strategy—possibly packaging ourselves up
 to be an acquisition target? Or, should we acquire a smaller competitor and
 gain their market share?

Case Twelve

Your client is an electronics firm considering moving to a catalog distribution system. What are the issues?

Suggested Frameworks

Start with the 3C's to flush out some basic information on the client. Then, think of possible issues within the context of this client. Be creative with your ideas.

Additional Information

• The client is a small to medium-size company—revenues in the \$300-\$500 million range. The company has a reputation for high quality products at a premium price. Products manufactured by the client include electronics component parts (75%) as well as some finished goods (25%) such as CB radios, clock radios, wireless transceivers, etc. The client has a small 8-10 person sales force. Your client is in trouble financially. Sales are on the decline for the third year in a row. There has been consolidation in the industry among your client's customers, which include retail electronics stores (like Radio Shack) as well as electronics component manufacturers (like TV/VCR producers).

- First, try to understand why the client has decided on a catalog distribution system at all. What is going on with the existing sales channels? How committed is he to this idea?
- If the client is losing money, maybe he is grasping at straws to stem losses. Use a quick profitability analysis to understand where the losses are coming from. If your client's cost structure has not changed, then it could be that his losses come from lower volumes. Maybe, as the consolidation among his customers takes place, they are moving to increasingly larger firms as sole suppliers, cutting your client out of the loop. Your client has two options:
 - **1.** Borrow money for expansion so that you can compete with the big players for those consolidated contracts.
 - **2.** Realize that you are too small and are unlikely to recover from the sales slump, work on packaging your company for sale to a competitor. What might you do to make your company an attractive takeover prospect?
- Both types of your customers require a degree of handholding that is simply not present in a catalog distribution system. So, are you targeting an entirely new market? Maybe home buyers, electronics hobbyists? What does this industry look like (quick Porter's 5)? Most likely you will find this market to be intensely competitive with a number of big competitors like Belden, Thomas Register, JBL, etc. Do you really think your client can win, or even play in this market? Why or why not?
- Finally, be creative, what about an electronic catalog distribution system? Internet-based? Easy to set up—low fixed and variable costs, no advertising required. This might be attractive to your existing customer base, especially if you can offer on-line ordering and invoicing (EDI). Is your client ready to take this step?

Case Thirteen

A Canadian company that owns a large real estate portfolio has asked you what they should do about their portfolio of farmland. The farmland, which is located in remote rural locations in Alberta, is worth about C\$200 million and was acquired from the Canadian government a few decades ago as an exchange for services provided. The farmland is not a strategic asset and the client is not sure why it has held it for so long or why it should own it at all. In fact, it has chosen, for no particular strategic reason, to sell \$10 million of farmland each year. What should they do to maximize the potential return from this land?

Suggested Frameworks

This case asks for an analysis of the benefits of owning the land versus divesting the portfolio. Note that the company does not know whether it is making money or not from the land. Understand the revenues, the costs, and use a basic profitability analysis to see if it is worth keeping. If it is not, then think about how one can value farmland and sell for maximum profit.

Interviewer Notes

- Note that the \$10 million per year sell off may be the worst possible way to sell this land. When prices are high, you sell less acreage, and when prices are low, you sell more acreage. It is kind of a "reverse dollar cost averaging" strategy.
- A suggested way to analyze the viability of keeping the land is to examine the rates of return:
- + 5% per year price appreciation
- + 4% rental income per year
- 1% taxes, expenses

8% return on investment

- BUT, the cost of funds is 11%; so, the company is not recovering its cost of capital by investing/holding this farmland. It should be sold and the proceeds invested elsewhere.
- Farmland prices are closely linked to grain prices, so predicting grain prices
 gives an index for land values. When grain prices are up, sell more land and
 when they are down, hold the land. Be careful not to sell too much in one
 area, though you can have a "slippage" of 3% and still justify a sell off
 versus holding the land.
- Another way to approach this case would be to think in terms of what you
 would need to do an NPV analysis. Essentially, there are 3 ways you can
 make money on this property (or any property):
 - 1. Rental income from tenants—you could lease this land to farmers, but do you want to be in the landlord business? Would your costs go up for things like lawyers fees (tenant contract negotiations) and land management fees?

- 2. Tax benefits from holding the land—this land may provide you some sort of tax shelter under Canadian tax law. E.g. in Texas, two rows of trees allows you to classify your land as a tree farm that is subject to certain tax benefits.
- **3.** One time sale of the land to an interested party at a profit for you.
- Since this land was essentially free to you, any income stream you could show is most likely going to generate a positive NPV for you.

Case Fourteen

An insurance company has two annuity products: a fixed annuity product and a variable annuity product. These products have a target ROI of 15% but are only earning 5% right now. The fixed annuity product pays the clients a fixed income stream at fixed interest rates. The variable product has returns that vary with the market. The market is doing great and the company is wondering how to improve their returns on these products. How would you go about thinking about this problem? What are some potential areas for improvement?

Suggested Frameworks

Start with the three Cs to understand the company's risk profile, the nature of its competition, and the customers that buy these instruments. Then move to a profitability analysis to identify where this company is losing money. If you are not familiar with annuity products, ask questions to ensure you understand how the products make money for the insurance company.

Additional Information

 The company sells 20% of the fixed product and 80% of the variable product. On the fixed product, the company makes money based on the spread between the fixed income stream they are paying out and the money they are earning on the investment in the market. On the variable product, the company earns money through charging fees.

- The obvious answer seems to be that they need to get into higher paying investments to achieve higher market returns. However, keep in mind that they have fixed annuity product they are committed to paying.
- The company could calculate the duration of their liabilities (the fixed stream of cash outflows) to ensure they have enough assets to support them.
- The company could also focus on cutting costs to raise their returns. They
 have marketing (ads, pamphlets, phone personnel), broker fees, sales
 personnel, transaction fees. The company does all of this in-house. They
 could probably outsource and have these services performed more cheaply.
- The fees the company charges for the variable rate product could be compared to the competition. If they are too high, the company may want to lower fees to get a higher volume of customers. If they are too low, they may want to raise rates to be more competitive. Chances are, the existing customers with an annuity probably will not withdraw their funds.
- The mix of products could also be considered. The company only earns a
 flat fee on the variable product. The amount of return made on the fixed
 product can vary widely, but has the potential to make a very good return
 with smart investing. The company should shift marketing and sales efforts
 to the fixed product.
- Since more and more people are investing in 401K plans and other retirement plans, this could be a potentially large target market for a secure fixed annuity product.

Case Fifteen

You are the manager of a hotel in Puerto Rico. Over the last two years, the profitability has deteriorated and you wonder why.

Suggested frameworks

To learn about the market you will need the three C's first. Once you understand the market and the position of this hotel in it then look at the profitability tree. Once you have identified the cause for the declining profitability, use the 4 P's to improve profitability.

- **Three C's.** As the profitability has decreased over the last two years, the interviewee should look for parameters that have changed in this timeframe.
- **Company.** The middle market hotel is located on one of Puerto Rico's beaches o. The hotel does not have it's own restaurant as many restaurants are nearby and does not have a pool as the sea is a 400 yard walk away.
- **Competition.** No new hotels have been built recently, nor have the existing ones change their positioning. It is a normal beach with a normal mix of lower, middle, upper-class hotels.
- **Customer.** Customers are mainly people from the US; some are from Canada, almost none from Europe. Average age about 40 to 50. If you want to help the interviewee a lot, you can tell him/her that the customer base has changed from individual tourists to tourists that buy package trips.
- **Profitability Tree.** The focus should be to find out parameters that have changed in the income statement.
- **Revenues.** Prices are the same, sold room mix is the same (this is often the solution in other cases), the number of rooms sold is the same, people stay the same length of time, exchange rates are no issue. However, as the new package tours are sold through travel agencies, heavy discounts have to be granted. Revenues in total decreased.
- **Expenses.** It will be important to hear that the interviewee develops a complete picture of the costs. However, the interviewee should be guided not to loose too much time here. Depending on how the case goes, seasonality (fixed costs) can be made an issue or not.
- 4 P's. Once the cause of the decreasing profitability has been identified (discounts due to package tours), creativity is necessary to develop solutions:
 - Change distribution channel (e.g. Internet)
 - Pricing strategies
 - Attract new clientele (e.g. seminars, sportspeople etc.)
- Is it plausible that seminars come here when there is no restaurant? How would you do an investment calculation for a restaurant (lost bedrooms vs. additional income)

Case Sixteen

GOTONet, an ISP (Internet Service Provider) offering services in the United States is thinking about entering the European market for ISPs. Thus far, they have successfully captured the dominant position and sustained profitability domestically while charging an annual access fee for access and by receiving a percentage of all e-commerce transactions that their subscribers undertake.

GOTONet has already performed some due diligence on the ISP market in Europe and has learned that until the last year the market was very fragmented. Recently, however, a new entrant has captured a high degree of market share by offering consumers free Internet access.

You are in a meeting with the CEO of GOTONet and have been asked to perform some quick "back of the envelope calculations" on what the implications of providing free Internet Access would be.

Interview Notes

- GOTONet hopes to capture a customer base of 8 MM subscribers
- Currently GOTONet subscribers pay \$ 25 per month for access
- The average GOTONet subscriber purchases \$900 annually on the net of these purchases; GOTONet receives a 3 % commission.
- Fixed Costs are \$1.3 B and variable costs amount to \$800 MM annually
- The CEO asks you the following questions:
 - 1. Please determine net income (before taxes) given the current revenue model?
 - 2. Given the Above, what is the current profit margin for GOTONet?
 - **3.** Will GOTONet sustain profitability if the monthly subscription charge is reduced to zero?
 - **4.** If not, how much would the average GOTONet consumer need to increase spending by to make up for the loss in subscription fees?

Suggested Answer

1. To determine Net Income you must calculate annual revenues and expenses:

Total Subscription Revenue: 8 MM Subscribers X \$25 / month X 12 months = \$2,400,000,000

Total Revenue from Commissions: \$ 900 X 3 % X 8 MM Subscribers = \$216,000,000

Total Expenses: \$ 1,300,000,000 + \$ 800,000,000 = \$ 2.1 B

Thus, Net Income before taxes is \$ 300,000,000.

2. To determine the current profit margin:

Net Income/Total Revenues: \$ 300,000,000 / \$ 2,600,000,000 = 11.5 %

- **3.** To determine if they will sustain profitability, deduct subscription revenues from the income statement above, they will not be profitable.
- **4.** To determine by how much GOTONet consumers would need to increase spending by to make up for the loss in advertising revenues:

The lost revenue per subscriber is \$300 per year. Thus, total revenue from sales would need to be \$300 +the \$27 we already make from the purchases they currently make on-line. Thus, the total is \$327.

Assuming the sales commission charge remains the same customers will need to spend

$$X3\% = 327 \text{ or } 327.03 = \$10,900$$

Thus if consumers currently spend \$ 900 annually, they will need to spend an additional \$10,000 annually to compensate for the loss in subscription fees.

Market Entry & General Strategy Cases

Case One

A major retailer is thinking about expanding a new retail concept in the United States. Two years ago, this client noticed that in Mexico shopping was a family affair. Entire families - mother, father, and children - would travel to the stores together. The stores catered to these customers by providing music and activities for children and making the experience similar to that of an entertainment center. So our client copied the concept and invested in a major clothing store/entertainment center in Southern Texas targeted at the Mexican-American population. "Extras" such as hot Mexican food are sold and live music is provided. The resulting sales from this "pilot" store are at acceptable levels. However, few Mexican-Americans shop there and when they do, they buy only highly discounted items. In fact, many Mexican-Americans in the area still prefer to buy clothes in local discount stores. The client wants to expand the stores across the entire Southwestern US., but wants guidance on how to undertake this.

Suggested Frameworks

This is a marketing problem, so the three C's may be the best place to start. Be sure to understand that you have more than one customer segment and understand their differences.

- This case centers around the target customer and customer buying behavior.
- It is important to understand why the concept is successful in Mexico. Mexicans place a very high value on families and will appreciate any activity that allows the whole family to be together. The retail stores provide "extras," such as hot food and games, free-of-charge, since it is considered a cost of doing business. This "family" value may not be transferable to a different culture that the Mexican-Americans are part of.
- Next, the customers of the "pilot" store must be examined. Ethnic retail
 items are increasingly popular in the US. As it turns out, this store is
 attracting customers with large disposable incomes who are generally
 middle class or upper-middle class. They are interested in buying Mexican
 souvenir items and enjoy the fun atmosphere and music.
- The "pilot" store is charging customers extra money for the Mexican food and the rides and activities for children.

- Mexican-Americans living near the store only shop there if there is some special item that is highly discounted and not available in the other local discount stores. They usually do not bring their families and they do not pay for the family activities, games, and food. These customers are generally from the lower-to-middle income bracket and have little disposable income.
- The key point in this case is that the store/entertainment center idea is a
 good concept that could succeed in the US, but it will succeed for very
 different reasons than the client anticipated. The stores should not be
 positioned only as family stores for Mexican-Americans, but should also
 cater to the US-wide surge of interest in Mexican culture, clothing, food,
 and music.
- The client should consider placing future stores in major urban areas near target customers with large disposable incomes. Now that we know that the target customer is no longer only Mexican-Americans, it is possible that the concept will be suitable anyplace in the US.

Case Two

Hughes aircraft is planning to spend \$1 billion to launch a 250-channel TV satellite. Your client, a large cable TV company, is wondering if this action is a serious threat to their business. How would you go about analyzing this situation and providing your client with an answer?

Suggested Frameworks

This case calls for an assessment of the profitability for Hughes. Then, compare that number with the \$1 billion initial investment. If the return looks good, your client should be worried.

Additional Information

• To access the satellite, a homeowner would purchase a small receiver that is placed near a window. The receiver costs \$700 but Hughes is considering leasing options. The satellite will not be launched for 2-3 years.

- The biggest potential threat is in rural areas where cable has not penetrated, but this may not be as big of an issue because so little (<30%) of the US population lives in these areas. Besides, there is not much you can do to keep these customers from signing up with Hughes since that is their only option for service at this time. You should be more concerned with your urban area customers switching over the satellite systems.
- To assess the potential for income for Hughes, assume about 70 million households in the US, 10% market penetration, and about \$360 per year in leasing and in fees for each customer. This equates to about \$2.5 billion each year in revenue with little variable cost. Yes, it looks like Hughes may be a threat.
- What can your client do? There are a few options:
 - 1. Lower cable rates to make entry less attractive.
 - 2. Develop exclusive contracts with channels to block-out the satellite.
 - **3.** Lobby the government for relief (after all, they just regulated you).

Case Three

A turnaround specialist has retained your services to help him evaluate a medium-sized lumber company as a potential acquisition. How would you determine whether the acquisition is worthwhile?

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 the lumber company's processes to determine where you could add value. Also, be sure to consider external factors such as government regulations (the Spotted Owl?), competitor response (always should be considered with industry entry), and technology.

- Because most of the company's products are sold to the construction industry, it faces cyclical demand.
- Most of the company's production facilities are fully depreciated and somewhat antiquated.
- Some reduction in workforce will be necessary to achieve levels of efficiency on par with the best in the industry.
- The company has extensive holdings of forests. The historical ROI for these assets has been 16%. This is actually less than the company's cost of capital of 18%. If the company were acquired, some of the acreage of forests could be sold. This would (1) provide cash to fund capital improvements, and (2) improve ROA.
- The potential exists to placate environmentalists and improve operating efficiency by 1) increasing selectivity in tree cutting, and 2) upgrading process machinery to peel trees more efficiently.
- Ultimately, the decision of whether to acquire the company should be based on a conservative assessment of 1) market potential, 2) the potential to improve the company's operations, and 3) predicted competitive reaction. Because of the cyclicality of the industry, it is particularly important to look at downside and upside scenarios. Sales below projections will be a problem, but sales growth higher than expected may also be a problem if the company ends up starved for working capital.

Case Four

A small biotech firm has discovered a compound that could cure a potentially fatal disease. At what price should the firm sell the drug?

Suggested Frameworks

Begin with a brainstorm of all possible costs that have gone into the drug so far. Then consider what additional costs the firm would incur if it continued to develop further the drug. A three C's will highlight several key issues.

Interviewer Notes

- NPV is king in this case. Push the interviewee to consider also the opportunity cost of giving up the revenue stream by not taking the drug through to distribution.
- The selling price should equal the NPV of the cash flows that the firm would have received over the life cycle of the drug less all of the costs that the buyer will have to incur (e.g., development, and marketing). Factors affecting future expected cash flows: Does this firm have other products already in the market that make it a recognized name? Can it thus expect a price premium? Are its competitors also creating a similar drug? How many customers does this disease affect?

-OR-

- This firm is not a distributor and typically sells out to larger drug companies with established distribution and marketing infrastructure.
- The price should not necessarily be cost dependent, but should be based on the expected value it holds for any purchaser.

Case Five

A major airline is considering acquiring an existing route from Tokyo to NY. 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 go into cost to come to a conclusion.

- Occupancy rates and expected prices will determine revenues. 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. Mentioning fare wars and competitor reaction is a good idea.
 Looking at competitor occupancy rates and fares could be used as a point of
 research.
- Operating costs will depend on expected fuel costs, incremental costs for landing rights, etc. Most airplanes are fixed costs because they are owned or under long-term leases. However, is there another route that is more profitable that these planes could be dedicated to? It is also very important to estimate the cost of cannibalization of existing Tokyo-LA, LA-NY routes. Will these routes be continued at the same level of operation? Last but not least, it is important to note that losing passengers to cannibalization is better than losing them to competitors.

Case Six

A major American airline is considering establishing new routes from Tokyo to several sites in the United States. Would you recommend that they take this action?

Suggested Frameworks

Because the company is already in the industry, industry attractiveness is not the key issue. To begin, try a three C's analysis that will give you an idea of the market environment. Once you understand the revenue potential for these routes, then look at costs. Try the profitability analysis framework as a basic structure.

- This case requires a complete examination of the customers and competition.
- Customers consist of both business and leisure travelers. While business travel from Japan to the US. has been declining at about 25% over the last year, leisure travel has increased at a faster rate. It is expected that leisure travelers will continue to grow at a faster rate than business travelers. Currently, 50% of all Japanese travelers to the US are leisure travelers. Business travelers provide much more attractive margins than leisure.
- It is extremely expensive to buy gates at Tokyo's crowded airport.
- As it turns out, competition will come not only from other airlines at Tokyo, but also from a new airport that's being built in Osaka.
- Furthermore, Osaka is expected to attract a very high percentage of the leisure travelers. It is very inconvenient for leisure travelers to fly out of Tokyo, where there's heavy congestion and where prices tend to be higher due to high gate prices. It is estimated that the leisure travelers at Tokyo airport could decrease by 25-30%.
- If our client continues with their plans for buying gates in Tokyo, they will find it difficult to attract the growing percentage of leisure travelers needed for their new routes to the US. It probably makes much more economic sense to buy gates in Osaka instead.
- Another insight is the recognition that Osaka will increase the total number
 of airport gates in Japan. The intense demand for gates at Tokyo will
 decrease considerably with the greater supply of gates at Osaka. This fact
 most likely doesn't change the benefits of buying gates in Osaka. However,
 there may also be a new opportunity for our client to buy gates cheaply in
 Tokyo to establish new business traveler routes to the US.

Case Seven

You are a successful entrepreneur who started a coffee business several years ago in 1985 (before coffee became so "hip"). You sell your gourmet coffee to New England grocery stores, where customers can buy the beans whole or ground them in a machine situated in the same aisle. Your coffee is extremely popular and the brand is well known, however the market is pretty saturated and growth is slowing. In order to continue your growth, you are considering expanding your grocery store sales into other regions of the country. Another option you are considering is to open coffeehouses under your brand name in New England. Which option is likely to be more profitable?

Suggested Frameworks

• You should start with the 3Cs to get an understanding of how the company is so successful now. You may then want to move into a five forces framework to understand which business is more likely to bring success.

- This case definitely doesn't have a "right" answer, but the path the interviewee takes to their answer is crucial.
- Why has the company enjoyed so much success? How important is its brand name? How important is brand name for purchasers of coffee? Is the product superior or has some other aspect of the business, such as sales or advertising, been the reason for success? Who are the customers? Why has this company been more successful than its competitors
- What potential do the two options have? How much can brand name be leveraged for coffeehouses? In a new region? What capabilities does the company have to support the two types of expansion? Which is more costly? More risky? What is the competition like in these product areas? Etc. Etc.
- In ending with the "answer," the interviewee should summarize the points that led him/her to this decision and should describe any concerns that he/she has about this decision.

Case Eight

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. Another possibility is a basic three C's to analyze the market potential. 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 market.

- The company is a holding company. They have previously made unsuccessful forays into software and into real estate.
- The home security industry 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 system.
- This is in some sense a razor and razor blade sort of business. The economics are:

Item	Retail Price	Cost/Margin
Equipment & Installation	\$500-\$1500	0-10% margin
Monthly service	\$20/month	\$5/month

- What strengths/competencies of the Baby Bell company are useful in this market?
 - 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.

Case Nine

A specialty ceramic materials firm has decided to enter the automotive parts supply business. They have developed new ceramic engine components that when used in a standard internal combustion engine will increase fuel mileage by 20%, decrease pollution by 30%, and improve longevity by 20%. Your client wants to know how to proceed.

Suggested Frameworks

The first place to start is with an industry analysis, perhaps using Porter's 5-Forces to get an understanding of the automotive parts business. From there, look at the new venture's profitability and finally a marketing plan.

- There is quite a bit of internal rivalry in the automotive parts business. This has driven profit margins down to a minimum level. Buyer power is quite concentrated with the big three automakers coming first, then the large engine manufacturers, and then possibly the large automotive supply centers. There are very few supply issues as the components for ceramics are easily found. New entrants should not be an issue because the formulation for our product is a mix of patented materials and processes. Substitutes are the traditional steel components.
- Profitability analysis shows that our components costs \$500 per engine set, while the traditional steel components costs \$50 per engine set.
- The best place to determine cost benefit is on miles per gallon savings. For example, for a 30-mpg car, the new components will get 36 mpg. The average person drives 12,000 miles per year, which is 400 gallons with the old components and 333 gallons with the ceramics. At \$1.25 per gallon, this is an \$83 dollar a year savings. It will take the average driver over 5 years to save the extra \$450.
- However, the average semi-truck will drive over 100,000 miles per year. At 10 mpg to 12 mpg the annual savings are over \$2,000.
- The next step is how to go to market. This company lacks any automotive distribution network or sales force. The company should form a joint venture for distribution with a current automotive parts supply company.

Case Ten

A producer of glass containers is considering making a \$1 million investment to upgrade some process equipment. Would you recommend that they do so?

Suggested Frameworks

Start with a simple cost/benefit analysis. Look at the potential benefits from upgrading the equipment and compare that to the \$1 million cost. To look at the benefits, consider the Porter Five Forces framework to look at likely returns from the industry. Remember that future cash flows from this investment must be discounted at the company's cost of capital.

- This company has only one, albeit large, facility. There are quite a few other glass producers.
- Margins and profits of the entire industry have been eroding for several years.
- There has been and continues to be some cannibalization by plastic and metals. However, glass remains the material of choice for many applications, especially food products.
- The main input material, sand, is inexpensive and plentiful.
- Some of this company's competitors have already made a similar upgrade to their own process equipment.
- The key insight in this case is to recognize the high competitive intensity in this industry. The profit potential, at least in the short term, appears poor.
- Given the fact that there are too many players and too little profit, some consolidation and/or exit of some companies from the industry appears inevitable. This company must decide whether it is worth it to try to ride out this shakeout.
- At least in the short term, the return on the \$1 million investment will likely
 not be adequate to justify making it. However, one interesting possible
 justification for making the investment might be to "dress up" the company
 in order to sell it.

Case Eleven

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

Suggested Frameworks

Because this is a demand-oriented question, once should consider a marketing framework, such as the 3/7 C's. To bring your case to a conclusion, consider the 4P's as a framework

- 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!
- 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. Location of competitors should also be considered.
- 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 profits, share, etc.).
- The client will have to match competitors' incentives to customers and should estimate the cost of these.
- Why would customers want to come to this bank over others? Strong brand name/reputation? Already use bank in other location? Better rates? Lower fees? What is this bank's competitive advantage in other locations and what would it be in this location?

Case Twelve

An Israeli travel agent has been extremely successful. His primary source of revenue is customers who fly to and from the US. He manages to fill up over two planeloads on a daily basis. Given his success, he is considering buying an aircraft and flying the US-Tel Aviv route himself. What advice would you give him?

Suggested Frameworks

This question could be structured by either a marketing framework, to see if the demand is really there, or by looking at industry attractiveness with a framework such as the Five Forces. Try both, or a hybrid of the two, to structure your answer. Do not forget to consider external issues such as competitor response and government action (airlines are strictly regulated in most countries).

- The client is attracting customers due to his own promotion and reputation. He will probably continue to do so if he were to buy his own aircraft. Also, access to hubs, etc., would not be a problem.
- If the route is extremely busy, it is probably very lucrative for other airlines too. Therefore, competitor pressure may be fierce. The dominant operator on this route is El Al (a large airline with deep pockets) that finds this route extremely attractive.
- If our client were to enter the industry, he might trigger a price war initiated by El Al since, if it were not do so, other small operators would want to follow our client's lead and soon El Al might lose this important source of profits.
- The only way our client could fight this price war is by differentiating itself from El Al and other airlines and charging a price higher than El Al's. However, El Al will try to match any such move towards differentiation, and our client will be forced to go out of business.
- The client should also consider barriers other than competition that might
 exist in this market. Besides the cost of buying the plane and contracting all
 related support personnel, your client must meet regulatory standards for
 international travel. Further, the client must consider if two planeloads
 generates enough revenue to cover fixed and operating costs.
- It is therefore best to maintain status quo.

Case Thirteen

How would you compare the airline industry with the baby food industry? In which would you invest your own money?

Suggested Frameworks

This is a classic industry attractiveness question. Use Porter's Five Forces, or even better, create your own framework for analyzing the suitability of an industry for investment.

- It turns out that competition in the airline industry is intense. Fixed costs are
 high and competitors keep cutting prices till they shave margins to the very
 bone. Customers are price sensitive. Brand equity is virtually non-existent.
- Using a microeconomics argument, you see that airlines will keep cutting
 prices as long as they are covering variable costs. Since fixed costs are high
 and probably financed with debt, these companies can end up defaulting on
 interest payments.
- On the other hand, the baby food industry is less competitive. There are two
 or three large players who do not indulge in cutthroat pricing. Products are
 well differentiated. Customers are quality conscious: they will pay a
 premium for quality.
- To invest your own money, baby food is better than airlines due to higher profit potential.

Case Fourteen

Your client has just developed a new product innovation the Palm Pilot. It is completely new, how you go to market with the product?

Suggested Frameworks

Start with 3Cs and then move into a 4P's

- You all know the product. 3Com owns the rights and is ready to go to market.
- Customer This is a major breakthrough so market dispersion will be critical.
- Who is your target market? (people with busy and changing schedules)
- Why will they want to buy your product? (convenience, easy to use/update/change, similar to physical day planner but adds may features)
- How much value does my product offer? (considerable value to unorganized people)
- What strengths to do you have. Large sales force, access to retail market, some brand recognition.
- Competitor standard physical day planner, electronic keyboard planners, plain spiral notebooks.
- Product: What new innovations does it offer? Why will they buy it and what will they use it for? Need to determine specific first buyer group. The first people to buy the product will be innovators. How do you get the innovators to try to he product?
- Place: Where do potential customers shop? Want them to be able to touch and try the product before purchasing.
- Promotion: How do you advertise the product? Do you discount? Advertise product to people who are technology-savvy and like to try new products.
- Price: What value does the product offer to customers. What are your costs? How much of the difference between a cost and value to consumer can you capture? How much will it cost to change over given the customers investment in organizer he/she already owns? Value must be greater than this cost. Price the product between total cost to get product to customer and the value to customer (given that he/she might already have an organizer.) The more value you leave on the table for the customer, the more sales you will have!

Case Fifteen

A large US cutting tool manufacturer, with a dominant market share in the US but minimal presence abroad, is considering entering the German market. They believe Germany is attractive because of its industrial base.

Suggested Frameworks

This case is adaptable to a few frameworks; you could try using Five Forces, but do not get locked into running through all five. Another approach is to use a mix of the 3 C's and 4 P's.

- The cutting tools that this company manufactures are many different types
 of drill bits that go onto machine tools, and are used in metal working
 applications from machine shops to auto manufacturers, and many other
 industrial applications.
- The business is divided between standard parts, and custom-designed parts
 for specific applications. Standard pieces are sold through distributors and
 direct through a sales force, while custom-designed pieces are sold through
 a direct sales force. Custom-designed pieces are much more profitable than
 the standard pieces, and our client is interested in this market.
- (At the time of this case) Germany is a growing market for cutting tools, due to a strong industrial base, especially in heavy industries where there is the possibility to sell custom-designed pieces in large volumes to customers.
- Germany appears attractive because it could provide a foothold to enter the
 rest of Europe, where again our client has a negligible presence. France and
 Italy also appear to be attractive markets, and the experience gained in
 Germany could help to establish a European name for the company.
- There are about ten competitors in this market, all German, none of which has more than a twenty- percent market share. There is little movement among competitors in terms of stealing share from each other. They are all basically growing along with the growth of the market in general.
- Some competitors are stronger in custom designed tools while others are strong in standard tools. All competitors have direct and indirect sales forces. Each of the competitors has a very strong relationship with their customers. Customer loyalty is so strong that cutting tool firms send salespeople to customers of competitors every day for years before winning the account. Once a supplier has established a relationship with the customer, the supplier is almost assured of a cash stream over a period of years. This makes the cost of acquisition of new customers extremely high.
- As the direct sales force is the key to winning customers, and the strategic focus of our client, our client could not enter through distributors. On the other hand, they could not hope to enter with their own direct sales force because of the expensive and long customer acquisition process.
- They established a joint venture with a company that had a strong customer base, but did not have superior engineering capabilities to custom design pieces.

Case Sixteen

A major greeting card company is considering a proposal from Yahoo to advertise its e-commerce product, a greeting card that is sent to the recipient as an e-mail attachment. Your client will get an exclusive position on the website's front page that will help drive traffic to its greeting card site. The Yahoo exclusivity costs \$2 million per year for the next two years.

Is it a good deal? Should your client do it? Will they make money?

Suggested Frameworks

This is a classic revenue/cost problem. To begin, determine the traffic and customer base that will be attracted from the Yahoo portal and the resulting revenue. Then compare this to the proposal cost as well as internal costs to deliver the electronic greeting card product. There are also some peripheral considerations for the Yahoo deal.

Interviewer Notes

Customer Base from Yahoo:

50 billion visits to Yahoo's site (per year)

Click through rate to greeting card site – 1:1000

5% sell rate

Result: 2.5 million sales via Yahoo (interviewee calculation)

Cannibalization:

25% of traditional greeting card business = 625,000 (interviewee calculation)
Incremental increase in card sales (delivered electronically)
= 1,875,000 (interviewee calculation)

Revenue:

\$20 million in revenue from all cards (traditional paper and electronic)

S10 million in electronic card revenue

 $Production \ costs = \$0$

 $Design\ costs = margin = 50\%$

Card cost to customer = \$2-6 per card (average is \$4 per card)

Profit = \$2 per card (interviewee calculation)

Net Profit:

Incremental revenue from electronic greeting cards = $1,875,000 \times \$2 = \$3,750,000$ (per year) (interviewee calculation)

Less \$2 million exclusivity cost for Yahoo

\$1.75 million in profit per year

So, yes they should do the Yahoo deal

Other Considerations:

- Repeat business
- Competitive Landscape. Other greeting card companies could jump into the business and cannibalize your client's traditional business regardless of whether they do this. Also, other players already offer free electronic cards

Case Seventeen

Two high net-worth individuals want to invest in the local Boston telephone network. More specifically, they would like to acquire a CLEC (Competitive Local Exchange Carrier). As the consultant to these clients, you need to identify the key success factors they should seek when analyzing the CLEC's.

Suggested Frameworks

This is a classic case for the three C's framework. After delving into company, competitors and customers, the interviewee should be able to create a basic list of success factors. To begin, the interviewee should really tap into the competitive environment and the industry itself, especially if he/she does not know anything about the telecom industry.

Note: is a funny case since you are essentially "shopping" for a company and therefore looking at a number of companies. There are no facts the interviewer can give to the interviewee about a particular company – just industry facts. The interviewee simply has to determine what would be the important issues to examine.

Interviewer Notes

- The telephone industry was deregulated in 1996—this case takes place in late 1997/ early 1998.
- Because of deregulation, CLEC's are now able to lease telephone lines from the big Bell companies. The idea is that the CLEC's lease the lines for a limited time (7 years). During that time, they will build their own networks so that at the end of seven years they can operate lines independently.
- CLEC's sell phone service packages to commercial customers (not end consumers)
- There are twenty to thirty CLEC's in the Boston area. All CLEC's currently in the Boston area are unprofitable. This is due to the high start-up costs and the lack of current revenues. Most will turn around in the next few years
- Both investors have no telephone expertise, but both have experience in the cable TV industry. Investors are looking to hold the company for three to four years before selling

Company. The interviewee might want to explore these areas:

- **Financials.** Today, all the companies in the industry are unprofitable. This means that the issue here is potential worth, not necessarily current worth.
- **Product.** Ask about the package price to the commercial customers. Most of the CLEC's compete on price for their services. Service with most of these CLEC's therefore is probably seen as a commodity service.
- **Management.** Does the management team work well together? Will they work well with the investors? Do they have experience in the industry?
- **Infrastructure.** Will the company be able to build it's own network of lines so that it can run independently at the end of 7 years?

• **Service.** Does the company have the capacity to service its customers in day to day activities, emergencies, etc? If the CLEC's cannot compete on price, they may be able to compete on service.

Competitors

- **Fragmentation.** With so many CLEC's in the market (20-30), the industry is pretty fragmented. There is a potential, therefore, for a CLEC to differentiate itself on service and geography.
- **Ma Bell.** Bell Atlantic is still a major player in the market, despite all of the small local companies. Commercial business can still opt for Bell for their local service. This is a huge competitor with lots of marketing power.
- Other entrants. Without going necessarily into the 5 Forces model, the interviewee can ask about the possibility of other entrants (cable companies offering phone service for example) coming into the marketplace.

Customer

It is here that the interviewee can spend some time segmenting the market.

- 1. The CLEC's serve commercial businesses. As a result, the investors would want to acquire a CLEC in a desirable geographic location (the financial district in Boston may be more desirable for example than a more residential neighborhood such as the South End)
- 2. You may want to look at the types of commercial customers that the CLEC targets: large businesses, medium-sized, small...high tech requiring lots of phone lines vs. more traditional types of businesses, etc.
- **3.** Customer service is probably key in this industry since most of the CLEC's compete on price. Service can be a distinguishing factor.

In the end the interviewee should sum of some of the key "success factors" to look for in an acquisition target. Among them may be:

- Right customer base (based on segmentation above)
- Appropriate infrastructure for short term and long term growth
- Good management team
- Opportunities to partner perhaps with other companies for further expansion (cable TV companies, Internet service providers, etc.)

Case Eighteen

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

Suggested Frameworks

Remember Man Ec; the firm can either use a penetration or skimming pricing strategy. Consider the impact of either strategy on the company and its competitors. Also, do not forget to think about any substitutes for aluminum cans.

Additional Information

- It turns out that our 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.

- Clearly, our client should either drop price (market penetration) or reap additional profits (market skimming).
- If our 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 our client's market share marginally, but
 some smaller competitors will have to start exiting the industry and larger
 competitors will have to start investing in discovering our 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.
 Dropping prices could start a price war that might erode profitability and attract new and powerful entrants into the industry. The cost advantage may help another day during a price war.

Case Nineteen

Your client is a service provider that maintains databases for directory publishers (telephone companies etc.), The company which is wholly owned by a large corporation is 40 years old and holds a 50% market share. 65% of its sales are to 10 customers (its customer base is highly concentrated). It recently lost a major customer that represented \$4 million of its \$45 million in annual sales. It has been a cash producing business for the parent company and the parent is wondering if the database company will be viable in the future.

Suggested Frameworks

Using basic profitability analysis, the problem seems to be a revenue shortage from reduced unit sales. Unit sales can fall because:

- 1. Customers are simply not buying the product/service,
- 2. They are buying it from someone else, or
- **3.** They are doing the service themselves (this is a risk often unique to services).

Look at their core competency to see how valuable it really is to the customer.

- The company has not been keeping technology up to date (it is a cash cow) and its customers, given the growth of PC technology, are doing their database marketing and formatting on their own.
- Unless the company can find new ways to use their core competencies, it
 may not be viable for much longer. What are their likely competencies and
 how may they extend to other industries or businesses?

Case Twenty

GLAXO Wellcome and Smith-Kline Beecham, have announced a merger. Why would these two firms merge and what issues might arise?

Suggested Frameworks

- This is a straight value chain case focused on cost reduction and leveraging
 of existing resources. You should look within each area at profitability
 (both revenues and cost.)
- **Research:** Some overlap in development, but most improvement comes in increased leverage of common fundamental research. Not a main driver because limited economies of scale in research, but some gravy.
- Potential savings: Facilities, decrease basic research spending, more communication/knowledge sharing.
- **Manufacturing:** Some consolidation of plants as excess capacity can be used and can achieve greater economies of scale. Also should get better prices with vendors because of economies of scale.
- **Potential savings:** Facilities, increased economies of scale, better power over suppliers.
- Sales: Major driver as each company can expand scope using other firm's
 sales force into new geographies. One is strong in Europe; other is strong in
 South America. They are both strong in US though, so also substantial cost
 savings though reductions in US sales forces.
- **Potential savings:** Decrease size of sales force, decrease advertising with one combined company.
- **Distribution:** Can shutdown many warehouses in US to lower costs.
- Risks:
 - Brand risks if an approved drug is found to be harmful.
 - Culture clashes.
 - Management succession.

- Both are pharmaceutical firms, but they have little overlap in term so f products or markets.
- Increasing pressure from providers and recipients for lower costs have put a lot of pressure on Smith Kline and Glaxo.
- Expected annual savings of \$1.5B
- They have different product lines,

Case Twenty-One

I am a manufacturer of railroad cars in a declining market. My firm is losing market share and money but I think the industry may rebound in the near future. What should I do?

Suggested Frameworks

This is an industry analysis question. You could first start off with a Five Forces analysis. Then you could think about a value chain analysis. Finally, you could analyze the company's core competencies to determine other options.

Another potential way to think about this case is to use a new product/market matrix as a point of discussion around the company's options for future growth.

		Market Share	
		High	Low
Industry Growth Rate	High	Star	Question Mark
	Low	Cash Flow	Dog

- The railroad industry has undergone massive consolidation due to excess capacity. As a result, railroad companies will probably require fewer railroad cars in the future.
- The client does have excess capacity and should consider leveraging its manufacturing abilities to enter new industries.

Case Twenty-Two

You have been working on an engagement for the president of a medium-sized manufacturing company that has been suffering drops in profit margins. The president's staff includes the VP of Operations, VP of Marketing, and VP of Finance. Although equal in title, the VP of Operations has the most influence on the president, and has been worried about losing some of that power to the other two VP's. The results of your work indicate the Operations organization is the trouble spot: it is overstaffed by approximately 40%, and has seen rising costs and falling productivity. You know that in order to implement your suggestions for improvement, the President as well as his staff need to "buy into" your solution. How do you tell everyone?

Suggested Frameworks

There is no framework for this case. It takes some thought and maybe a little common sense. Do not be surprised by cases that do not use standard frameworks to work through.

- The president believes in the VP of Operations, if the VP doesn't buy in, neither will the president.
- The VP of Operations will be worried about losing face by having run a poor organization. You need to worry about his ego and how he will respond.
- The best approach may be to gather the three VP's for a meeting. Do not tell the group what the results are, but lead them through a discussion of case facts that lead to the answers. In this way, the three VP's will feel as though they have arrived at the solution themselves. Most importantly, it will allow the VP of Operations to appreciate fully the state of affairs.

Case Tewnty-Three

Your client is a large electric utility. Consolidation has been widespread in the utilities industry and your client wants to know if they should be jumping on board this trend. What advice would you give them?

Suggested Frameworks

First of all, if you do not know anything about the changing regulatory environment, do not be afraid to ask (unless of course you worked in the industry, in which case you should be very afraid!). A good way to start your analysis might be to look at an industry value chain to try and determine in which links there could be cost savings associated with increased size. Another useful tact might be to draw analogies between utilities and other recently deregulated industries such as telecom and airlines to form hypotheses for the future.

- The industry has been deregulating.
- Individual states have control over exactly how and when the utilities located in their states will be de-regulated. Some states are proceeding more quickly than others are.
- It is quite probable that soon individual customers will have a choice as to their power suppliers. Many large industrial customers already do.
- There is quite a bit of over capacity in the industry. However, much of this
 capacity is necessary for the infrequent surges in demand due to
 exceptionally warm/cold weather.
- Many utilities located in dense population areas have relatively high
 production costs. Existing transmission capabilities are sufficient to carry
 power from rural to urban areas. This transmission comes at a small cost,
 but can be less than the rural-urban price differential.

Case Twenty-Four

You client is a large real estate development company considering buying a piece of real estate in Colorado. How do you analyze the investment?

Suggested Frameworks

- You need to determine the highest and best use for the land in order to assess its value. To do this, you should start with the 3Cs:
- **Competitors.** Analyze other similar plots of land that have been developed with like characteristics Utah, Montana, even the east like New Hampshire. What other commercial developments exist in the area? Is there an abundance of any one type? Horseback riding stables? Fly-fishing camps? Is there enough demand to handle another competitor, or do you need t branch out?
- **Customers.** Consider existing activities that many people do within the area as this may show what people are interested in doing with the land. Segment the potential market: residents, vacationers (summer and winter). Which groups are the largest and which are growing. Analyze the unmet needs of each group, can you fulfill them in some way? Do you want to try attracting a new group that does not already vacation or reside in the area? (very expensive and risky)
- **Company.** What specific skills do you have to improve or manage this land? What specific characteristics does the land have that might differentiate it for better or for worse?
- Then you need to analyze:
 - Financials—How investment fits in portfolio, geographic or product diversification;
 - Liquidity risk of the investment; Investment time horizon;
 - Whether improvements can have multiple uses if the original idea fails;
 - If you have the skills to manage the property, and
 - How you intend to ward off potential competitors by creating a unique value proposition.

- The property has 5,000 acres of open land. The land is currently undeveloped, has several small hills and abuts a mountain. There are seven horse riding stables in the area, two of which offer cattle drives, like in City Slickers.
- The property is 45 minutes from Telluride, and skiing area, home of a large summer film festival and a 5 star resort and spa.
- Company currently owns hotels, strip malls, and office buildings nationwide.

Case Twenty-Five

Your client is a premium manufacturer of washers and dryers. It sells its products through small specialty shops. Recently its market share in the overall industry has been decreasing. What should the client do?

Suggested Frameworks

The key element to this case is the fact that the traditional distribution channel for washers and dryers is diminishing. In order to survive, your client must negotiate with department stores. It is important to identify the critical issues when attempting to do this.

- Department stores will want your product because 1) It will pull people into the store and allow them to cross-sell; 2) It will enhance their brand equity by selling a premium product. 3) Margins are normally greater on premium priced products.
- Department stores may be wary because 1) Your products may cannibalize their proprietary product line. 2) They may feel like they are giving too much power to one supplier.
- There will probably be backlash from the small specialty shops. This will have to be dealt with diplomatically. Channel conflict is inevitable.

A mutually beneficial opportunity exists between the department stores and your client. This will have to be negotiated. The important fact is identifying all of the key issues involved.

- The image of your clients company is premium. They are perceived to have the best products on the market.
- There are two distinct segments of the market. The normal-low end segment and the premium segment.
- Your client has maintained market share in the premium segment.
- The percentage of washers and dryers that has been sold through major department stores has increased from 20% to 60% in the past 20 years.
- Small businessmen own the small specialty shops. They stock all brands and types of washers and dryers.

Case Twenty-Six

Your client installs and services security systems for both residential and commercial customers. It is the market leader, with a 10% market share and sales of \$1B. The company's customer service rating has begun to decline. What should the client do?

Suggested Frameworks

Begin with a 3 C's analysis and then perform a SWOT. Identify potential reasons for the company's decline in customer service.

You should question the implications of "market leader" status and recognize that customer service is often best conducted by smaller, more customer-focused firms. Pinpoint what has recently changed in the industry (recent bankruptcies or acquisitions, etc.)

- The company currently has 1 million customers. This number is expected to double over the next 10 years.
- Customers have to call a different phone number for each type of question or problem. Call wait times are often long. The company is considering the creation of a 1-800 number with an "emergency" option and voice mail.
- Time to receive service is also a problem. The company is considering a
 workforce restructure (e.g., add more repair personnel or add more
 technically knowledgeable staff to the help desk), as well as a job tracking
 system which would allow the staffer to send a repair person familiar with
 that customer or type of system.

Case Twenty-Seven

Your client is a national beef brand. The board wants to know if its advertising campaign has been successful. How would you evaluate the campaign's performance?

Suggested Frameworks

This is a different type of problem in which you would first have to determine the company's advertising campaign objective. Some objectives could have been to increase sales of beef, increase awareness of beef, or alter the growing public perception of beef as being bad for your health.

- Assume that the objective was to increase sales of their branded beef.
- Measures of success could include:
 - 1. Sales as a percent of sales overall (any increase in market share?)
 - 2. Any increase in price premiums charged?
 - 3. Any increase in brand recognition?
 - 4. Market growth
 - 5. Share of market

Case Twenty-Eight

A commercial retailer has been approached by a new warehouse that wants their business. Should you take the deal?

Suggested Frameworks

This case is really an analysis of which of two options is better for the client.

Interviewer Notes

Current Charges:

Monthly Fee: \$3.50 per pallet

Average Monthly Storage: 10,000 Pallets

Pallet Turnover: 26 times per year

Moving Fee (In and Out): \$2.75 per pallet

New Warehouse Size: 150,000 square feet to 175,000 square feet

Proposal:

Flat Rate: \$1,500,000 per year Warehouse Size: Unlimited

Calculations

Monthly Charge: (3.5)(10,000)(12) = \$420,000 per year Turnover: 365 / 26 = 14 days (almost twice a month) Moving Fee: (2)(10,000)(2.75)(12) = \$660,000 per year

Total: \$1,080,000 (Do not take the proposal)

As Shank would say, "Let's take a closer look."

Assume Pallet Size: 5 feet x 5 feet or 25 square feet

Monthly Pallets: (10,000)

Monthly Square Feet Of Pallets: (10,000)(25) = 250,000 Stacked: (250,000) / (150,000) = < 2 times so must be stacked.

Judgement

As the company grows it may need additional space and the old warehouse will not be able to fill the company's needs. When the economics look better the company should switch to the new proposal in order to handle growth.

Case Twenty-Nine

Your client is a Korean conglomerate (Danut) that has acquired a small Boston-based biotech firm. This company has developed a chemical that helps control the ripening of produce. After limited testing, this chemical appears to work especially well with apples; it allows apple orchards to harvest earlier and improves the overall quality of the harvest. Your client would like to know if they should attempt to commercialize this chemical.

Suggested Frameworks

Explore four areas:

- 1. Market: Size, growth, and characteristics assess overall attractiveness
- 2. Profitability: Can we make \$? Are existing players (if any) profitable?
- **3.** Differentiation: What is our positioning? Is it unique? Is it defensible?
- **4.** Reality check: Can the company do this? Do they have the resources?

Suggested Solution

Market

Apples are grown throughout the United States. Our client, for the moment, is only concerned with the Maine market.

- 20,000 acres are devoted to apple orchards in Maine
- \$30,000 / acre is the average revenue for apple orchards
- \$600 MM is the total market size which seems large enough to continue
- The market is growing at ~5% p.a.

Approximately 200 orchards in Maine. Thus, the average orchard has a 100 acres of land.

Profitability

Pricing is easily the most important issue in this case. This is a value-based pricing problem—how much incremental profit does our product create for an apple orchard owner, and how much of that benefit can we capture?

Our client's product provides three benefits to orchard owners:

1. Earlier Harvesting—It costs money to maintain a growing field of apple trees. For example, the possibility of frost in Maine forces farmers to cover their trees, etc. Our client has given a sample of the product to a farmer with 300 acres. This farmer spends \$1,500/night to maintain an active crop of apple trees and was able to harvest his crop 10 days earlier by using the product.

Estimated Savings: \$1,500 X 10 days / 300 acres = \$50/acre/year

2. Better consistency of apples—Orchards split their harvest between the whole-apple market (25% of a crop) and the juice market (75%). For the whole-apple market, the farmers must sort through the harvested apples and

separate out any apples that are not red and ripe. Our client's product improves the consistency of red apples and improves this yield by an estimated 5%.

Estimated incremental revenue: \$30k X 25% X 5% = \$375/acre/year

3. Increased sweetness—F For apples dedicated to the fruit market, this product improves the overall sweetness of apples. Thus, it takes fewer apples to make apple juice. It is estimated that the sweetness factor improves yield by 10%.

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Estimated incremental revenue: \$30k \ X \ 75\% \ X \ 10\% = \$2,250/acre/year
Total benefit to orchard = \$50 + 375 + 2,250 = \$2,675/acre/year
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A study of technology innovation in the agriculture industry has shown that new products typically capture 1/3 of total benefits created for users. Thus, it is reasonable to expect that our client can price the product at \$1,000/acre/year.

Costs. It is estimated that the product will cost \$1,000 / kg to produce. Tests indicate that 1 kg of the product can support 200 acres of apple crop, meaning it costs \$5/acre to manufacture the product. Thus, gross margins are \$995, a 99.5% margin. Raw materials (mainly egg yolk), transportation, warehousing, and sales and marketing are relatively small. This is an enormously profitable product.

Differentiation. No product like this exists on the market. Our client has a patent on the manufacturing processes needed to make the product and the patent does not expire for 11 years. Potential competitors can probably develop their own manufacturing processes, but we are estimating an 18-24 month lead-time. The actual product is a combination of proteins found naturally, and it is therefore not an option to patent the product itself.

Execution. The client is a huge conglomerate and easily has the resources to make any necessary investments. One might be concerned that the opportunity is actually too small relative to the size of the client. However, this acquisition is part of an overall company effort to acquire small, entrepreneurial companies that will drive technological innovation. This opportunity is a good fit.

Conclusion. The product and market opportunity are almost too good to be true.

More Case Questions To Try

This section has some additional questions you could think about. Again, try various frameworks and practice giving a structured answer out loud.

Sample Cases

- 1. A multinational oil company has called you in to prepare a five year strategic plan for its Far East operations. How will you go about preparing it and what actions would you suggest?
- 2. A major airline wants to purchase aircraft for its Tokyo hub. How many should it purchase?
- 3. Why do airline companies batter each other over prices despite poor profits? Would you invest in this industry?
- 4. You are the product manager for a noodle product company. You have two major product lines: cup products and block products. Your product lines are losing money. What should you do?
- 5. Our client is considering diversifying into the insurance business. How would you go about valuing an acquisition in the insurance industry?
- 6. The productivity of the sales & trading staff of an investment bank is much less than that of the competition. How would you go about improving it?
- 7. How will you measure the performance of drug reps that make visits to doctors' offices? This is an intricate problem as there is no way of determining whether doctors are prescribing the clients products or not.
- 8. My friend and I are having drinks at a popular cigar bar in downtown Chicago. My friend wants to buy the place. How much should she be willing to pay for the business?
- 9. Our client is in the "new age" fruit juice business. They have seen a decline recently in demand for their product. What might be going on here?

Market Sizing & Estimation Cases

Case One

Your client is Wilson Tire, located between Hanover and Lebanon on Rte. 120. Mr. Wilson is attempting to size the market for snow tires in Hanover. Help Mr. Wilson estimate the total market size and how many purchases might be made each year.

Suggested Frameworks

None. This case is intended to test comfort with numbers and quantitative ability. This case also requires that plausible numerical assumptions be made. The key to this case is to be organized and methodical.

Interviewer Notes

- As with regular framework cases, there is not a "correct" answer to this
 case
- This question might begin with an estimation of the total population of Hanover. This total might include a student vs. full-time resident population.
- Next, a person might consider number of cars per household or number of cars per student. It might also be a good idea to consider the types of cars that will require snow tires (i.e., 4-wheel drive might not require tires).
- Special consideration might be given to students. First, some students may buy their tires out-of-state.

Finally, consider how often people install tires on their car and how many snow tires people buy (2 or 4).

Case Two

How many gas stations can a town support?

Interviewer Notes

You are expected to make assumptions about factors that you feel are important in arriving at an answer. In this question, there are two distinct approaches: the demand side approach and the supply side approach.

The demand side approach:

Assume the town has a population of 500,000. Let's say the average family has two adults, two children, and one car. This implies we have (500,000/4)*1 = 125,000 cars. Assume each car is driven an average of 50 miles a day and you can get 10 miles per gallon. This means daily consumption is (50/10)*125,000 = 625,000 gallons. Assume each gas station has 4 pumps on average and each pump, when in use, can pump at a rate of 5 gallons per minute. Assume further that out of an average 12-hour day, pumps are busy 80% of the time. This means that each gas station can produce 12*.8*60*5*4 = 11,520 or approx. 12,000 gallons per day. Since daily consumption was 625,000 gallons, we need 625,000/12,000 or approx. 12,000 gas stations.

Remember that the numbers are not important; the process of breaking down the problem and solving it is.

The supply side approach:

Try putting numbers to this yourself. Assume profit margin and price of gas. Estimate amount of gas that a station needs to sell to make a decent profit. Estimate daily consumption of gas. Combining the two estimates, arrive at the number of gas stations.

Case Three

How many gallons of unleaded gasoline do automobiles consumer each year in the United States?

Suggested Frameworks

None. This case is intended to test comfort with numbers and quantitative ability. This case also requires that plausible numerical assumptions be made.

- Estimate the number of cars in the US.
- Estimate the number of miles traveled by each of those cars each year.
- Estimate the average miles per gallon for each automobile.

More Market Sizing & Estimation Cases To Try

This section has additional questions you can break down, analyze, and attempt to answer Again, practice giving a structured answer aloud.

Sample Cases

How many snowplows do you need in the US?

How many American Express cards are there in the US?

What would you estimate the US market for skis to be?

What is the weight of a Boeing 747? How would you find out quickly? You can't ask Boeing.

How many pounds of beef are sold in the United States?

How many tombstones are sold in the US each year? Do you think it is a high-potential market?

What do think are Lou's most profitable brunch entrees, and why? (Beverages NOT included)

How fast does the Earth rotate?

Sketch a demand curve for the health care industry and show why we are spending so much.

You just got on an elevator with 30 floors above you. Two others get on. What is the probability that you all get off on the same floor?

You tie a string tightly around the globe at the equator. Then you loosely tie a string that is 4 inches longer around the same parameter. What is the distance between the first and second strings? (If you do not remember your formulas, it is ok to ask the interviewer, they aren't testing your memory here!)

Can you explain what the Dow Jones Industrial Average is?

What is the Gross Domestic Product of the US? Of Japan?

"Brainteasers"

Case One

World real interest rates rose by about 1/2 % from the time of the Pharaohs till the 1950s. Since then, they have risen by about 4%. Why do you think this has happened?

Interviewer Notes

This is a perplexing question with a relatively simple answer. In the last four decades, the demand for money has risen due to a large number of entrepreneurial endeavors, corporate mergers and acquisitions, and global expansion of businesses. The world money supply, however, has not kept pace with this. As a result, the interest rates (the "price" of money) have gone up.

Case Two

Why are manhole covers round?

- Therefore, they do not accidentally fall into the manhole.
- You can roll covers instead of carrying them.
- Round shapes will offer the widest opening for the least total opening area. This will help reduce metal costs.

Case Three

Why are soda cans cylindrical?

- To allow easier gripping.
- To allow easier, denser packing in dispensing machines.
- To avoid sharp edges that might cut hands.
- Circular surfaces can easily distribute internal pressure. In addition, surfaces with edges could develop fractures due to high stress at the edges.
- Cylinders provide the maximum volume for the least surface area and this saves metal costs. Only spheres are better than cylinders in this regard, but they are impractical.

Case Four

You come across a bomb that is about to go off if you do not stop it! To neutralize the bomb, you must get EXACTLY four gallons of water in the empty tub to which it is attached. The only equipment you have is one empty 3-gallon jug, one empty 5-gallon jug and an unlimited supply of water. What do you do?

Interviewer Notes:

- There are no markings on the jugs or the tub. The only thing you know is that one jug is 3-gallon and the other jug is 5-gallon.
- You can pour out water if you want to.
- The jugs have to be completely filled. You cannot make eyeball assumptions about a half-filled jug. You have to make sure you get EXACTLY 4 gallons in the tub.
- Once the interviewee has figured it out, ask them to try it again another way. There are two ways to answer the question.

Suggested Solution

Method One. Fill the 3-gallon jug and empty it into the tub. Then, fill the 3-gallon jug and empty it into the 5-gallon jug. Again, fill the 3-gallon jug and empty it into the 5-gallon jug. Only 2 gallons will fit, therefore you have one gallon left in the 3-gallon jug. Pour this one into the tub and you will have exactly 4 gallons.

Method Two. Fill the 5-gallon jug and empty it into the 3-gallon jug. Only 3 gallons will fit and therefore you will have 2 gallons left in the 5-gallon jug. Empty these 2 gallons into the tub. Do this again - and you will have exactly 4 gallons in the tub.

Helpful Hints

Make sure to think outloud.

Case Five

Why is there no light beer in the UK?

Suggested Frameworks

This problem does not fit a common framework, but can be dissected by simply listing the alternative reasons for each component of the issue. Here is one approach:

The reason there is no light beer could be because:

- 1. Consumers do not demand it,
- 2. Producers are not producing it, despite consumer demand, or
- **3.** Some outside influence, such as the government, will not permit light beer in the country.

Following the consumer option, one can think of reasons why there is no demand for light beer, such as the tradition of taste for dark ales and local pub brews. On the producer side, most beers are manufactured by local pubs, which have integrated forward and formed an oligopoly. They have locked foreign light beer manufacturers out of the market. The entry barriers are too high to be profitable. Government protection could also contribute to this barrier.

The Resume Case

These are appearing more and more often in the interview circuit. The interviewer will ask you to analyze the strategy of your former employer, the Tuck School, your department, etc. The object of this interview is to see if you have the ability to step outside of your job and see the big picture surrounding your old company and industry.

Also, expect questions such as, what would you recommend to the CEO? Your manager?

Practice these with a partner. There is a good chance you will get one, and not being well versed is especially problematic. You certainly cannot claim not to understand the business.

Another example might be:

What was the most quantitative project you ever managed? Can you sketch your analytical process on the chalkboard for me?

The moral of this story: Think about your projects and look at your old reports, if necessary. Know your resume cold.

Cases With Slides

What They Are

In some interviews, you will be given data or slides to interpret, instead of being given a purely verbal case. Although most interviewers do not put exhibits together for interviews, at times, you will be presented with a slide and asked to interpret it.

There are advantages and disadvantages to slide-based interviews. The advantage is that you can target your questions very specifically to pieces of information that need to be explained, such as "please explain the units used on this axis," and "what do the size of these bars represent?" This will buy you time while you think about the slide without feeling like you are getting off track, as well as provide you with some insight.

The disadvantage is that after having spent all the time preparing the exhibits, the interviewer has a pretty specific idea of what kind of interpretation he / she is looking for. The fun part is, there's a story behind every slide, and it's just waiting for you to tell it.

Cracking the Slide-Based Case

Make sure that you understand all of the elements on the slide. If you do not understand the units used, or how to interpret different elements on the page, do not hesitate to ask your interviewer for clarification.

Think through the implications of the different elements on the page. Do the axes give you any indication of what would be favorable or unfavorable for the client?

Look for anomalies; usually the point that the slide is trying to make will stand out in some way. Look for an element that stands out from the others, either an especially high or low growth, a small or large sized bar, or the use of shading.

Check with your interviewer as you interpret the slide. It's quite possible that not all of the information will be contained in the slide, and the interviewer will be expecting you to ask for clarification. They may also have another backup slide they are waiting for you to ask for, so go ahead and question away.

Bubble Chart

The bubble chart is one of the all-time consultant favorites, and you'll see it adopted by a broad range of consulting firms. In the 1997-98 interviewing season, the "bubble" made its appearance in several first-year case interviews.

The Layout

- The bubbles represent either different companies or different businesses within a company. The size of the bubbles correlates to the sales of the company. It's a good idea to check out the bubble used as a key to orient yourself as to the scale.
- The X-axis usually shows market share. In the case of our sample slide, the market share is described in relative terms to other companies in the industry, with .1 being a small share and 10 being a large market share.
- Although most times you will see small share on the left and large on the right, it can also be reversed. A quick glance at the numerical sequence of the X-axis will tell you whether being on the left is favorable or unfavorable.
- The Y-axis can show either market growth or profitability.

What It's About

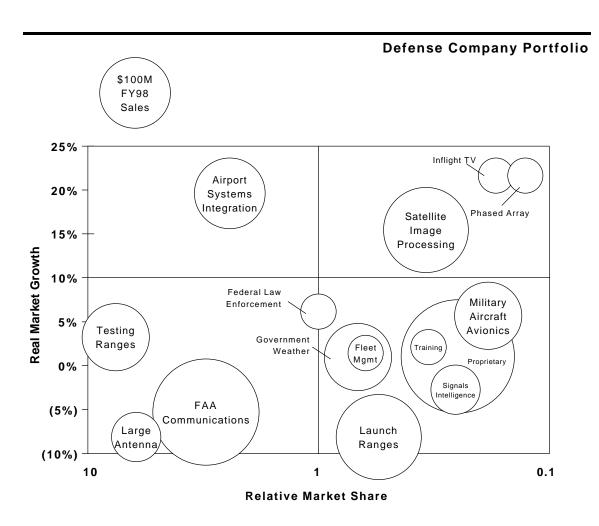
- The bubble chart allows you to show three dimensions of data on one slide.
- The three dimensions are generally used to show the relationships among market share, company size and either growth or profitability.
- When the slide shows growth against market share, the information portrays
 how attractive each of the businesses are now and going forward. A
 company or business unit with good market share and high growth has
 potential, and conversely, a company with poor share and growth is usually
 a dog. While this relationship does not always hold true, it's a good rule of
 thumb.
- When the slide shows profit against market share, the information gives more of a snapshot of how well each company is doing today in the market. You would expect to see a somewhat linear relationship between share and profit. Companies that fall above the line are extracting above average profits, and those below the line are of below average profitability.

The Sample Slide: Defense Company Portfolio

Try to look at the slide and interpret it before reading the bullets below. What story does the slide tell you? What other information would you ask for?

- This bubble slide represents the portfolio of a diversified defense company.
- The total sales of the company, judging by the key, are a little over \$1B.

- Many of its largest businesses, about a total of \$700M, are either declining or at no growth (probably because of reduced defense spending), and many have poor market share.
- Using a growth-share matrix interpretation, Airport Systems seems the most promising business unit, and the Satellite Image Processing is a question mark. We would need to know the profitability of each of these businesses to understand exactly how attractive they are.



Merimekko

Originally the name of a European fabric company famous for producing patchwork designs, "Merimekko" now means market map.

When we analyzed this slide, we had not yet seen the next one. It's a good idea to try to interpret them in this order because this might be how they would be given to you in an interview.

The Layout

- Each category represents a different product line or target market, and all of the categories together add up to the size of the market. Usually, there would be a dollar revenue figure under each category, to give you an idea of the total market size and how much each bar represents.
- The Y-axis shows what percent of revenues is from each of the segments in the category bar.

What It's About

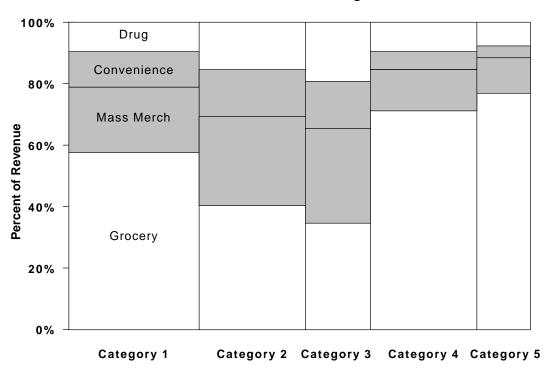
- This slide allows you to see at a glance how important / large different market segments are, and where the sales in each segment are going on a percentage basis.
- The shading brings your attention to the key segments in the market, and by eyeballing the slide you can see in relative terms what percent of the market they represent overall.

Sample Slide: Category Channel Development

Try to look at the slide and interpret it before reading the bullets below. What kind of industry could this slide be a market map of? What would the categories be? What does the shading suggest to you about the client? What courses of action might you suggest to the client? What other information would you ask for?

- The market is for a group of products sold in grocery stores, mass merchandisers, convenience stores and drug stores, and grocery is the largest channel. It is probably the snack food market.
- The categories might be different kinds of snack foods, like salty snacks (chips, pretzels, etc.), sweet snacks (cakes, cookies), diet snacks, nut snacks and fruit snacks.
- The shading suggests that the convenience and mass merchandiser channels are important; either the client is strong in those categories, or these categories are growing rapidly. The interviewer would have to provide you with some insight here.
- If the shading represents where the client has strong distribution, then you
 might suggest trying to develop more products suited to those channels.
 Otherwise, the client might try to gain more strength in the grocery channel,
 which reaches the bulk of the market.
- If the shading represents channel growth, you might suggest the client focus its selling efforts on these channels.

Categories 4 and 5 derive less revenue from the Convenience and Mass Merchandiser channels than other categories examined.



Different Sized Bars

This slide is not necessarily such a standard as the others in this group of slides, but it's interesting because it demonstrates how consulting firms can vary bar charts to give more of a dynamic picture of their analysis.

The Layout

- The X-axis represents the different categories in the market.
- The Y-axis shows the CAGR for the categories.
- The area of the bars themselves show how much of the market the categories represent.

What It's About

- This type of bar chart, although simple in design, allows you to show four types of information on one slide: The categories in the market, the growth in each category, the size in each category, and the growth of each category relative to the others.
- Overall, this growth picture will tell you how attractive each of the different categories are, and how important they are.

Sample Slide: Channel Growth

Try to look at the slide and interpret it before reading the bullets below. What does this slide tell you about the different channels? How does this relate to the previous slide? What course of action would you recommend to the client now? What information would you still want to ask for?

- Instead of categories on the X-axis this slide has channels, and tells us
 which channels are growing faster than others. The mass merchandise and
 convenience channels are growing faster than the others, and they are also
 of considerable size.
- Put together with the previous slide, we can see that categories 1, 2, and 3 (possibly salty, sweet and diet snacks) have a lot of sales in these two channels and these two channels are growing faster. Conclusion: these are attractive segments for our client.
- There are several possible courses of action that you could recommend; one is that they push the products that are in the growing segments, and support them with more advertising and spending.
- Finally, we still need to know about profitability in the different categories and market segments to be able to tell our client where to focus.

The Mass Merchandiser and Convenience channels have been growing faster than Grocery and Drug.

