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TOP CONSULTING INTERVIEW PREP

# TUCK CONSULTING CLUB CASE BOOK

## 2009-2010 Edition



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## INTRODUCTION

This book provides a brief overview of the case interview process, a few tools to keep in mind when preparing for interviews and a collection of practice cases. We hope it is helpful in your preparations. Thank you to all our contributors:

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**GOOD LUCK!**

# RECRUITING INTELLIGENCE

## Interview process timeline

1. Over the summer

**Prepare your resume:** Think of succinct ways to describe your main achievements. Show the skills consultants are looking for: leadership, teamwork, academic excellence, analytical skills, problem solving, personal achievement and personal impact.

**Read the newspaper:** Use current events to practice breaking down business problems and thinking about how to structure a solution.

2. First few weeks at school

**Participate in resume review:** Leverage CDO student fellows, second years and study group members to refine and revise your existing resume.

**Attend Sector Smarts:** Attend panels of recent Tuck alumni who share their experiences. Ask questions and decide what is important to you in your choice of career. Decide whether consulting meets your objectives.

3. September

**Attend company briefings:** Attend as many briefings as you can in your area of interest. Many of the firms that recruit at Tuck will come to Hanover to make formal presentations. These presentations are often followed by an informal Q&A period which gives you the chance to meet some of the firm's employees. Many of those presenting will be Tuck alumni and may well be involved with interviewing later in the process - first impressions matter! Try to learn about the culture of each firm, its values, and why its people believe it's a great place to work.

**Talk to second years:** The recruiting period can be bewildering, so talk to those that have been through it already. This is the best place to ask questions that you might be embarrassed to ask elsewhere.

**Remember that most second years will not be around after Thanksgiving, so ask early and ask often!**

4. October

**Attend Crack the Case workshops:** These workshops are hosted by second years with prior or internship experience with management consulting firms. These four in depth workshops, each building on the previous, are designed to help you perform your best in the case interviews used by many firms.

**Consulting Trek:** This three-day trip over the October break provides a comparative look at all the major firms. We visit each firm at their office – this is a critical opportunity. Do not miss it.

**Establish links with Tuck Alumni:** Building relationships at your firms of choice will express your interest and help develop your understanding of firms, particularly if you have a strong location preference

**Practice case interviews:** Work with your peers (both friends and other you are not close with) and work by yourself (you don't need an interviewer to practice structuring a problem or

performing “public math”)

#### 5. November/December

**Outreach with other offices:** It is critical that you make contacts in several offices of your key firms. Speak to Tuck alums there. Get the inside scoop to see which office is best for you and your background. It may not be Boston or NY, so explore freely. This is overlooked by many candidates. The firms wish Tuckies applied to a broader geographic spread of offices! So consider it and do your due diligence by speaking to people.

**Apply to firms:** Deadlines and methods vary for each firm. If in doubt, ask. Have a back-up plan, it never hurts. Tuck’s policy is that 50% of interview slots are “closed list” positions. A “closed list” position means you were selected by the firm for an interview. If you are not “closed listed” you can still bid for an interview slot.

**Practice case interviews:** Continue to work with your peers and work by yourself. Some firms may visit campus and run sessions to help you prepare for the interviews

#### 6. January

**Refine technique:** Formal second year practice coaching session will be organized with second years (and in some visiting firms) This period is very busy and involves a lot of balancing of school work and interview preparation. **Prioritize your practice.**

**Fit interview prep:** Cases are important, but they are not the only factor. Do not neglect preparing your story. Make sure it is clear, concise and that you can tell it in an engaging manner. The fit component matters, particularly in final rounds. Firms want smart people who are good to work with. Show them that you meet those criteria.

#### 7. February

**Formal on campus interviews.** First round interviews are typically held on campus. Firm’s interview practices are similar but key differences do exist. Second round interviews will usually be at the firm’s office. Again, the exact process varies from firm to firm. - Speak with the CDO if you have any questions.

*The entire process is well tried and tested. You will get a lot of help but it also requires a concerted effort on your part to be successful. Don’t underestimate the importance of practicing cases and your own style!*

## What are the firms looking for?

Key success factors associated with each firm will vary, however there are a number common points to remember when compiling your resume, submitting applications, and interviewing. These key success factors are divided into two key areas: 1) case-based skills and 2) experienced based characteristics:

### Case Based Skills

- **Problem solving skills (dealing with ambiguity):** These themes may seem obvious when considering the case interview but are mentioned here for two reasons.

First, does your resume show a history of success in this area? Secondly, don't let yourself get flustered by interviews that don't follow the typical path. Stick to a logical approach even in less structured interviews.

- **Analytical Skills:** Your analytical skills are often tested through your ability to structure a problem and its various components. This skill can be learned and refined through practice. It is important to have structure in your problem solving as you will need to effectively communicate your plan of action to tackle the problem. A well designed structure makes this communication easy and will help you effectively solve the problem. Do not confuse structure with frameworks (the frameworks provided in this book will help you think about an appropriate structure but they are seldom used in isolation as a structure to solve the problem).

- **Quantitative skills:** Most cases will involve a quantitative component. These math problems typically involve high school level math. To complicate the experience, you are often not given all required information required to solve the problem. Your setup is equally or more important to your ability to use solve basic math. Also remember to walk your interviewer through your calculations and approach as you complete the problem vs. being a silent calculator.

- **Synthesis skills:** Your ability to weave insights together throughout the case and to develop a coherent synthesis (not a summary or travel log) is important in any case interview.

### Experience based characteristics

- **Personal Achievement:** You will be up against a very competitive group of applicants that all have similarly impressive academic and professional achievements. Distinguish yourself by showing that you are successful in your personal life, using examples from outside work/school if possible. This will add breadth to your candidacy.

- **Leadership:** Discussion of leadership is a common activity at Tuck but it can be hard to quantify. Some people will have obvious leadership experience but for others, you will need to make sure that leadership elements in past experiences stand out. Practice describing these events in a succinct and understandable way.

- **Teamwork:** Some would call this the "airport test." Are you someone that the interviewer wants to work with on a difficult and time consuming case or be stuck in an airport with? The interview is your chance to show that you fit with the culture of your chosen firm/s. This is a two way process: do



they like you and do you like them? The best advice here is to try to relax and be you. There are many other areas that could be mentioned. Some firms will rate some higher than others. Try to build a picture of this as you listen to firm presentations, talk to employees and scour the respective firm websites.

### Structure of a case interview (example)

Order	Section	Duration	Skills	Objective
1	Meet & Greet	1-5 min	Inter-personal	Utilize information from the interviewer bio to make a connection. Relate to the interviewer with similar experiences (from Tuck, if possible)
2	Receive the Question	1-2 min	Listening	Take notes. Pick up as much data as possible
3	Clarify the Question	2-3 min	Finding data	Rephrase the Question. Dig a little deeper with follow-up questions with general strategy frameworks (e.g. 4P's/3C's)
4	Develop a framework to solve	10-15 min	Analytics, problem solving and public math	Frame Problem Walk the interviewer through the solution
5	State the conclusion (synthesis)	1-2 min	Big Picture thinking	Synthesize findings. State larger considerations Of the solution (overall impact)

### How to give a case interview

Your role as a case interviewer is to present a problem and act as guide for the interviewee. The interviewee does most of the work and the best interviewer will stay mostly passive with limited directive probing throughout the process. Here are some interviewer best practices:

- **Prepare:** Make sure you have read the case before the practice session. You should understand the most important facts before you sit down with your partner. All too frequently an interviewee is shortchanged by an interviewer who is not able to adequately facilitate
- **Role Play / Facilitate:** Act as a consultant for interviewee's desired firm
  - Set the scene with small talk
  - Control the time of the interview through the questions you pose, shoot for about 25 minutes in length
  - Selectively challenge the interviewee's hypotheses when appropriate to probe deeper and

- better analysis.
- Be tough, but give subtle clues when at an impasse
- **Be complete:** Make this a real interview experience
  - Make the interviewee synthesize the key points
  - Ask resume or personal background questions
  - Allow the interviewee to practice their questions to the interviewer
- **Respond:** Take notes and give feedback at the end, so that the interviewee can learn from the process. This feedback should:
  - Clarify what went well and not so well
  - Present elements of the case that were missed
  - Direct the interviewee toward areas for improvement
  - Be comprehensive as you address the interviewee's presences and poise in addition to the technical skills they present

*Note to all interviewers: Always give critical and constructive feedback. Be as honest and forthcoming as will be meaningful to your interviewee. Mutual improvement is your goal and may require uncomfortable conversations.*

## STRATEGIC TOOLS AND FRAMEWORKS

### General Tools for Case Interviews

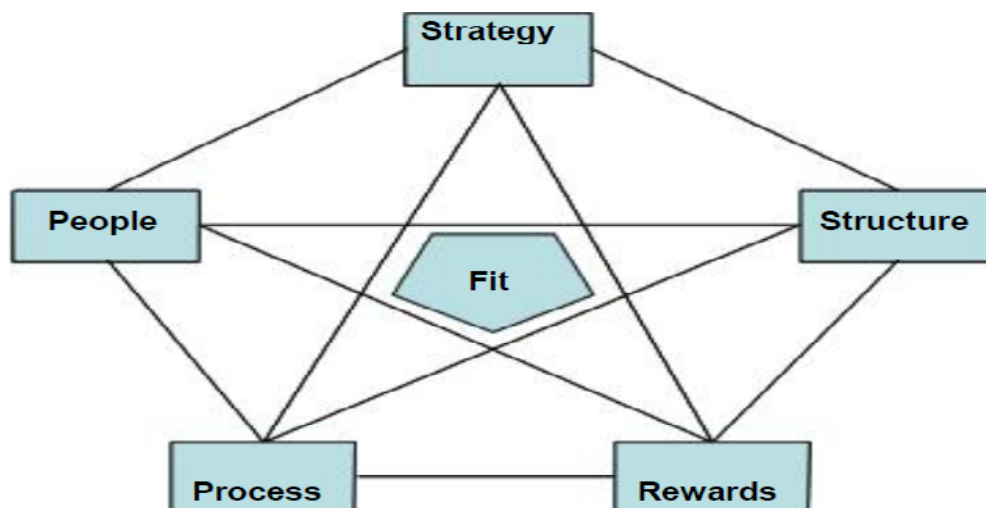
When preparing for case interviews, you will hear repeatedly, “Learn the frameworks,” and “develop the analytical tools.” The problem for most people is that nobody ever explains exactly what frameworks and tools they are talking about. The list presented in the following sections, though not exhaustive,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

As you become more familiar with these frameworks and tools, you will develop a higher level of comfort in developing your own frameworks (or structures) to tackle a problem. Early on in your practice you will find that you may be reliant on the frameworks to the point where they become your structure. More advanced interviewees can rely on the framework foundations to develop their own structure to solve the problem.

### General Strategy

#### Star Model

The Star Model provides a framework for organizational change. Each of its elements are interdependent; a change in one area will require change in other the at least one of the other areas. Using the Star Model helps prevent the error of focusing on a single element of the business and ignoring important attributes associated with all aspects of the organization.



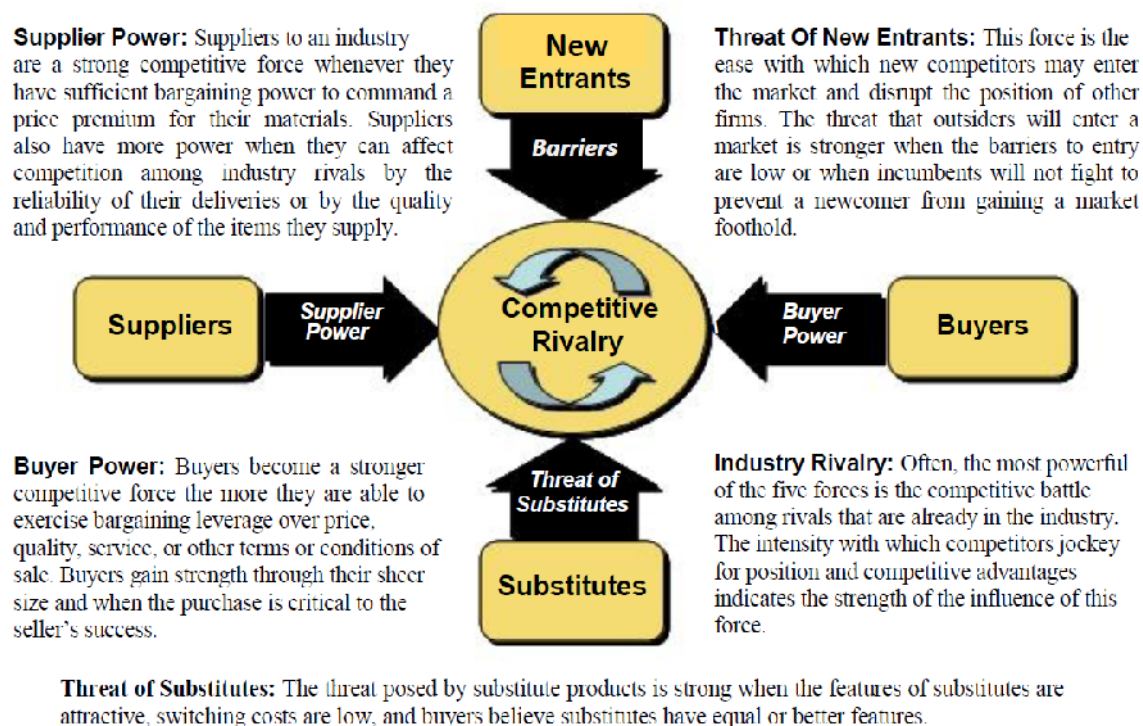
#### SWOT Analysis

SWOT (Strengths, Weaknesses, Opportunities and Threats) provides a simple structure for evaluating a business (both internally and externally). This basic framework may be helpful in structuring an analysis about a company’s position and the external environment.

	Positive	Negative
Internal Factors	<p><b><u>Strengths</u></b> Use/Leverage</p>	<p><b><u>Weaknesses</u></b> Stop / Minimize</p>
External Factors	<p><b><u>Opportunities</u></b> Exploit / Expand</p>	<p><b><u>Threats</u></b> Defend</p>

### Porter's Five Forces

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



### Core Competency Analysis

A core competency is something a firm does well and is often a source of competitive advantage. Core competency analysis involves the identification of which processes a firm executes very

well. After identifying the core competencies, one can then determine how they may be leveraged to further develop the business (e.g., expand into new, and sometimes unexpected, areas. A core competence must be:

- Truly superior
- Sustainable
- More powerful than other strategic levers
- Capable of creating future value propositions

*Example:* Honda recognized its core competency of engine building. It transitioned it into building 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 combination with a value chain analysis of a business.

<b>Industry / Market Attractiveness</b>	<b>High</b>	<b>PROTECT POSITION</b> Invest to grow at maximum rate Concentrate effort on maintaining strength	<b>INVEST TO BUILD</b> Challenge for leadership Build selectively on strengths.	<b>BUILD SELECTIVELY</b> Specialize around limited strengths Withdraw if substantial growth is lacking.
	<b>Medium</b>	<b>BUILD SELECTIVELY</b> Invest heavily in most attractive segment Build up ability to counter competition. Emphasize profitability.	<b>INVEST TO BUILD</b> Protect existing programs Concentrate on segments with high profits/low risk.	<b>LIMITED EXPANSION</b> Look for ways to expand without high risk, otherwise minimize investment and rationalize operations.
	<b>Low</b>	<b>PROTECT AND REFOCUS</b> Manage for current earnings Concentrate on attractive segments.	<b>MANAGE FOR EARNINGS</b> Protect position in most profitable segments Upgrade product line	<b>DIVEST</b> Sell at time that will maximize cash value. Cut fixed cost and avoid investment meanwhile.
		<b>Strong</b>	<b>Medium</b>	<b>Weak</b>
<b>Competitive Strength</b>				

### GE/ McKinsey Matrix

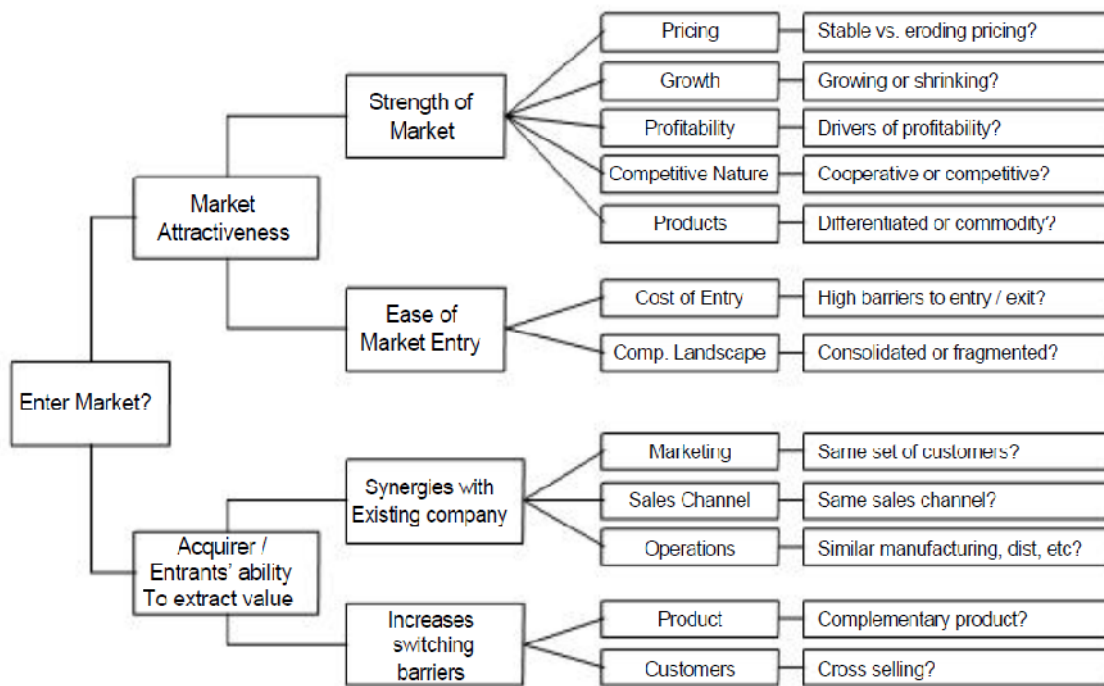
This framework provides a method to evaluate business opportunities or different business units. It is useful for assigning investment priorities and resource allocation. Its use is similar to that of the BCG matrix, but replaces Industry Growth and Market Share with Market Attractiveness and Competitive Strength and increases the granularity of analysis.

### Decision Trees

Decision trees provide a general structure for almost any kind of analysis. In fact, they are the basis of any of the tools presented above. 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. Continue to peel back the layers of the problem until you have reached a sufficient level of detail. 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. We have included an example market entry tree below:

Market Entry Decision Tree Example



## Marketing/ Positioning

### The Three Cs (Or Is It 7?)

The Three Cs is simple framework that can be helpful to evaluate the 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 toward 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)

### **Segmentation**

Market segmentation is a process of dividing/grouping a market (i.e. customers) into smaller subgroups. These segments are homogeneous (i.e. people in the segment are similar to each other in their attitudes about certain variables). Because of intra-group similarity, they are likely to respond somewhat similarly to a given marketing strategy. Successful segmentation requirements are: homogeneity within the segment, heterogeneity between segments, segments are measurable and identifiable, segments are accessible and actionable, segment is large enough to be profitable

The variables used for segmentation include:

- Demographic variables
  - Age
  - Education
  - Family life cycle
  - Family size
  - Gender
  - Income
  - Nationality/Race
  - Occupation
  - Religion

Sexual Orientation  
Socioeconomic Status

- Geographic variables
  - Climate
  - Country size
  - Region of the world or country
- Behavioral variables
  - Brand loyalty
  - Decision Making unit
  - Product end use
  - Product seekers
  - Product usage rate
  - Readiness-to-buy stage
- Psychographic variables
  - Attitudes
  - Life style

When enough information is combined to create a clear picture of a typical member of a segment, this is referred to as a buyer profile. When the profile is limited to demographic variables it is called a demographic profile. A statistical technique commonly used in determining a profile is cluster analysis.

Example: An auto manufacture has sought differences in its customer pool. It has identified three key variables to segment on: Gender, Age and Income Level. From these segment variables, it finds meaningful breaks and constructs buyer profiles.

## Operations/ Productivity

### *Framework for Operations Strategy*

Use this framework to understand a company's manufacturing strategy and whether or not this strategy fits 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.

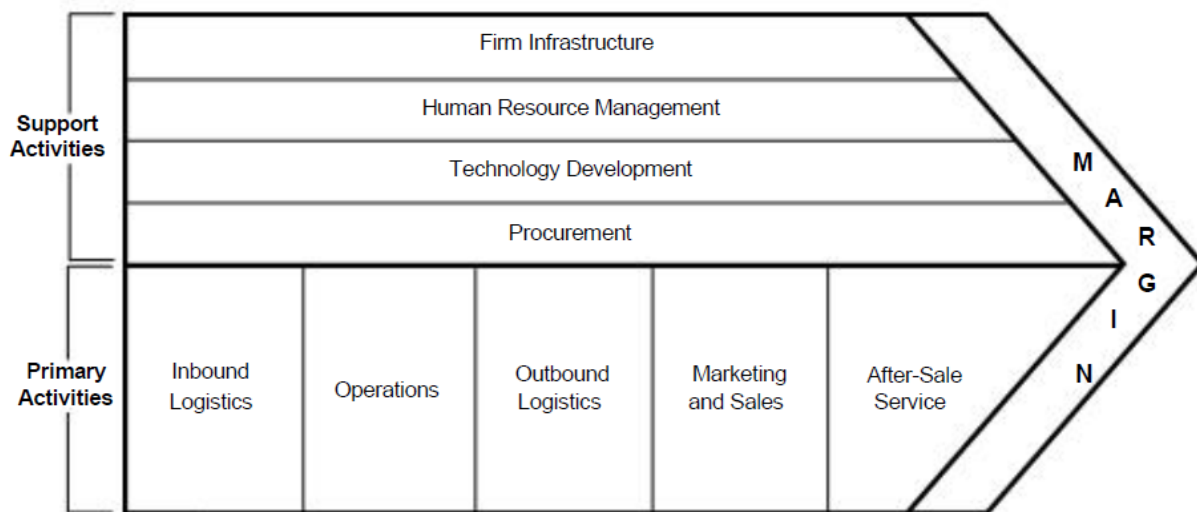
Once you have defined the manufacturing strategy in terms of Cost, Quality, Delivery & Flexibility mentioned above, there are 10 management levers you can use to pursue your goals: facilities, capacity, vertical integration, quality management, supply chain relationships, new



products, process and technology, human resources, inventory management and production planning and control.

### Value Chain Analysis

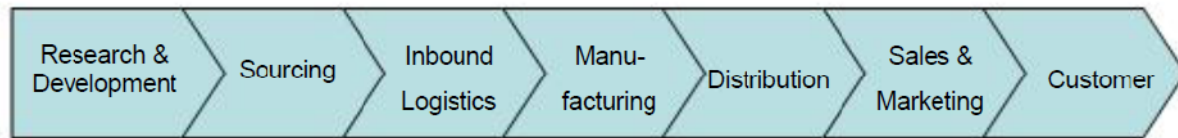
This analysis can provide a good outline for analyzing a company’s internal operations and the value of each step in making a product or service go from raw materials to a finished good or service. Value chains vary dramatically for every industry, but here are two examples that can be customized:



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 core competencies 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 is 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.

## Synergies

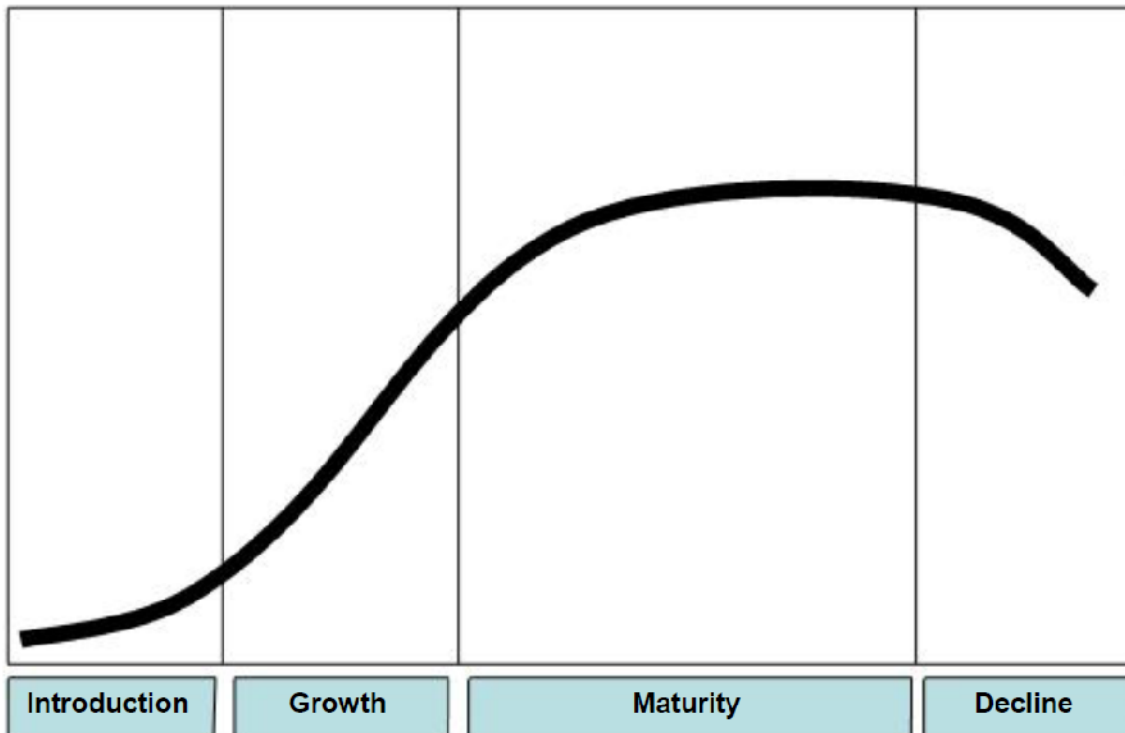
This idea is used in many settings, but it can be especially useful in analyzing the potential benefits of mergers or acquisitions (a popular case interview topic). Synergies can come in many forms, but here are a few to look for:

- 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)
- Eliminating redundant headcount from a newly combined entity (e.g., duplicate R&D, Marketing, Sales, etc)

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.

## Product/ Technology Life Cycle

This concept takes into account the passage of time when discussing the sales of a product or technology. Products and technologies 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. **Introduction Growth Maturity Decline**



### 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.

### 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 Sigma. 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.

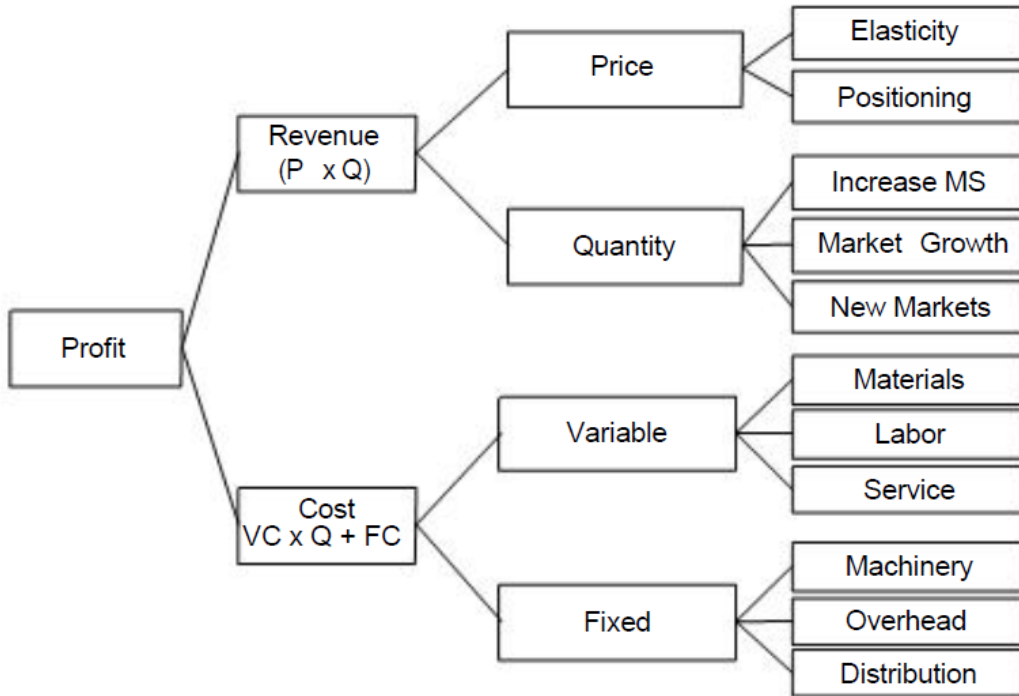
## TYPES OF CASES

### Financial Analysis/ Profitability

#### *Profit Tree*

Breaking profitability down to its simplest components is common analysis performed in consulting cases. Dividing profitability into components such as revenue and cost can be helpful in discovering the causes of a less than favorable bottom line. While many methods may exist for

discovering sources of financial problems, walking through a tree similar to the one below can provide a comprehensive structure to discovering the area where you should focus your analysis.



### Cost Driver Analysis

This analytical tool can help you understand what makes a particular kind of cost go up or down. These areas are covered in Tuck’s Managerial Accounting class. A neat reference to these topics is found below.

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

## Breakeven Analysis

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 breakeven 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 per unit represents the revenue remaining after factoring the variable costs to produce 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 subtracts the total fixed cost.

$$Profit = Q \times (P - VC) - FC$$

### Example Case: Bun on the Run

**Case Description:** This case aims to help a client improve its profitability from its airport fastfood business

**Inventory:** [no exhibits]

**Industry:** Retail/Consumer Goods [Fast Food Chain]

#### Potential applicable frameworks:

- |   |  |  |   |
|---|--|--|---|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3 C's             | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> <u>Microecon. Analysis</u> |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External        |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other                      |

---

## Introduction

Our client, Bun on the Run, operates a fast food restaurant chain. The industry's average profit margin is 3 to 5%. However, our client currently is making only 1.5%.

*Question 1:* How can you help them increase their margins to 3%?

---

## Case Details

*Info to be given as case progresses:*

- The fast food outlets are on toll roads and in airports
- The airport outlets are franchises
- Airports constitute most of their business
- The low profit margins are due to their airport business

*Info to be given if asked:*

- **Industry:** The industry is fairly mature and stagnant
- **Market:** The client operates in 80% of the airports and present in all large airports; they service 90% of all airport passengers
- **Competition:** There is only one other competitor, who has the remaining 10% market share; their margins are on par with the industry
- **Menu:** Standard fast food menu; competitor is no different
- **Costs**
  - *Variable costs:* 70% ( **COGS:** 35% , **Labor:** 35% )
  - *Fixed costs:* 30% ( **Airport Fee:** 10% , **Infrastructure:** 5% , **Rent:** 15% )
  - **COGS:**
    - Core ingredients (bread, meat, etc): 70% of COGS. Already optimized and cannot cut costs anymore
    - Non-core ingredients (paper towels, ketchup, etc): 30% of COGS. Contracted through SYSCO and costs are competitive
- **Labor**
  - Most employees are salaried and full time, earning minimum wage of \$6/hour
  - Benefits start after 6 months
  - Turnover: 200%
  - A new employee costs an additional \$18/hour; this cost includes training (4 weeks) and background check

## Recommended Solution

### Question 1

The client is experiencing a high turnover of employees who were getting trained and then going to work for a nearby McDonalds for higher wages. Since new employees are expensive (\$18 training per hour + \$6 wages per hour), the turnover is bleeding the client's profit margins. Solution is to reduce turnover/increase retention rate, thereby reducing costs and increasing profit margins.

### Overall Recommendations

*A good answer includes:*

- Identifying the components of the costs and narrowing it down to the high turnover issue.

*A better answer includes:*

- Suggestions for increasing employee retention rate, such as making benefits available earlier, and paying above minimum wages

*A superior answer includes:*

- Suggestions to increase retention rate with minimal costs, such as increasing job satisfaction of employees through cross-training
- Identifying implications of suggestions, such as cross-training reducing utilization

## Market Sizing

At times, interviewers may ask questions that are different from those presented so far, but try to evaluate you along much the same lines. Market sizing questions are often reserved for undergraduate interviews but may be presented to you as a component of a greater case question or as a second case during the interview if you have extra time. There are no specific frameworks for these types of questions. There are a number of steps to remember when effectively tackling a market sizing question.

- 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 300 million. The population of Canada is about 33 million, while the population of Mexico is about 100 million.
- Always remember to give your answer “the sniff test” before committing to it. If you are trying to determine market for baseballs and your result is in the trillions it just plain smells funny.

### *Example Case: Magazine Market*

**Inventory:** [no exhibits]

**Industry:** Magazine

---

### Potential Applicable Frameworks

- |  |   |   |   |
|--|---|---|---|
| <input type="checkbox"/> Profitability           | <input type="checkbox"/> 3 C's                        | <input type="checkbox"/> Value Chain              | <input type="checkbox"/> <u>Microecon. Analysis</u> |
| <input checked="" type="checkbox"/> Market Entry | <input type="checkbox"/> 4 P's                        | <input type="checkbox"/> Supply Chain             | <input type="checkbox"/> Internal / External        |
| <input type="checkbox"/> Competitive Threat      | <input checked="" type="checkbox"/> Porter's 5 Forces | <input checked="" type="checkbox"/> Market Sizing | <input type="checkbox"/> Other                      |

### Introduction

Your client is the CEO of a publishing company that produces a line of educational magazines as well as a line of women's magazines. Both businesses are profitable but are not growing quickly. He wants to start a third monthly magazine in the U.S. targeting 30 to 50 year old men. His stated goal is to generate circulation revenue of \$10 million in the first year. He has hired you to figure out whether this is possible.

---

## Case Details

**Question 1:** Is it possible to generate \$10 million in circulation revenue in the first year?

*Info to be given as case progresses:*

- This is an estimation case. The key is to clearly define your assumptions. The specific answer is not as important as long as you are making reasonable assumptions.

*Info to be given if asked:*

- Hints on assumptions below
- 

## Recommended Solution

### Question 1 Details

Sample assumptions:

- Based on normal distribution with a life span of 80 years, approximately 2/3 of the population is between 30 and 50, or 100 people. Half of these are men, or 100 million people.
- Of these men, approximately 1/2 would read a magazine (50 million)
- 10% of these would read a men's journal (5 million)
- 5% market share capture in first year (250k)
- Magazine cover price is \$2.50 to \$5.00 (\$3.00 news stand and \$2.00 subscription)  
50/50 split between news stand and subscribers: \$250k + \$375k = \$625k per issue
- Assume monthly magazine x 12 = \$7.5 million annual revenue
- This is less than the \$10 million target

### Overall Recommendations

*A good answer includes:*

- Reasonable assumptions and logic about market size

*A better answer includes:*

- Above plus breakout of subscription and newsstand revenue

*A superior answer includes:*

- Detailed industry insight and practical recommendations for CEO



## Industry Analysis/ Market Entry/ Growth Strategy

These cases ask you to use your knowledge of microeconomics, marketing and even common sense to analyze an industry or market. They test your ability to evaluate viable markets and opportunities and prioritize factors that make it easy or difficult to enter the market.

### Example Case: Splat!

**Inventory:** [no exhibits]

**Industry:** Consumer Products

### Potential Applicable Frameworks

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Profitability      | <input checked="" type="checkbox"/> 3 C's  | <input type="checkbox"/> Value Chain              | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain             | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input checked="" type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

---

### Introduction

We have a private equity client that is considering purchasing a small company that makes paintball guns (Splat). Sales last year were \$50M, net profit was \$20M, and they have been growing at 50% per year. The client has asked us for help in evaluating this investment. You & I are the team members who will do the bulk of the thinking and analysis.

*Overarching question:* How would you evaluate whether or not this paintball gun company (Splat) is a good investment?

*Comments on structure (feedback of good/bad structure to be given **after** the interviewee creates their own approach):*

- The company is growing really quickly. We'd probably want to find out its potential future growth. To do this, we'd want to understand
  - Is the market attractive?
  - Can Splat succeed in the market?
- In addition, the attractiveness of this investment depends on the valuation/price our client is paying for Splat (will not get into the details, but should mention it)

---

### Case Details

**Question 1:** Is the market attractive?

*Info to be given as case progresses:*

There are no secondary research reports on the paintball gun market. We're going to have to estimate it ourselves.

*Info to be given if asked:*

- **Market size:** the interviewee should identify that the market can be sized by making assumptions about the following (prompt if necessary):
- Population size: US = 300MM, assume US only
- Paintball participation: 10% of the population plays paintball in a given year
- Gun purchasers: 10% of players actually purchase (rather than rent) a gun
- # of guns purchased per year: Average purchaser buys 1 per year  
Average price of a gun: \$100
- Annual market size is  $300M \times 10\% \times 10\% \times 1 \times \$100 = \$300M$
- The company had \$50M of sales, which means they would have 20% of the market.
  
- **Market growth:** *Focus on how you would estimate. Case data is 20% growth.*
- Look at the same drivers of market size to see if they are growing
- Survey people to find out about participation, purchasing habits
- Call stores that sell paintball equipment and ask them how fast sales are growing, and what is causing growth
- We found that the market is growing ~20% per year and will continue to do so for the next several years.
- This implies that at 50% growth Splat is gaining share

**Question 2:** What position does Splat have relative to its competitors? How do customers view our products?

*Info to be given as case progresses:*

*Prompt interviewee if needed:* You'd want to know how Splat's product compares to competitors in the eyes of customers

*Info to be given if asked:*

- **End customers:** How would we figure out what customers think? Survey people who bought paintball guns...prompt for possible survey questions  
e.g. When you bought the gun, what were the most important criteria?  
e.g. How did Splat rate relative to other guns you looked at?
- When surveyed, customers indicated they buy based on reputation for quality, and Splat is known as having the best paintball guns on the market. 2 other players are viewed quite favorably, but not as highly ranked as Splat.

**Retail customers** - So the market is growing at 20%, and Splat has a slightly better product than

our competitors. What else could lead to 50% Splat growth vs. 20% market?

- Brainstorm for interesting ideas
  - Other than the people who purchase the gun, retailers are a key customer
  - Sell through paintball specialty stores, large chains of sports stores such as Galyans, Sports Authority, & Wal-Mart.
  - Splat's sales have been steady through specialty channel, but growing ~60% per year in large chains. What might be going on?
  - Stores might be growing faster than the stores our competitors are selling through
  - No, we surveyed store managers in a bunch of these stores and they consistently said sales were growing at 20%. They sell all brands, and Splat was doing slightly better than others (~25% growth).
  - Our stores may be adding new locations, or Splat has recently been added to some of these stores
  - Yes. Over the last few years, the chains have added Splat to a few stores per year. They are now in almost all of the stores.
- 

## **Recommended Solution**

The company has been growing fast for a few reasons:

- High market growth
- Quality product
- Adding stores
  - Adding stores appears to be done, so growth will only be from market growth & share gain vs. competitors, estimated at 25%
  - Depending on the price of the deal, the company should buy Splat if the return meets their needs with the company growing 20-25% per year over the next few years

(If time) What risks would you highlight?

- Maybe paintball is a fad, and participation will stop increasing or even decline
- Maybe brand perceptions change quickly, and we will lose share
- Maybe someone will get killed or injured playing paintball. If it's our gun, it's a legal issue. If it's another gun, it may result in decreased participation.

## **Overall Recommendations**

*A good answer includes:*

- Structuring an approach to answering the overarching question (i.e., identifying the need to understand the market, competitors, and customers)
- Understanding the different components that make up the market sizing

*A better answer includes:*

- Recognizes that Splat growth is much greater than market growth and quickly trying to identify the source of the discrepancy

- Realizing that roll-out into the retail channel/supply chain could be the current source of extraordinary growth for Splat

*A superior answer includes:*

- Move quickly through market sizing, uncover the difference between market and Splat growth, and understand the difference between the two
- Understanding the importance of end consumers and retailers in order to solve case
- Identifying that there are risks to every investment worth considering

## **Additional Resources**

- Other School Casebooks
- See \Consulting Club\Tuck Casebook 2009\Additional Cases for recommendations
- Firm websites
- Second year students
- Books, including: *Case in Point*, *Vault Guide to Case Interviews*, etc.

## IV. PRACTICE CASES



Tuck Consulting Club

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### **Chateau**

**Case Description:** Evaluate investment in small Chateau/bed and breakfast in France

**Inventory:** [no exhibits]

**Industry:** Hospitality

**Potential applicable frameworks:**

Profitability  
Market Entry  
Competitive Threat

3 C's  
4 P's  
Porter's 5 Forces

Value Chain  
Supply Chain  
Market Sizing

Microecon. Analysis  
Internal / External  
Other

### **Introduction**

---

There is an investment company that has purchased a 12<sup>th</sup> century chateau in central France, located about a 3.5 hour drive from Paris, 1 hour from Loire Valley. The local area is primarily countryside, small villages with lots of character, lots of tourist stuff within 1 hour drive from the castle. The castle has gone unused for ~30 years, but once refurbished will be a 6 bedroom bed & breakfast.

The company is looking for 50 investors to pay \$15K each to start up the business. The investors will each receive 2 weeks per year free stay at the castle as well as a 1% ownership stake in the company. You've been out of college for a few years and have managed to save a bit of money.

*Overarching question:* How would you go about considering whether or not to invest?

*Comments on structure:* In order to evaluate the investment, the interviewee should recognize that the question is really asking whether or not the Chateau will be successful and make money—rendering it an attractive investment opportunity. The structure of the interviewee's approach should be based on evaluating the Chateau's profitability. Even better is a break-even approach to this question.

### Case Details

**Question 1:** Estimate the chateau's financials. Will it make money?

*Info to be given as case progresses:*

- Prompt the interviewee to identify the different components of the chateau's financials
  - Initial investment (purchase price + renovations + furnishings)
  - Operating costs
  - Revenue

*Info to be given if asked:*

- Initial investment: Define components of initial investment
  - \$1M purchase price
  - \$250K renovations
  - \$250K furnishings
  - This totals to a \$1.5M initial investment
  - Remember, 50 investors paid \$15K for 2 weeks per year = \$750K
    - ③ \$750K investor money
    - ③ \$750K debt from bank (remainder of investment)
  
- What are the costs associated with operating this chateau? (prompt interviewee to approach this question with a break-even analysis if not already heading in that direction)
- Prompt interviewee to identify major cost buckets first and then guide them through the assumptions for each cost category
- Note: used 400 days in a year to simplify public math!
  - Interest on debt: 10% on \$750K = \$75K
  - Proprietor salary: \$40K (1 annual salary)
  - Landscaping: \$10K (\$1K/month, \$20/hour, 50 hours per month, 10/week)
  - Laundry service: \$10K (400 days/year x \$25/day = \$10K)
  - Marketing: \$10K (determined by management, to be discussed later)
  - Breakfast: \$10K (5 people x 400 days: 2000 breakfasts x \$5 cost/breakfast)
  - Utilities: \$5K (~\$500 per month. 5x house utilities, seems reasonable)
  - Miscellaneous: \$15K (car insurance, fuel, misc. repairs/purchases)
  - Total annual costs: \$175K

## Chateau (continued)

- Can the castle generate enough revenue to cover costs/break even?
  - How do you determine revenue: price x # of nights:
  - How would you determine price?
    - ③ Competitors in area? (\$50 - \$125 per night)
    - ③ Castle B&Bs in other parts of France? (\$300-\$500 per night) ③
    - Upscale hotels in Paris (\$400-500 per night)
      - Who is the right competitor to look at???
      - Who is your customer? What is their decision process?
    - ③ Price estimate: \$200/night (I'll let them choose and run with it if their # is supported with logic)
  - Calculate breakeven occupancy
    - ③ 6 rooms x 400 nights/year: 2400 potential nights
    - ③ 2400 x \$200/night: \$480K
    - ③ 50%: \$240K...Chateau is profitable at 50% occupancy or 3 rooms filled throughout year
    - ③ BUT remove investor weeks
      - 50 investors x 2 weeks per year x \$1400 per week: \$140K
      - Full potential: \$340K
      - 50% of that is \$170K
        - Which is the right 50%??? Is it more relevant to look at # people you need or % occupancy?
    - ③ Does 50% occupancy sound right?
      - How would you figure it out?
  - Data: local tourist offices say 50% is average occupancy in region, confirmed by key competitors
- What are the risks?
  - Occupancy
    - ③ Tiny marketing budget
    - ③ Location is not ideal- how do you get people there???? ○
  - Execution
    - ③ Timing with French contractors ③
    - Budget overruns
  - Hard to find buyer if it doesn't work out
- Suppose company is doing well, returning over \$100K profit per year. What should they consider doing next???
  - Pay down debt of this castle, identify additional revenue opportunities at this castle
  - Invest in new castles
    - ③ How would you prioritize new castles
      - Size: better economics
      - Geography
        - Proximity to contractors, local knowledge, marketing
  - Other locations: same customers, different vacation

*Chateau (continued)*

- Would you invest?
  - What else would you want to know to make your decision? (Management, success of other similar investments in France or other countries, survey results, detailed marketing plan, etc.)



## Recommended Solution

---

### Details

- [Details provided in body of case.]

### Overall Recommendations

*A good answer includes:*

- Ability to structure the overarching question (should you invest) as a way of evaluating the profitability and risks of running this business
- Able to identify the major cost components and revenue estimate

*A better answer includes:*

- All of the above
- Identifies how you might go about collecting important data points for profitability analysis (primary research, competitor research, etc.)
- Recognizes that 2400 room/nights per year does not include the 2 weeks that were sold to the 50 investors

*A superior answer includes:*

- All of the above
- Pull it all together and understand not only the profitability of the Chateau, but answers the question “would you invest?” by identifying the risks associated with the investment



## ***Bun on the Run***

**Case Description:** This case aims to help a client improve its profitability from its airport fastfood business

**Inventory:** [no exhibits]

**Industry:** Retail/Consumer Goods [Fast Food Chain]

### **Potential applicable frameworks:**

- |  |   |   |   |
|--|---|---|---|
| <input checked="" type="checkbox"/> Profitability      | <input checked="" type="checkbox"/> 3C's              | <input checked="" type="checkbox"/> Value Chain   | <input checked="" type="checkbox"/> Microecon. Analysis |
| <input checked="" type="checkbox"/> Market Entry       | <input checked="" type="checkbox"/> 4P's              | <input checked="" type="checkbox"/> Supply Chain  | <input checked="" type="checkbox"/> Internal / External |
| <input checked="" type="checkbox"/> Competitive Threat | <input checked="" type="checkbox"/> Porter's 5 Forces | <input checked="" type="checkbox"/> Market Sizing | <input checked="" type="checkbox"/> Other               |

---

### **Introduction**

---

Our client, Bun on the Run, operates a fast food restaurant chain. The industry's average profit margin is 3 to 5%. However, our client currently is making only 1.5%.

*Question 1:* How can you help them increase their margins to 3%?

## Case Details

---

*Info to be given as case progresses:*

- The fast food outlets are on toll roads and in airports
- The airport outlets are franchises
- Airports constitute most of their business
- The low profit margins are due to their airport business

*Info to be given if asked:*

- **Industry:** The industry is fairly mature and stagnant
- **Market:** The client operates in 80% of the airports and present in all large airports; they service 90% of all airport passengers
- **Competition:** There is only one other competitor, who has the remaining 10% market share; their margins are on par with the industry
- **Menu:** Standard fast food menu; competitor is no different
- **Costs**
  - *Variable costs: 70%*
    - ③ **COGS:** 35%
    - ③ **Labor:** 35%
  - *Fixed costs: 30%*
    - ③ **Airport fee:** 10%
    - ③ **Infrastructure:** 5%
    - ③ **Rent:** 15%
- **COGS:**
  - Core ingredients (bread, meat, etc): 70% of COGS  
Already optimized and cannot cut costs anymore
  - Non-core ingredients (paper towels, ketchup, etc): 30% of COGS  
Contracted through SYSCO and costs are competitive
- **Labor:**
  - Most employees are salaried and full time, earning minimum wage of \$6/hour o  
Benefits start after 6 months
  - Turnover: 200%
  - A new employee costs an additional \$18/hour; this cost includes training (4 weeks) and background check

## **Recommended Solution**

---

### **Question 1**

The client is experiencing a high turnover of employees who were getting trained and then going to work for a nearby McDonalds for higher wages. Since new employees are expensive (\$18 training per hour + \$6 wages per hour), the turnover is bleeding the client's profit margins. Solution is to reduce turnover/increase retention rate, thereby reducing costs and increasing profit margins.

### **Overall Recommendations**

*A good answer includes:*

- Identifying the components of the costs and narrowing it down to the high turnover issue.

*A better answer includes:*

- Suggestions for increasing employee retention rate, such as making benefits available earlier, and paying above minimum wages

*A superior answer includes:*

- Suggestions to increase retention rate with minimal costs, such as increasing job satisfaction of employees through cross-training
- Identifying implications of suggestions, such as cross-training reducing utilization



## **Switching Costs**

**Case Description:** A producer of mechanical switches for large industrial machines is trying to improve its profitability.

**Inventory:** [no exhibits]

**Industry:** Heavy manufacturing

**Potential applicable frameworks:**

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3 C's             | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

---

## **Introduction**

---

This company makes only one product - mechanical switches. These switches are then sold to companies which operate very heavy and complicated machines. The company has been consistently profitable and remains profitable today. However, the CEO believes there is an opportunity to improve profitability even further.

*Question 1:* How should this company increase profitability?

**Case Details**

---

**Question 1:** How should this company improve its profitability?

*Info to be given as case progresses:*

- None

*Info to be given if asked:*

- The switches can only be used in specific industrial machinery.
- Switch failure can cause serious damage to customer equipment, and therefore customers replace the switches frequently.
- Customer equipment is extremely complicated and expensive (about \$10MM per machine, each company operates several machines).
- Price is \$12/switch. Costs are \$5/switch.
- There is only one competitor in the market, which has 60% market share.
- The competitor sells its switch for \$15/switch.
- There is no real difference between the switches the client makes and those made by its competitor, nor are there significant differences in delivery times, etc.
- The market share has been divided in this way for years and there hasn't been a change in prices for a long time (other than inflation). Therefore, the two companies in this market have established excellent relationships with their customers.
- New customers are not expected to be added in the foreseeable future.

## Recommended Solution

---

### Question 1 Details

- Customer acquisition would be very expensive with very low chances of success.
    - Customer relationships are a significant “barrier to entry” for market share gains/losses.
    - Customers that are satisfied with the competitor’s quality are unlikely to migrate to the Client just to save a few dollars/switch, given the price of machines and impact of faulty switches.
  - The company has room to raise prices.
    - The switches are a very marginal component of the customers’ cost. The customers will likely not take chances with the quality of switches and therefore are willing to pay a premium.
    - Since price does not dictate market share, the client should take advantage of its “secured” market share and increase prices.
    - The new price could be a range. Push for the interviewee’s rationale behind pricing.
      - ③ e.g. less than \$15 might allow client to still claim to customers to be cheaper than competition, strengthening relations.
      - ③ \$15 could be passed off as price parity
      - ③ Greater than \$15 is possible if customers are truly price inelastic.
- Follow-up questions might be: what do you expect the competition to do. How high are you willing to risk going? What would happen if a low cost competitor came in at \$6?

### Overall Recommendations

*A good answer includes:*

- The interviewee understands the insignificance of the product cost to the customers.
- After some guidance, the interviewee understands that the company could use the market’s unique characteristics to raise prices.

*A better answer includes:*

- The interviewee understands that the relationships and trust are a “barrier to entry”.
- The interviewee recommends raising the price.

*A superior answer includes:*

- The interviewee understands that this company has very strong supplier power.
- The interviewee recommends increasing the price and provides a clear rationale for how the company could/should position potential prices.



## **Chicken Pox**

**Case Description:** Evaluating decision to fund third and final phase of testing for Chicken Pox Vaccine. Good public math practice

**Inventory:** 2 Exhibits

**Industry:** Healthcare / Pharma

### **Potential applicable frameworks:**

- |  |   |   |   |
|--|---|---|---|
| <input checked="" type="checkbox"/> Profitability      | <input checked="" type="checkbox"/> 3C's              | <input checked="" type="checkbox"/> Value Chain   | <input checked="" type="checkbox"/> Microecon. Analysis |
| <input checked="" type="checkbox"/> Market Entry       | <input checked="" type="checkbox"/> 4P's              | <input checked="" type="checkbox"/> Supply Chain  | <input checked="" type="checkbox"/> Internal / External |
| <input checked="" type="checkbox"/> Competitive Threat | <input checked="" type="checkbox"/> Porter's 5 Forces | <input checked="" type="checkbox"/> Market Sizing | <input checked="" type="checkbox"/> Other               |

---

### **Introduction**

---

Your client is a large pharmaceutical drug company working on a vaccine for chicken pox. The vaccine needs to pass three phases of testing to be approved by the FDA. It has just completed the second phase and the client is asking your help to decide if they should fund the third phase. The third phase would last 2 years, cost \$300M, and results from previous phases indicate the vaccine has a 95% chance of approval. We would be able to start producing vaccine immediately following approval.

*Question 1:* Go/No go?



## Case Details

---

### **Part 1:** Market Size

*Info to be given as case progresses:*

- We are only worried about US market in this case.

*Info to be given if asked:*

- Vaccine is a one time pill
- Assume US population is 300M and uniformly distributed from 0-75 (as many people enter population as leave every year)
- When asked what portion of population would need vaccine hand them Exhibit #1
- It is estimated that it would take 3 years to vaccinate existing population
- When asked about price have them estimate off of Exhibit #2
- Costs (per pill)
  - Distribution           \$1.50
  - Production           \$2.50
  - SG&A                 \$5.00
  - Assume the \$300M costs for phase three include everything else (plant set up costs...) and can be spread over the 2 years of testing

*Exhibits*

- #1 Cumulative distribution of exposure
- #2 Willingness to pay

### **Part 2:** Competitive Landscape

*Info to be given as case progresses:*

- None

*Info to be given if asked:*

- Vaccine will not be patented
- Other companies would have to undergo same series of testing
- No other companies have started formal testing of vaccine
- Phase 1 and 2 combined take 3 years (we have 3 years of competitive protection)
- Phase 1 and 2 cost \$200M

*Exhibits*

- None

**Recommended Solution**

---

**Part 1 Details**

- Population can be viewed in two parts: existing population when vaccine is released and people that will be born every year.
  - Exhibit 1 should lead interviewee to estimate that half of existing population 0-18 will need vaccine
    - ③  $300M/75 = 4M$  people of each age.  $4M * 18/2 = 36M$
    - ③ According to willingness chart 75% willing to purchase so  $36M * .75 = 27M$  over 3 years
  - 4M babies born every year (steady state uniform distribution) and 75% of parents willing to purchase:  $4M * .75 = 3M$
- Exhibit 2 should lead interviewee to recommend setting price at \$30 per pill
  - \$30 price - \$9 costs = \$21 profit per pill

Year	1	2	3	4	5	6	...After
Existing Pop Vaccines			9	9	9		
New baby vaccines			3	3	3	3	3
Total			12	12	12	3	3
Revenue			360	360	360	90	90
Costs	-150	-150	-108	-108	-108	-27	-27
Net	-150	-150	252	252	252	63	63

(millions)

- Pharma companies usually have rather high hurdle rates due to the risky nature of their business model but any reasonable rate will yield a high positive NPV. Interviewee should also mention the 5% chance of failure and how that could effect the calculation (there are a couple correct ways to interpret the effect). They do not need to calculate NPV - just recognize high positive value.

**Part 2 Details**

- Since there is a natural three year protection due to required FDA testing other companies would not be able to capture the “existing population” segment of the market. Assume they did enter in year 6 we would be sharing only 3M vaccines per year. Even assuming they were able to capture a descent portion of the market they wouldn’t be able to cover the upfront testing costs for years.
- Costs for phase 1 and 2 should not be used when calculating our go/no go since they are sunk, but should be taken into consideration when evaluating competitors decision.
- Competitors do not have much incentive to follow us into this market making our position even better.

*Chicken Pox (continued)*

**Overall Recommendations**

*A good answer includes:*

- Some prompting led to right assumptions. Completed basic calculations. Set up NPV and recommended “GO” based on high positive NPV.

*A better answer includes:*

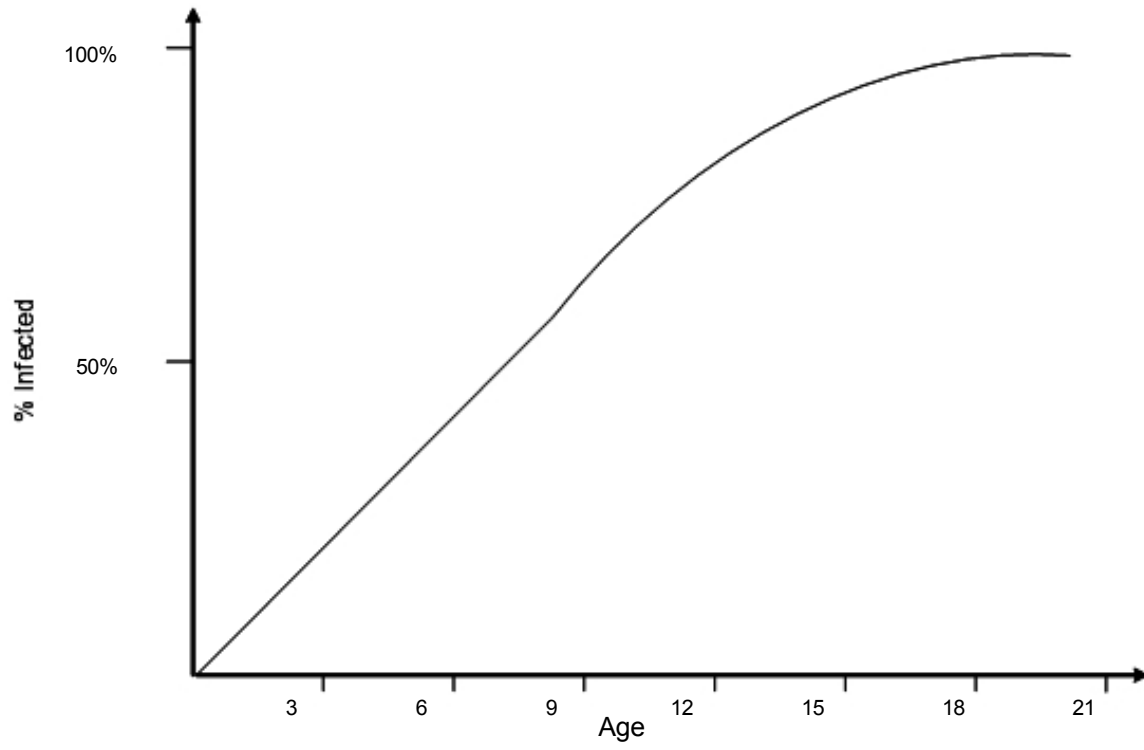
- This is a fairly fact based case and does have a right answer. Interviewee should fully understand the model they came up with and confidently recommend “Go.” Difference between better and superior would be how much the interviewee led the case, drove to the right conclusions themselves, and drew on all available information to form insights and strengthen recommendation.

*A superior answer includes:*

- There are two key insights:
  - “Market” segments into existing population and annual babies born
  - Competitors have no incentive to enterThese insights should be noticed and understood quickly and without prompting when interviewee reaches that portion of case.
- Assumptions about graphs are made quickly and explained well.
- Calculations set up clearly and completed quickly.
- Overall: NPV analysis indicates project is very profitable. Competitor analysis indicates we will not face competition. Recommend funding 3<sup>rd</sup> phase.

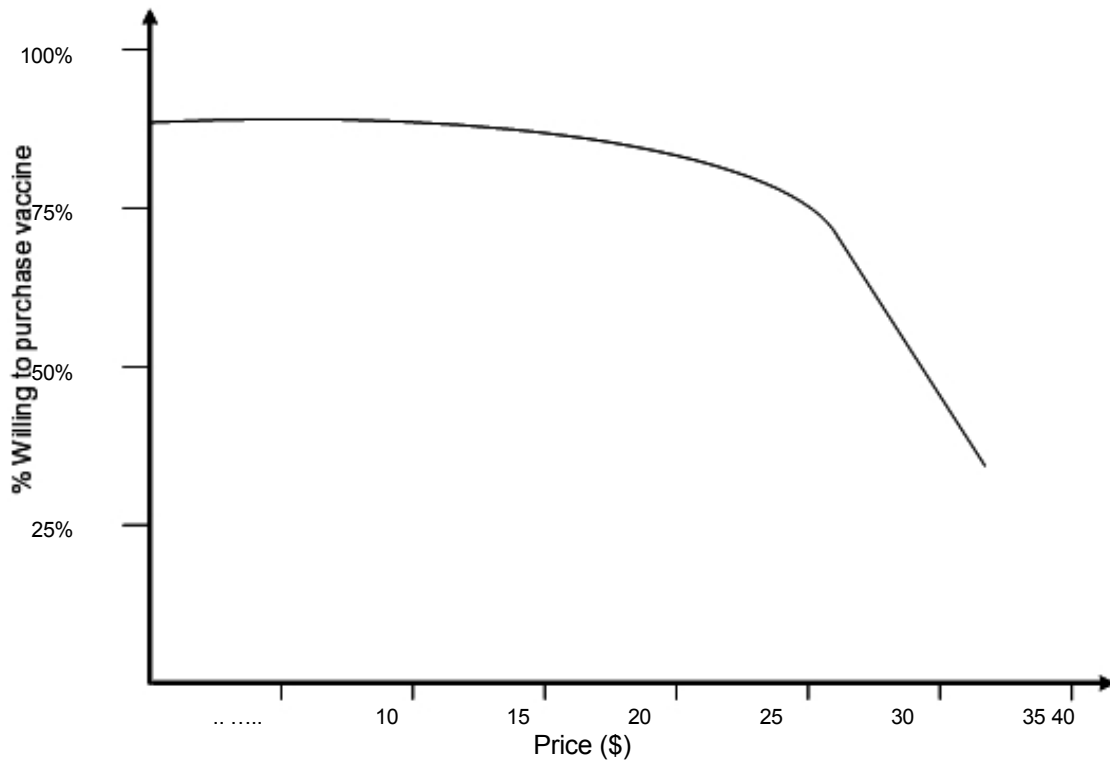
**Exhibit #1**

**Cumulative Distribution of Chicken Pox Exposure**



**Exhibit #2**

**Parent's Willingness to Pay**





## ***Everlasting Light Bulb***

**Case Description:** This case concerns valuation of a new, industry-changing disruptive technology

**Inventory:** [no exhibits]

**Industry:** Consumer goods

**Potential applicable frameworks:**

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3 C's             | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

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### **Introduction**

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You are a scientist. You have just invented the world's first everlasting light bulb. Fortunately, you have been granted a rock-solid patent for it. The current light bulb industry is a global monopoly. How much is it worth?

**Note to Interviewer:** This case requires a thorough pre-read by the interviewer in order to make it work.

### **Case Details**

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*Info to be given if asked:*

- Assume that the patent is for eternity.
- You are valuing the PATENT not an individual everlasting light bulb.
- This is a domestic light bulb only so has no commercial applications such as offices or cars
- There are 6B people in the world. You can assume that only 4B people have access to electricity.
- You can assume that there are 8 people on average per household (HH).
- Conventional light bulbs price: \$2. Everlasting light bulbs will be priced at \$5.
- You can assume that conventional bulbs last 2 years.
- Assume everyone switches to everlasting in year one. The phase of the transition will have little impact on the eternal patent value, right?!
- Assume a profit margin of 20% on conventional and everlasting bulbs.
- Can assume a 5% discount rate.

## **Recommended Solution**

---

### **Current market sizing**

A good candidate will ask what type of bulb this is as a clarifying question upfront before they attempt a framework. They should also ask for the length of the patent. They will discover it is a domestic bulb with an eternal patent.

A good candidate then sizes the market for domestic light bulbs. A typical way to start is with 6B people in the world, assuming, say, an average HH membership of 8. Assume only 4B people have electricity supplied houses. Therefore there are 500M HH in the world.

Assume there are 5 rooms in the *global average HH* (not everyone is a rich American). Therefore there are 2.5B domestic rooms. Assume 2 bulbs on average so 5B domestic bulbs globally. With \$2 per bulb, amateurs then say the industry today is worth \$10B pa. But bulbs last for 2 years. Therefore the industry today is worth \$5B. This is the “schoolboy” trap in this case. With a 20% margin, current profit is therefore \$1B pa.

### **Would people switch?**

Yes. \$2 every two years or \$5 one-time is a no-brainer decision for the consumer to make. The everlasting bulb will pay for itself in a mere 5 years.

### **What is the value of the new industry?**

Well, you only buy one everlasting bulb. Therefore  $5B \text{ bulbs} * \$5 = \$25B$ . 20% margin so \$5B one-time profit. Another “schoolboy” error is to say \$25B sales every year. Remember: it is an everlasting bulb.



*Everlasting Light Bulb (continued)*

**So what?**

The everlasting bulb will destroy an industry pumping out \$1B pa profit for the monopoly and cause a \$5B bonanza for the scientist.

**So how much is the patent worth? The interviewer should then try to trick the interviewee and say its worth \$1B pa in profit so at 5% discount rate in perpetuity its worth \$20B right?**

It is surprisingly easy to get them to agree to this. Challenge them as follows.

**But if it's worth \$5B in a one-off bonanza to the scientist, the monopoly should pay \$15B or less, right?**

Again, easy to get them to agree to this new answer. Once they agree with \$14.5B you say...

**But hang on, why not buy it and lock it in a safe? If the patent is bulletproof it's only worth \$5B, i.e. the standalone value to the scientist, right? Alternatively, aren't you a monopoly? So you are the only potential buyer right? An external buyer would only pay \$5B (the value of the standalone patent). So why not pay \$5B and one cent?**

They will then agree to this new answer which is 1/3 of the \$15B they were proposing a while ago.

**But hang on; the scientist is just a scientist. So he has no sales and marketing infrastructure. So its worth less than \$5B, right? That just assumed a 20% steady state profit margin but s/he has no infrastructure. So assuming \$500m sales cost it's only worth \$4.5B, right?**

Again, easy to get them to agree to this. They will be getting very suspicious of all the pat answers you are giving them but they are not far off here though.

**So it's worth \$4.5B and one cent, right?**

At this point they will feel so confused and stupid that they will be wary of you. A great candidate will confidently state yes but they are typically utterly demoralized at this point. But this is the "right" answer.

**Notes**

They often panic at the start as no real framework exists to answer this bar the simple market sizing at the start. It is a great conceptual thinking decision flow-chart what-if style question that rewards candidates for confident thinking on their feet. It can be a very hard case. The best candidates remain composed while bombing certain sections. This test of this case is to show grace under fire.



## ***Fine China***

**Case Description:** This case examines the operations and potential for improved profitability of a fine china manufacturer and distributor. It also tests public math throughout.

**Inventory:** 1 exhibit (for interviewer)

**Industry:** Specialty Retail

**Potential applicable frameworks:**

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3C's              | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4P's              | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

---

## **Introduction**

---

Our client, FC Limited (Fine China Limited) manufactures sets of fine china (plates, tea cups, etc). They only sell the china in sets (never as individual pieces) at \$1,500 per set. Excess or lack of demand has never been a problem for FC, and they sell 10,000 sets per year. The company was started 50 years ago and has been successful and profitable throughout its history. However, in the last 7 years a key competitor recently entered the industry. FC's recently learned that the competitor has at least 50% higher margins and would like to match or exceed its results.

**Questions:** *(to be asked and answered in order)*

*Question 1:* Why are FC's profit margins not good as these new entrants? How do you propose FC fix this problem?

*Question 2:* Given the issues and recommendations from Question 1, how can FC cut costs, and what are the new expected profit margins?

### Case Details

---

**Question 1: Why are FC's profit margins not as good as they would expect? How do you propose FC fix this problem?**

*Info to be given as case progresses:*

- FC sells 10,000 sets per year. They are exactly meeting demand and this number is not expected to change in the coming years. (Essentially, this is not a revenue generation issue)
- The company has been profitable, but as new entrants have arisen, they noticed that their margins are not as high as some of these new competitors.

*Info to be given if asked: (The interviewer should encourage the interviewee once/if he/she goes down the supply chain path)*

- Raw material costs (porcelain clay): in-line or less than that of their competitors.
- Manufacturing: takes place in FC's North Carolina headquarters. Manufacturing is efficient, and costs are slightly lower than those of their competitors.
- Distribution: FC has 6 warehouses: 2 in North Carolina, 2 in Ohio, and 2 in Southern California. FC manufactures the china in North Carolina. The sets are then distributed to the regional warehouses for quicker shipping to the retailers in those regions when orders are placed to the factory.
- The china is only sold as a set. It is the crème-de-la- crème of china; the sales channels are upscale retail stores like Neiman Marcus and Saks Fifth Avenue.
- These retail stores do not hold inventory of the china; they just have one set for their display case because the china is so delicate and susceptible to breakage. The stores do not want the liability of holding inventory. They take orders from customers for next day pick-up from the store or occasionally the sales person will make a personal home delivery.
- Delivery to the store requires "White glove service". No damage or sloppiness permitted. This is the reason for the warehouse network.
- "Shipping" - when the company started, they used rail-roads to transport the china from the manufacturing plant to the warehouses. In the last 30 years they moved to using trucks for this transportation.
- The key competitor is located in Tennessee (if the interviewee pushes, the location is in Memphis), has one warehouse and uses FedEx from their manufacturing site to ship quickly to retailers, they also have the one day delivery commitment. (Don't volunteer the competitor's distribution strategy until the candidate asks about FC's value chain description and for comparison to the competitor.)
- Retailer to Customer link: customer sees the china in the retailer's display case and places an order. The retailer immediately contacts FC to have a set shipped to the store for the customer.
- Pricing is in-line or slightly higher than their competitors, FC's price will not change

*Fine China (continued)*

- Common carrier “white glove service” is more expensive than our current per box shipping cost allocation. No need to be precise in how much more expensive. If pressed, it costs \$150 per set.
- A good proxy for evaluating fixed cost mix is square footage in the facilities. The factory is twice the size of the average warehouse.

**Question 2:**

*Question 2a:* What does the current income statement and cost structure look like? (What are the profits and current profit margin?)

*Question 2b:* Given that FC has decided to eliminate most of the warehouse space, where can FC cut costs and what are the new expected profit margins?

**Question 2a:** See attached exhibit. This is for the interviewer only. The interviewee should “derive” the income statement.

1. The interviewer should tell the interviewee that current total costs are \$12mm
2. The interviewer should ask the interviewee what he/she thinks are the major cost items. As they are named, the interviewer should reveal the % of total costs.
3. Once all of the costs have been uncovered, the interviewer should ask the interviewee for the current profit margin. (20%)

Example dialog:

*Interviewee:* There must be high warehousing costs for those 6 warehouses

*Interviewer:* Yes. Fixed Overhead is 40% of total costs

**Question 2b:** Now that we have discovered that profit margins in the existing business are 20%, where can FC cut costs? What are the new expected profit margins as a result of these reduction in cost?

**Again, see attached exhibit for interviewer only.**

- The interviewee should identify the cost heads that could be reduced.
- Once identified, the interviewer should tell them the expected percent reduction.
- After all cost reductions have been identified, the interviewer should ask the interviewee for the new profit margin. (approximately 42%)

*This part of the case is for cost intuition as well as public math.*

## **Recommended Solution**

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### **Question 1 Details**

- The current distribution system in this era of overnight shipping is inefficient and costly. They should cut out the middle distribution warehouses to reduce costs and increase profits.
- FC should move to shipping inventory through overnight services like FedEx or UPS. The increased transportation costs are more than offset by the potential cost reductions.

### **Question 2 Details**

- Fixed overhead, labor and inventory costs will decrease as a result of fewer distribution warehouses. Shipping expenses will increase. See attached exhibit for details and numerical solutions.

### **Overall Recommendations**

*A superior answer includes:*

- A superior interviewee quickly recognizes that this is not a pure-play profitability case but rather a supply chain case as well. (i.e. the interviewer uses both the profitability and supply chain frameworks in some fashion)
- Uses his/her intuition to quickly spot the crux of the problem: the abundance of distribution warehouses.
- Can not only calculate the numbers in Q2, but also has a sense for why the numbers make sense.

**EXHIBIT 1**

FINE CHINA, LTD						
CURRENT "INCOME" STATEMENT:				NEW INCOME STATEMENT		
DERIVED IN QUESTION 2A...				TO BE DERIVED IN 2B...		
<b>Revenue</b> (have interviewee calculate)	10,000 sets @ \$1,500/set =	\$ 15,000,000			\$ 15,000,000	
<b>Costs:</b> (figures given once cost head is named)	<b>% of of \$12mm Total Cost</b> (to be given to interviewee)		<b>Expected % Reduction</b> (to be given to interviewee)	<b>WHY:</b> (Interviewee should give intuition behind each number)		<b>increase/decrease</b>
Raw materials	20%	\$ 2,400,000	0%	stays the same b/c producing the same amount	\$ 2,400,000	\$ -
Fixed Overhead	40%	\$ 4,800,000	-50%	Reduction of warehouse space (keep some in NC)	\$ 2,400,000	\$ (2,400,000)
Labor	20%	\$ 2,400,000	-25%	Fewer laborers loading and unloading at warehouses	\$ 1,800,000	\$ (600,000)
Shipping	10%	\$ 1,200,000	25%	FedEx is more expensive than trucking overall	\$ 1,500,000	\$ 300,000
Inventory Costs	10%	\$ 1,200,000	-50%	Less inventory in warehouses	\$ 600,000	\$ (600,000)
<b>Total:</b>	<b>GIVEN:</b>	<b>\$ 12,000,000</b>			<b>\$ 8,700,000</b>	<b>\$ (3,300,000)</b>
<b>Profit Margin</b>		20%			42%	
		<i>Just need approx....</i>			<i>Just need approx....</i>	



## Got Gas?

**Case Description:** Our company is trying to determine how much it spent on gasoline last year and the impact of gas prices going forward.

**Inventory:** [no exhibits]

**Industry:** Manufacturing

### Potential applicable frameworks:

- |  |   |   |   |
|--|---|---|---|
| <input checked="" type="checkbox"/> Profitability      | <input checked="" type="checkbox"/> 3 C's             | <input checked="" type="checkbox"/> Value Chain   | <input checked="" type="checkbox"/> Microecon. Analysis |
| <input checked="" type="checkbox"/> Market Entry       | <input checked="" type="checkbox"/> 4 P's             | <input checked="" type="checkbox"/> Supply Chain  | <input checked="" type="checkbox"/> Internal / External |
| <input checked="" type="checkbox"/> Competitive Threat | <input checked="" type="checkbox"/> Porter's 5 Forces | <input checked="" type="checkbox"/> Market Sizing | <input checked="" type="checkbox"/> Other               |

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## Introduction

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We run a manufacturing business in Southeastern U.S. and have a number of salespeople who are consistently reimbursed for gas. We would like to determine how much we spent on gasoline last year so that we can evaluate how the rising cost of gasoline will impact our bottom line.

*Question 1:* What was the cost of gas last year?

*Question 2:* How will our expenses be affected going forward?

*Question 3:* Do you have any recommendations on what we can do to curb our expenses?

### Case Details

---

**Question 1:** What was the cost of gas last year?

*Info to be given as case progresses:*

- 30 salespeople spread throughout country
- 3 regions - East, Central, West (10 per region)

*Info to be given if asked:*

- How much does typical salesperson drive? 1000 miles per week (this is not an average for all salesmen)
- There are three driver categories; low, medium and high mileage averaging 500, 1000 and 1500 miles per week.
- There are 5 low mileage, 15 medium and 10 high mileage drivers.
- Does person get reimbursed for personal use? Not supposed to but happens
- Vehicles average 30 miles per gallon
- Are there any other uses of gasoline (i.e. delivery trucks, factory machines, etc.)? - there are but don't worry about them

*Assumptions to be made by interviewee*

- Average gas price over given period

**Question 2:** How will our expenses be affected going forward?

*Info to be given as case progresses:*

- Plans for sales force in coming year - no change in habits or mileage

*Assumptions to be made by interviewee*

- Average gas price going forward (best, worst, most likely case)

**Question 3:** Recommendations for keeping expenses down?

- Looking for out of the box recommendations here



---

## **Recommended Solution**

---

### **Question 1 Details**

- Maybe break up prior year into 4 quarters to capture different level of gas prices throughout the year
- (Assume everyone uses one octane level of gas, if asked)
- Determine total number of miles for 30 sales force and the subsequent cost
- Build in cushion for personal usage that slides thru cracks

### **Question 2 Details**

- Come up with 3 scenarios on what may happen to gas prices going forward and how that would affect our expenses (worst, best, most likely)

### **Question 3 Details**

- Come up with recommendations on ways to keep expenses down (setting limits on reimbursement, tighter controls, only reimburse for one level of gas, oil futures hedging strategy, issue gas cards for more visibility, etc.)

### **Overall Recommendations**

*A good answer includes:*

- A solid train of thought and come to a reasonable answer

*A better answer includes:*

- A table to clearly see the breakdown of the case logic
- Make general assumptions to keep the case moving along
- A common sense double check at the end to make sure the results are accurate

*A superior answer includes:*

- Strong out-of-the box recommendations including ways to implement these suggestions
- Moving through the case without math errors in a timely manner



## ***What's a bar worth?***

**Case Description:** The case investigates the question, what is a bar worth and whether someone should open a bar. Great introductory case!

**Inventory:** [no exhibits]

**Industry:** Hospitality

### **Potential applicable frameworks:**

<input checked="" type="checkbox"/> Profitability	<input checked="" type="checkbox"/> 3C's	<input checked="" type="checkbox"/> Value Chain	<input checked="" type="checkbox"/> Microecon. Analysis
<input checked="" type="checkbox"/> Market Entry	<input checked="" type="checkbox"/> 4P's	<input checked="" type="checkbox"/> Supply Chain	<input checked="" type="checkbox"/> Internal / External
<input checked="" type="checkbox"/> Competitive Threat	<input checked="" type="checkbox"/> Porter's 5 Forces	<input checked="" type="checkbox"/> Market Sizing	<input checked="" type="checkbox"/> Other

---

### **Introduction**

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As you know I am a manager for company X (doesn't matter which one, you choose). I travel a lot and last Thursday I was in San Francisco, working in the finance district. It had been a hard week, where I had already pulled about 60 hours, so I decided to get a drink around 8 PM. I walked across the street and found a martini bar.

After ordering myself a drink, I decided to take the place in. It was packed! So, I started thinking to myself, maybe I should open a bar. I am working long hours, and maybe this might be an opportunity to see my family more. But, I want to know more about this opportunity.

*Question 1:* So, that's what I want you to investigate for me today. What is a bar worth?

*Question 2 (not asked, but implied in the above description):* Should I invest in a bar?

### Case Details

---

**Question 1:** What is a bar worth?

*Info to be given as case progresses:*

- None

*Info to be given if asked:*

- Direct the interviewee to investigate the question
- Eventually we need to get to the profitability of a bar and for simplicity's sake, we should use the one described above
- Push the person to explore the different types of revenues a bar might have
- They need to derive drink revenues from the following:
  - There were 100 people in bar when you entered and when you left ◦ You had two drinks in an hour
  - You noticed that the bar was open 6 days/week, 8 hours per day ◦ The price of a drink is \$10
  - The number of people visiting the bar on weekends is 120
- Push the person to explore a bar's different types of costs
- They need to derive costs from the following:
  - There was one bartender and one bus boy
  - They should estimate all other costs (materials, wages, insurance, license, utilities, rent, etc.)
- Once at the solution, ask the interviewee if the number is reasonable

*Exhibits*

- None

**Question 2 (not asked, but implied in the above description):** Should I invest in a bar?

*Info to be given as case progresses:*

- None

*Info to be given if asked:*

- Repeat any of the above lead in paragraph, but the interviewee in the conclusion should create the recommendation based on the profitability

*Exhibits*

- None

## **Recommended Solution**

---

### **Question 1 Details**

- The candidate should attempt to value a bar from one of the following:
  - Intrinsic value (what does it mean to you)
  - Brand value (the value of franchising a bar)
  - Profitability (what is the profitability of a bar)

### **Question 2 Details**

- Broader question of whether this individual should invest in this bar
- Maybe if highly profitable, but needs to consider the hours required
- No if marginally or not profitable

### **Overall Recommendations**

*A good answer includes:*

- An approximation of the profitability of the bar described by the interviewer
- An estimation of the revenues from drinks
- An estimation of the costs from labor, materials, and overhead

*A better answer includes:*

- Derivation of the revenues based on hourly consumption and occupation
- Acknowledgement of multiple, possible revenue streams (food, cover charge, cigarettes/cigars, etc.)
- Acknowledgement of multiple, possible costs (rent, licensing, insurance, marketing, utilities)

*A superior answer includes:*

- At least three ways that one could value a bar
- Derivation of the revenues based on variable hourly consumption and occupation, depending upon time of day and day of week
- Derivation of the costs based on real world experience:
  - Liquor based on size of bottle and shots in a drink
  - Rent based on square footage
  - Wages based on similar jobs
  - Utilities based on personal monthly costs
- A conclusion that takes in the considerations of whether or not the interviewer should buy this particular bar



### ***Only you can prevent accidents!***

**Case Description:** This case explores the application of GPS technology to save money on medical claims from car accidents. Written structures, although suggested and useful, are of less importance than creative, yet structured, thinking.

**Inventory:** [no exhibits]

**Industry:** Technology

#### **Potential applicable frameworks:**

- |   |  |  |   |
|---|--|--|---|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3C's              | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis      |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4P's              | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External      |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other ( <i>Pricing</i> ) |

---

### **Introduction**

---

A friend of mine at MIT has come to us for help. He was given a \$20 million grant to think of a cool, yet socially responsible, technology. After some time, he has finally created a product that is on the brink of commercialization. It's a GPS device that is placed into a car and senses the type and severity of a car accident. It immediately transmits this information back to emergency services, which then deploys resources to the accident scene. This service is most valuable for the more severe accidents, otherwise known as "Type A" accidents. At this point, my friend is considering a pilot in the Chicago area. Before he moves forward, he would like us to help him answer the following questions:

*Question 1:* How large is this market opportunity?

*Question 2:* What methods should he use to price the device? (qualitative rather than quantitative answer)

Only you can prevent accidents! (continued)

---

### Case Details

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**Question 1:** How large is this market opportunity?

*Info to be given if asked:*

- 1 million cars in Chicago
- 1% of cars get into Type A accidents per year
- The average Type A accident medical claim is \$100,000
- The new device should save \$50,000 per claim

*Info to be given as case progresses:*

- “Market opportunity”= the size of the potential market
  - Market does not equal (# of sales x sale price). It is a measure of the “potential” opportunity (read: if the product reached 100% market saturation and extracted 100% of the value of the product).
  - Focus on medical claims only. The interviewer should let the interviewee be creative and suggest other ideas for a bit (i.e. device may result in other savings); however, suggest that the candidate size the market based on medical claims
- Hopefully, interviewee keyed in on “Type A accidents” statement in the opening. For simplicity, he/she should focus on Type A accidents.
- Focus on Chicago market opportunity only.

**Question 2:** How would you price this device?

*Info to be given if asked:*

- Fully-loaded device costs \$400 (this is not price—but cost of making device)

*Info to be given as case progresses:*

- Don’t give but rather ask the interviewee to think about the following:
  - Who is the customer?
  - Who are the stakeholders (who is interested in it):
    - ③ End user (car driver)
    - ③ Other individuals (family, other party in accident, community) ③
    - Insurance companies (primarily health, but also life and P&C) ③
    - Government
    - ③ OEM’s (i.e. Ford)
    - ③ Mechanics
    - ③ Medical community, including emergency services ③
    - Competitors
    - ③ Investors
    - ③ Etc.

*Only you can prevent accidents! (continued)*

- Once interviewee has listed them, ask him to think about the impact of some of the stakeholders. Examples include:
  - Government: makes it mandatory
  - OEM's/mechanics: installing devices in new/used cars
  - Community: social mandates
  - Investors: need for return
  - (Potential) competitors: imitation (is this a defensible patent?)

Only you can prevent accidents! (continued)

## Recommended Solution

---

### Question 1 Details

- Market Opportunity = Device Savings Per Claim \* Type A Accidents/Year
  - Device Savings Per Claim = (\$100,000- \$50,000) = \$50,000
  - Type A Accidents/Year = (1,000,000 \* 1%) = 10,000
  - Market Opportunity = \$50,000 \* 10,000 = \$500 million
- A good answer will get to the \$500 million number
- A better answer will get to the \$500 million number using a structured framework
- A superior answer will also talk about one or several of the following:
  - New product diffusion curve (the product will be adopted over time)
  - Other values of the device (beyond claims savings)
  - Device compatibility: can this device be used in any car?
- Things to avoid:
  - Getting stuck on the definition of “market opportunity”

### Question 2 Details

- A good answer will discuss various aspects of the pricing framework:
  - Pricing strategy framework:
    1. Prepare marketing analysis:
      - a. Customers
        - i. Segments
        - ii. Targeting
        - iii. Positioning
      - b. Competitors/substitutes
    2. Make marketing mix decisions
    3. Estimate demand curve
    4. Calculate cost
    5. Understand environmental factors
    6. Set pricing objective, which may be one of the following:
      - Profit maximization
      - Revenue maximization
      - Profit margin maximization
      - Quality leadership
      - Partial cost recovery
      - Survival



*Only you can prevent accidents! (continued)*

7. Pricing methods:

- Cost-plus
  - Target return pricing
  - Value-based pricing
  - Psychological training
  - Competitor pricing
  - Marginal pricing
- A better/superior answer will delve into various aspects of the aforementioned framework in some detail:
    - Customer: Who is it? Are there multiple ones (i.e. end user, insurance companies)?
    - Environmental factors: Is it a defensible patent? Should the government make it mandatory?



## **Kicks**

**Case Description:** Apparel manufacturer is considering entering the sneaker market

**Inventory:** Exhibit 1: Market Size Statistics / Exhibit 2: Market Share

**Industry:** Apparel

### **Potential applicable frameworks:**

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3C's              | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4P's              | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Private Equity      |

---

## **Introduction**

---

Your client is a shoe and clothing manufacturer (“Dering Co.,”) that has over \$500MM in sales. Dering Co. has been successful in its traditional market for apparel and men's casual dress shoes, but growth is slowing in this market and margins are declining. The company is U.S. based, but has a manufacturing facility in a low-cost SE Asian country. Several board members, who have backgrounds in the athletic shoe industry, believe that your client should, broadly speaking, enter the athletic shoe market. The athletic shoe market in total is \$20 billion today. You have been hired to address this question.

*Overarching question:* How would you think about this athletic shoe opportunity?

Kicks (continued)

### Case Details

**Question 1:** What market segment looks more or less attractive and why?

*Info to be given as case progresses:*

- Offer Exhibit 1 to interviewee with market size, growth, and margins •  
[see sheet below with answers for interviewer]
- Questions to prompt interviewee in right direction (interviewee should be able to move through this logic on his/her own)
  - What are projected industry revenues?
  - What are projected segment profits?
  - What does this mean/any insights?
  - What are the most attractive segments?
  - Do margins (%) or profit (\$) matter the most?

**Assume the following data, what market looks more or less attractive, and why?**

	Size	% Rev	Growth	Margins	Rev	Profit	Rank
1 Basketball	4.0	20%	100%	10%	8.00	\$ 0.800	4
2 Running	4.0	20%	50%	20%	6.00	\$ 1.200	1
3 Cross Training	5.0	25%	30%	10%	6.50	\$ 0.650	5
4 Walking / fashion	3.0	15%	50%	20%	4.50	\$ 0.900	3
5 Court	3.0	15%	50%	25%	4.50	\$ 1.125	2
6 Soccer	1.0	5%	20%	40%	1.20	\$ 0.480	6
	<b>\$ 20.00</b>	<b>1.00</b>			<b>\$ 30.70</b>	<b>\$ 5.16</b>	
					Margin	17%	
					Rev CAGR	8.9%	

*Info to be given if asked:*

- Growth is total growth (not annual or compound annual growth rate) projected over the next 5 years
- Margins are projected EBIT margins in 5 years

*Exhibits*

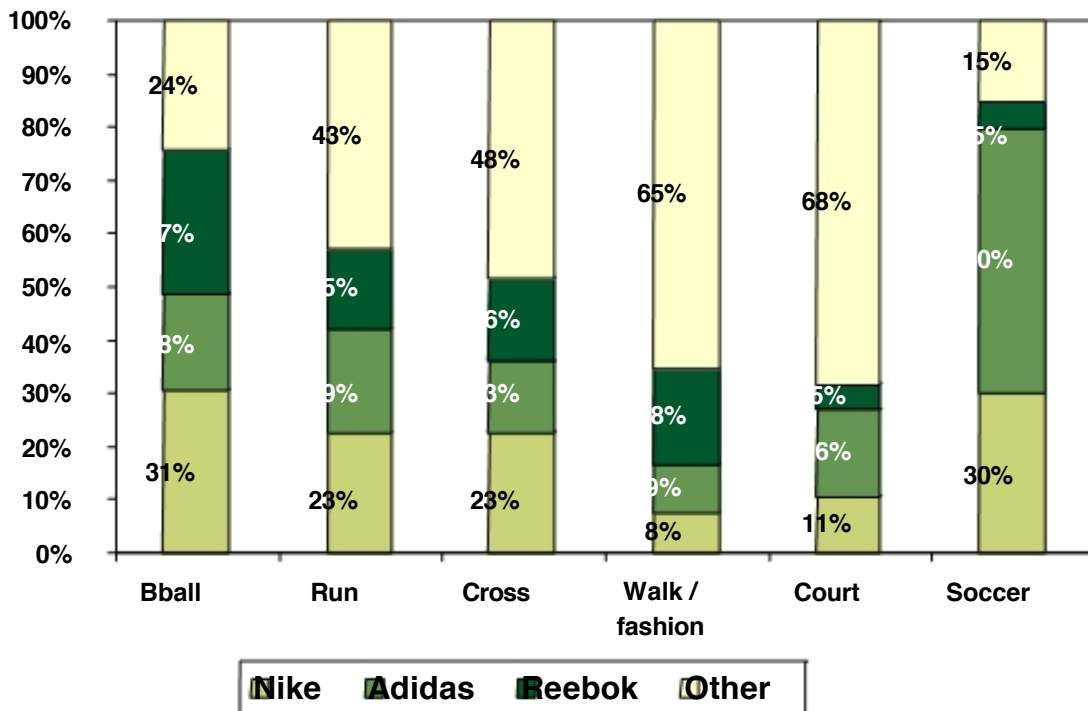
- Offer Exhibit 1 (market size, growth, and margin data) at outset

*Kicks (continued)*

**Question 2:** Which segments are the most attractive based on competitive data?

*Info to be given as case progresses:*

- Offer Exhibit 2 to interviewee with vendor/segment market shares
- Questions to prompt interviewer in right direction (in particular, be sure to ask the last question, as it has a specific answer)
  - What does this mean?
    - ③ Fragmented markets are most attractive (i.e., Run, Cross, Walk, and Court)
  - Which markets look most attractive?
  - How can you relate this back to the big picture?
  - What other information would you like to know?



*Info to be given if asked:*

- What is included in Other? Wilson controls 45% to 50% of Court market (contained in Other category). In all other cases Other contains players with very small market shares.

*Exhibits*

- Exhibit 2: Vendor / Segment Market Shares

*Kicks (continued)*

**Question 3:** After the following additional information, what is your conclusion?

*Info to be given as case progresses:*

- Additional research indicates the following:
  - BASKETBALL - highest price points in industry, but high sales & marketing costs which related to branding (why EBIT margins are lower despite higher price points)
  - RUNNING - high price points relative to industry average. R&D and technology in shoes is significant for the high end portion of this market (60% of the market)
  - CROSS-TRAINING - from initial industry conversations, no great insights were found
  - WALKING / FASHION - consumers wear these shoes w/ casual clothes frequently, which tends to indicate they are a bit more “style” and “fashion” conscious about how these shoes look
  - COURT - 65% of court shoes are bought thru specialty retail stores that are different from general retail stores that sell basketball, running, ct, etc. (tennis pro shops, etc. are examples). Wilson controls 45%-50% of the market for court shoes and high % of court apparel market.
  - SOCCER - 75% of soccer shoes are sold thru specialty retail stores (like court shoes) that are soccer only stores
  
- Questions to prompt interviewee in right direction (in particular, be sure to ask the last question, as it has a specific answer)
  - Any insights?
  - What is your conclusion?

*Info to be given if asked:*

- N/A

*Exhibits*

- [None]

Kicks (continued)

### Recommended Solution

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**Question 1 Detail: Which segments are the most attractive?**

- Interviewee should quickly proceed through analysis of Exhibit 1 by calculating the market size (using the growth rates) and then multiplying by the profit margin for each segment to calculate the projected profit pool for each segment [table is again listed below]
- Segments should be ranked based on the size of the profit opportunity, not based on the size, growth, or % profit margin
- RUNNING, COURT, and WALKING/FASHION are the top three segments

**Assume the following data, what market looks more or less attractive, and why?**

	Size	% Rev	Growth	Margins	Rev	Profit	Rank
1 Basketball	4.0	20%	100%	10%	8.00	\$ 0.800	4
2 Running	4.0	20%	50%	20%	6.00	\$ 1.200	1
3 Cross Training	5.0	25%	30%	10%	6.50	\$ 0.650	5
4 Walking / fashion	3.0	15%	50%	20%	4.50	\$ 0.900	3
5 Court	3.0	15%	50%	25%	4.50	\$ 1.125	2
6 Soccer	1.0	5%	20%	40%	1.20	\$ 0.480	6
	<b>\$ 20.00</b>	<b>1.00</b>			<b>\$ 30.70</b>	<b>\$ 5.16</b>	
					Margin	17%	
					Rev CAGR	8.9%	

Kicks (continued)

**Question 2 Detail:**

- Which markets look most fragmented and attractive?
  - When entering a market, fragmented markets are more attractive because they have less intense competition or more room for a new entrant than an industry that is controlled by a few big players
- Which markets look most attractive?
  - On first blush, markets are attractive based on fragmentation in the following order (most to least): Court, Walk/Fashion, Cross, Run, Basketball, Soccer
- How can you relate this back to the big picture?
  - If we combine market size/profit pool conclusions with market share data, we come up with the following results:

Segment	Profit Pool Rank	Fragmentation Rank
Basketball	4	5
Running	1	4
Cross Training	5	3
<b>Walking / Fashion</b>	<b>3</b>	<b>2</b>
<b>Court</b>	<b>2</b>	<b>1*</b>
Soccer	6	6

\* Wilson is contained in other and controls 45% to 50% of Court market, making it much less attractive from a fragmentation stand point.

- Combined rankings (profit pool and market share/fragmentation) show that Walking/Fashion and Court are most attractive
- What other information would you like to know?
  - The interviewee should ask what is contained in the “Other” segment of the market, which reveals that Wilson controls 45% to 50% of the Court market— this is an attention to detail question, the interviewee shouldn’t just assume that “other” is small players

**Question 3 Detail:**

- What is your conclusion based on additional information?
  - BASKETBALL - low margins
  - RUNNING - high price points but there is a high and a low end. Might be an opportunity in the low-end that is more casual/fashionable and consistent with core apparel business (40% of running market)
  - CROSS-TRAINING - No additional insight
  - WALKING / FASHION - Fashion conscious consumers, likely overlap with core apparel customer base
  - COURT - Controlled by a few big players, distribution through specialty stores
  - SOCCER - Distributed almost entirely through specialty soccer stores

*Kicks (continued)*

**Overall conclusion:**

- Walking/fashion is the most attractive market for the following reasons:
  - 3<sup>rd</sup> largest profit pool at \$900MM with 20% margins
  - Most fragmented in terms of competitor market share (when adjusted for Wilson's presence in Court)
  - Strong overlap with core business in terms of both customers and distribution channels
  
- Interviewee could also make a case that the low-end of running may be attractive but would need to know margin and competitive data for that segment of the running market

*A good answer includes:*

- A structured approach to answer the market entry question
- A quick and correct analysis of the projected profit pools
- An understanding of the relationship between fragmentation/concentration and how it relates to market entry

*A better answer includes:*

- All of the above
- Interviewee incorporates the internal capabilities of Dering Co. into recommendations (apparel/fashion company) and provides insight on how that would affect Dering Co.'s success in the different sneaker segments
- Recognizes that it is important to understand the details behind an analysis and asks what is in "other" market share category
- Identifies Walking / Fashion as most attractive segment

*A superior answer includes:*

- All of the above
- Interviewee quickly recognizes that Walking / Fashion as most attractive segment
- Interviewee also picks up on further segmentation of Running market and mentions in recommendations that it would be worth further exploring the low-end segment to understand profitability, size, competitors, etc.



*Kicks (continued)*

**EXHIBIT 1: Market Size Statistics**

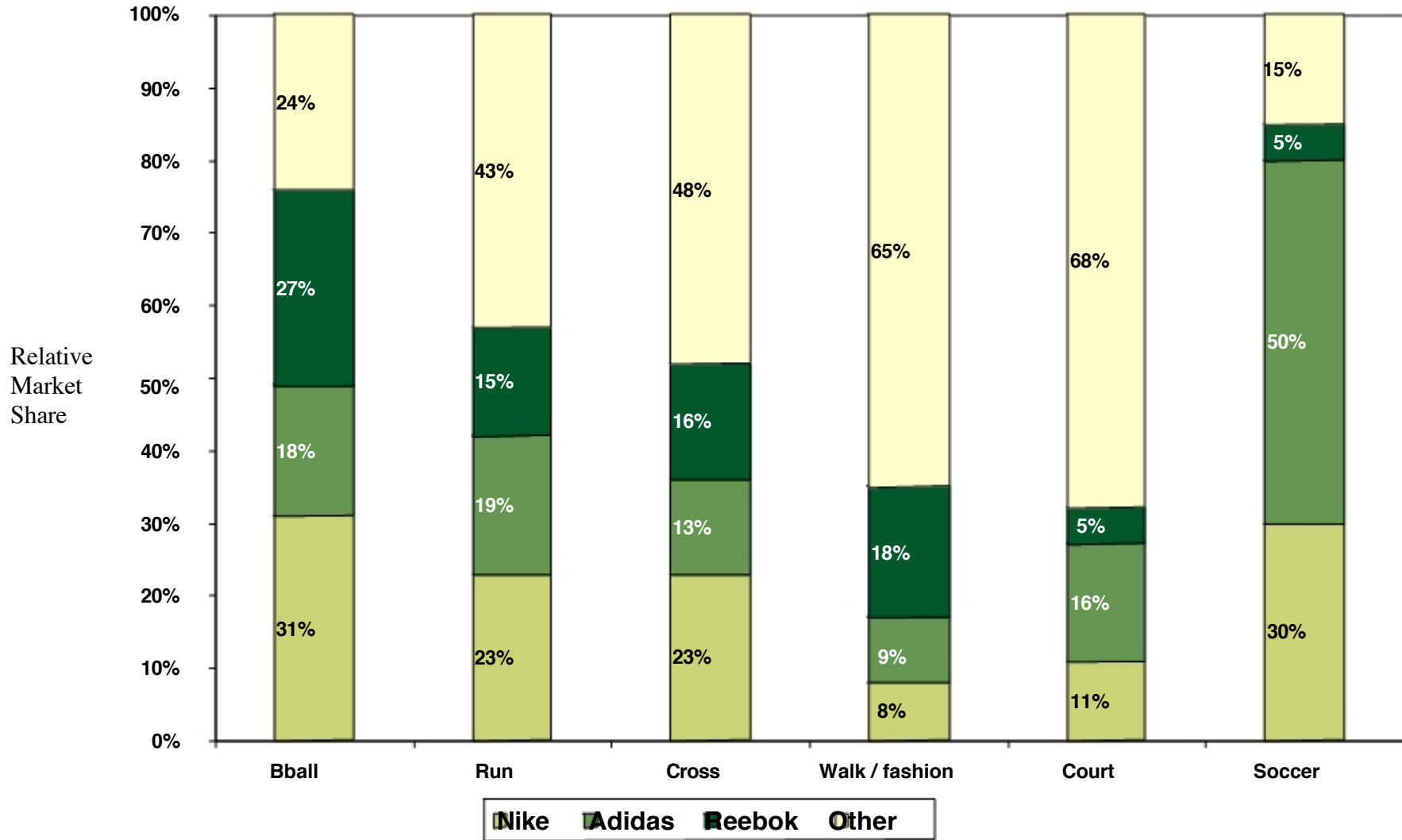
**Overall Athletic Footwear Market Size \$ Billions = \$20 Billion Today**

---

	% Rev	Growth	Margins
1 Basketball	20%	100%	10%
2 Running	20%	50%	20%
3 Cross Training	25%	30%	10%
4 Walking / fashion	15%	50%	20%
5 Court	15%	50%	25%
6 Soccer	5%	20%	40%
	100%		

Kicks (continued)

EXHIBIT 2: Market Share



Note: Figures do *not* reflect actual market share.



## ***Rafting***

**Case Description:** This case analyzes the current profitability and estimated value of a rafting business.

**Inventory:** [no exhibits]

**Industry:** Adventure Business

### **Potential applicable frameworks:**

- |  |   |   |   |
|--|---|---|---|
| <input checked="" type="checkbox"/> Profitability      | <input checked="" type="checkbox"/> 3C's              | <input checked="" type="checkbox"/> Value Chain   | <input checked="" type="checkbox"/> Microecon. Analysis |
| <input checked="" type="checkbox"/> Market Entry       | <input checked="" type="checkbox"/> 4P's              | <input checked="" type="checkbox"/> Supply Chain  | <input checked="" type="checkbox"/> Internal / External |
| <input checked="" type="checkbox"/> Competitive Threat | <input checked="" type="checkbox"/> Porter's 5 Forces | <input checked="" type="checkbox"/> Market Sizing | <input checked="" type="checkbox"/> Other               |

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## **Introduction**

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My friend Carlos wants to invest in a rafting business in California. In addition to the investment, he wants to work as general manager of this business. Carlos has asked me following questions:

**[Note to interviewer: This case is relatively straight forward. The interviewer should really probe interviewee to identify the key drivers of both revenue and cost in this particular business—try not to give away much. In addition, once the interviewee has performed the valuation, they should really think about some of the inherent risk of this business.]**

*Question 1:* Is the business currently profitable?

*Question 2:* How much is the business worth?

*Question 3:* Should I acquire it?

*Rafting (continued)*

### **Case Details**

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**Question 1:** Is the business currently profitable?

*Info to be given as case progresses:*

- Since this is a seasonal business, it is open every day in July and August and only 2 days per week in May, June, and September. It is closed for the rest of the year.

*Info to be given if asked:*

- Revenue:
  - The business has 5 rafting boats.
  - Each boat makes on average 20 trips per day.
  - The price of each trip is \$20.
- Costs:
  - Variable: Labor is 4 Rafting instructors, making \$15/hour worked.
  - Fixed: General manager's salary: \$40,000/year
  - Fixed: 2 leased vans to transport clients and equipment from the end of the tour back to the start: \$5,000/van/year
  - Fixed: Insurance (risky business!): \$8,000/year
  - Fixed: Overhead is \$2,000/year

**Question 2:** How much is the business worth?

*Info to be given if asked:*

- For the valuation, let's assume a discount rate of 10%.
- Let's do a perpetuity valuation.

**Question 3:** *Should I acquire it?*

No Information.

*Rafting (continued)*

### **Recommended Solution**

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#### **Question 1 Details**

The following answers may vary depending on the candidate's assumptions:

#### **Revenues:**

$\$20/\text{trip} * 20 \text{ trips/boat/day} * 5 \text{ boats} * 84 \text{ days/year} (24 \text{ in May, Jun, Sep} + 60 \text{ of Jul, Aug}) =$   
 **$\$168,000/\text{year}$**

#### **Costs:**

Variable:

- Rafting instructors =  $4 \text{ instructors} * \$15/\text{hour} * 8 \text{ hours/day} * 84 \text{ days/year} = \$40,320$   
 **$\approx \$40,000/\text{year}$**

Fixed:

- $\$40,000/\text{year}$  (general manager salary) +  $2 \text{ vans} * \$5,000/\text{van/year} + \$8,000$   
insurance/year +  $\$2,000$  overhead/year =  **$\$60,000/\text{year}$**

**Total costs  $\approx$  100,000/year**

**Profits = Revenues - Costs = 168,000 - 100,000 = \$68,000/year**

**Therefore, the business is profitable!!!**

#### **Question 2 Details**

- Using operating profit as a proxy for cash flow (ignoring taxes, working capital, etc.), and assuming zero growth in the business, we can use the perpetuity valuation formula  $CF/r$ , where  $CF$  is the annual cash flow, and  $r$  is the discount rate. Under these assumptions, we can conclude that the business is worth approximately:

$$\mathbf{\$68,000/0.1 = \$680,000}$$

#### **Question 3 Details**

Some things to consider apart from the numerical answers from questions 1 and 2:

- Some consideration of the risk inherent in this business and how that factors into our valuation
- Is it realistic to assume no growth? What kind of a business are we trying to run?
- Are there competing uses for our funds (i.e., opportunity cost of capital)
- Cash inflows may not be very stable (i.e. the business is weather dependent)

*Rafting (continued)*

**Overall Recommendations**

*A good answer includes:* Identifying the revenue, some of the costs, and calculating a ball park result in questions 1 and 2.

*A better answer includes:* Identifying “tricky” costs such as the insurance in a risky business and the general manager’s salary.

*A superior answer includes:* Identifying correctly all the revenues and costs, and providing other considerations for the acquisition decision.



## ***Snap, Crackle, Pop***

**Case Description:** This case challenges one to consider the steps a firm must take in deciding whether to introduce a product innovation into the market. It requires you to analyze the overall market and supply chain for instant popcorn before drilling into specifics about the effects of a new product introduction for a supplier to the popcorn market.

**Inventory:** [no exhibits]

**Industry:** Manufacturing

### **Potential applicable frameworks:**

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3 C's             | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

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### **Introduction**

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Our client is a supplier to the microwavable popcorn industry. They supply popcorn makers (e.g. Act II, Orville Redenbacher's, etc.) with the grease resistant paper used to package popcorn kernels in a variety of serving sizes. In this industry, the quality of the paper is determined by placing a bag of freshly micro-waved popcorn on a napkin and measuring the amount of grease that seeps through the paper packaging and is absorbed by the napkin.

The R&D department of our client recently developed a new type of paper that doubles the performance of the paper. A new type of coating is applied to the paper that virtually eliminates any seepage of grease in the napkin test.

*Question 1:* Should our client introduce this new product into the market?

### Case Details

---

**Question 1:** Should our client introduce this new product into the market?

*Info to be given if asked:*

- What is the overall market size?
  - Overall volume in the market is 100 million sheets of grease resistant paper per year.
- What is the competition in this market?
  - There are 4 players who supply paper in this market. Our client holds the largest market share (i.e. 50%), and with rest of market share split evenly among the rest of our competitors. Market share for all players has been stable over the last decade.
- How did our client achieve the larger market share?
  - They were the first mover into the market.
- Is there any difference between the paper supplied by our client and our competitors?
  - All players have been producing and supplying essentially the same type and quality of paper since microwavable popcorn was introduced
- Is there a history of innovations in the grease-resistant paper market?
  - All players have been producing and supplying essentially the same type and quality of paper since microwavable popcorn was introduced.
- Is there any threat of the popcorn makers vertically integrating?
  - Not really, popcorn makers differentiate on brand and are not really interested in entering production of what is essentially a commodity product.
- Is there pricing pressure evident in this market?
  - Prices have been relatively stable over the last decade, though recently there has been some increasing pressure as the retail price for microwavable popcorn has been dropping.



*Snap, Crackle, Pop (continued)*

- Will our client’s customers be able to differentiate themselves by using the new paper with increased grease resistance? Will they derive a competitive advantage?
  - They have not had direct conversations with the popcorn makers. They did however run some initial focus groups with end-customers (i.e. buyers of popcorn), and found the amount of grease that seeps through paper is not a concern for buyers and introducing the new paper will not necessarily sway consumer’s buying decision.
  
- Will producing the new paper require a large capital investment?
  - The cost of setting up the new production will be minimal.
  
- Will the new paper increase our client’s raw material costs (e.g. thicker paper, more coating, etc)?
  - It currently costs our client \$0.10 to produce each sheet of paper for an individual package of popcorn. The chemicals in the coating of the new paper increase the cost of a sheet by 20% to \$0.12.
  
- Will our customer’s clients incur any additional costs to setup their production process to accommodate the new type of paper?
  - They will not incur any extra costs in the production/packaging process. In fact, they will actually be able to save some money by using the new paper. The old paper required that popcorn makers to glue two sheets of paper together before packaging in order to achieve the desired grease resistance. The new paper allows popcorn makers to eliminate this step in the production process that previously added \$0.12 to their total packaging costs.

**Total Packaging Costs for Popcorn Makers**

	<b>Old</b>	<b>New</b>
<i>Grease Resistant Sheets Needed</i>	2	1
<i>Cost per Sheet</i>	\$0.20	?
<i>Cost to Glue Sheets</i>	\$0.12	\$0.00
<b><i>Total Packaging Costs</i></b>	<b>\$0.52</b>	<b>?</b>

## **Recommended Solution**

---

### **Question 1 Details**

- Interviewer should identify that talking to your client's customers (i.e. popcorn makers) would be the first step
- Realize that increasing the total packaging cost for popcorn makers to utilize the new paper in their packaging operations is not an option
- Realize that introducing the new paper will cut our client's volume by 50%
- Come up with a pricing strategy that will allow our client to maintain existing profitability, or potentially increase profitability by reducing total packaging costs for popcorn makers and increasing market share.

### **Overall Recommendations**

*A good answer includes:*

- Identifies that seeking input from your client's customers is a critical step
- Recognizes that the new paper adds minimal value to the end customer and thus will not help popcorn makers differentiate themselves
- Analyzes the supply chain to come to the conclusion that a the new paper will lead to a 50% drop in volume if our client maintains the same market share

*A better answer includes:*

- Recommends a specific price that our client should set to maintain profitability at current volume (i.e. \$0.52)
- Highlights that our client will have to pre-sell this innovation with clients over time as they will probably not be amenable to what they may perceive as a \$0.32 price increase

*A superior answer includes:*

- Recommends a specific price range that will allow the client to increase its market share and profitability by lowering the total packaging cost for popcorn makers in a retail market with increasing pricing pressure
- Identifies additional steps our client will have to take to ensure it can capitalize on this opportunity (e.g. patent protection, sales and marketing, etc.)
- A superior answer should also quickly realize that the rationale for the product introduction is driven by cost reductions for popcorn makers vs. demand creation in the retail market.



## Splat!

**Case Description:** Private equity client is considering investing in paintball gun manufacturer.

**Inventory:** [no exhibits]

**Industry:** Consumer products

**Potential applicable frameworks:**

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3 C's             | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

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## Introduction

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We have a private equity client that is considering purchasing a small company that makes paintball guns (Splat). Sales last year were \$50M, net profit was \$20M, and they have been growing at 50% per year. The client has asked us for help in evaluating this investment. You & I are the team members who will do the bulk of the thinking and analysis.

*Overarching question:* How would you evaluate whether or not this paintball gun company (Splat) is a good investment?

*Comments on structure (feedback of good/bad structure to be given **after the** interviewee creates their own approach):*

- The company is growing really quickly. We'd probably want to find out its potential future growth. To do this, we'd want to understand
  - Is the market attractive?
  - Can Splat succeed in the market?
- In addition, the attractiveness of this investment depends on the valuation/price our client is paying for Splat (will not get into the details, but should mention it)

Splat! (continued)

## Case Details

---

**Question 1:** Is the market attractive?

*Info to be given as case progresses:*

- There are no secondary research reports on the paintball gun market. We're going to have to estimate it ourselves.

*Info to be given if asked:*

- *Market size: the interviewee should identify that the market can be sized by making assumptions about the following (prompt if necessary):*
  - Population size: US = 300MM, assume US only
  - Paintball participation: 10% of the population plays paintball in a given year
  - Gun purchasers: 10% of players actually purchase (rather than rent) a gun
  - # of guns purchased per year: Average purchaser buys 1 per year
  - Average price of a gun: \$100
  - Annual market size is  $300M \times 10\% \times 10\% \times 1 \times \$100 = \$300M$ 
    - ③ The company had \$50M of sales, which means they would have 20% of the market.
- *Market growth: Focus on how you would estimate. Case data is 20% growth.*
  - Look at the same drivers of market size to see if they are growing
    - ③ Survey people to find out about participation, purchasing habits
    - ③ Call stores that sell paintball equipment and ask them how fast sales are growing, and what is causing growth
  - We found that the market is growing ~20% per year and will continue to do so for the next several years
    - ③ This implies that at 50% growth Splat is gaining share

**Question 2:** What position does Splat have relative to its competitors? How do customers view our products?

*Info to be given as case progresses:*

- *Prompt interviewee if needed:* You'd want to know how Splat's product compares to competitors in the eyes of customers

*Info to be given if asked:*

- End customers:** How would we figure out what customers think? Survey people who bought paintball guns...prompt for possible survey questions
- e.g. When you bought the gun, what were the most important criteria?
  - e.g. How did Splat rate relative to other guns you looked at?
  - When surveyed, customers indicated they buy based on reputation for quality, and Splat is known as having the best paintball guns on the market. 2 other players are viewed quite favorably, but not as highly ranked as Splat.

*Splat! (continued)*

**Retail customers** - So the market is growing at 20%, and Splat has a slightly better product than our competitors. What else could lead to 50% Splat growth vs. 20% market?

- Brainstorm for interesting ideas
- Other than the people who purchase the gun, retailers are a key customer
  - Sell through paintball specialty stores, large chains of sports stores such as Galyans, Sports Authority, & Wal-Mart.
  - Splat's sales have been steady through specialty channel, but growing ~60% per year in large chains. What might be going on?
    - ③ Stores might be growing faster than the stores our competitors are selling through
      - No, we surveyed store managers in a bunch of these stores and they consistently said sales were growing at 20%. They sell all brands, and Splat was doing slightly better than others (~25% growth).
    - ③ Our stores may be adding new locations, or Splat has recently been added to some of these stores
      - Yes. Over the last few years, the chains have added Splat to a few stores per year. They are now in almost all of the stores.

*Splat! (continued)*

### **Recommended Solution**

---

- The company has been growing fast for a few reasons:
  - High market growth
  - Quality product
  - Adding stores
    - ③ Adding stores appears to be done, so growth will only be from market growth & share gain vs. competitors, estimated at 25%
- Depending on the price of the deal, the company should buy Splat if the return meets their needs with the company growing 20-25% per year over the next few years
- (If time) What risks would you highlight?
  - Maybe paintball is a fad, and participation will stop increasing or even decline
  - Maybe brand perceptions change quickly, and we will lose share
  - Maybe someone will get killed or injured playing paintball. If it's our gun, it's a legal issue. If it's another gun, it may result in decreased participation.

### **Overall Recommendations**

*A good answer includes:*

- Structuring an approach to answering the overarching question (i.e., identifying the need to understand the market, competitors, and customers)
- Understanding the different components that make up the market sizing

*Splat! (continued)*

*A better answer includes:*

- Recognizes that Splat growth is much greater than market growth and quickly trying to identify the source of the discrepancy
- Realizing that roll-out into the retail channel/supply chain could be the current source of extraordinary growth for Splat

*A superior answer includes:*

- Move quickly through market sizing, uncover the difference between market and Splat growth, and understand the difference between the two
- Understanding the importance of end consumers and retailers in order to solve case
- Identifying that there are risks to every investment worth considering



## Home Security Systems - The Right Move?

**Inventory:** [no exhibits]

**Industry:** Telecomm

### Potential applicable frameworks:

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3 C's             | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

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### Introduction

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Our consulting firm has been engaged by a long-time client of ours, Big Telecomm Company, to help them think through their growth strategy. The CEO of Big Telecomm (or B.T. for short), wants to diversify into the home security system market. They're looking at growing through acquisition and have identified several appealing companies. However, their first priority is to figure out if entering the market is something they should even be doing in the first place.

*Question 1:* What should we consider in trying to make the market entry decision?

*Question 2:* Should we recommend this course of action to our client?



### Case Details

---

**Question 1:** What should we consider in trying to make this decision?

- Is this market attractive?
  - Size of market
  - Barriers to entry
  - Competition & other market characteristics
- Are there any other benefits to entering the market?

**Question 2:** Should we recommend this course of action to our client?

*Info to be given as case progresses:*

- This is a very open ended case so you should just start with the introduction and question. No additional data is needed in the beginning

*Info to be given if asked:*

- The home security market is a growing market in the US
- The industry norms are as follows:
  - equipment & installation
    - ③ \$500-\$1500 (1 time fee)
    - ③ Average 10% margin
  - Monthly service
    - ③ \$20/month (retail)
    - ③ Average \$5 margin
- There are 10 million hh that currently have home security systems

*Exhibits*

- N/A

### Recommended Solution

---

#### Question 1 Details

##### Market Size for Home Security:

300 million people

3 people/households (hh)

=100 million hh

Currently, 10 million hh have home security systems, which implies a penetration rate of 10%.

Market is growing to an estimated potential penetration rate of 20 million hh (based on demographic factors like aging population, increased disposable income, etc.)

Annual revenue/hh =

Monthly service = \$20/month or \$240/year \* 20 million hh = \$4.8 billion in revenue

Monthly service margins = \$5/month or \$60/year \* 20 m hh = \$1.2 billion profit

Equipment & installation is one time fee so not going to get \$\$\$ from all customers each year. Estimate % churn for customers - 10% year (exact # doesn't matter but it should be based in logic. i.e. high switching costs so low churn rate)

So, 10% new customers each year out of 20 m hh = 2 m hh

Equipment & installation to be \$1000 (average of \$500 & \$1500. = \$1000 \* 2 m hh = \$2 billion in revenue

Equipment margins are 10% = \$200 million profit/year

Market size/year in revenue = \$4.8B from service + \$2B from equipment & installation = \$6.2B

Market size/year gross margin = \$1.2B from service + \$200M from equip. & installation = \$1.4B

##### Benefits to being in home security market

- Possible economies of scale (materials purchasing, advertising, employee hiring)
- Increased switching costs for customers -> Lower churn rates -> Lower marketing/advertising costs
- Lower acquisition costs for customers (for each business since can draw from each others existing customer base)
- Compatibility between technologies (R&D benefits to customers, lower defect rates, decreased need for service & repairs)
- Call center staffing - both companies need - can combine and save \$\$\$ in facilities, hiring, training, staffing
- Similar business models - i.e. one time equipment & installation fee and then monthly revenue from service. Potential for combined service packages (phone, cable, internet, home security)

*Home Security Systems (continued)*

**Overall Recommendations**

*A good answer includes:*

- market size for home security market (potential revenues)

*A better answer also includes:*

- Listing of synergies between two industries and possible areas for cost savings (potential costs)

*A superior answer includes:*

- Things that B.T. should consider when evaluating different home security companies (i.e. should it be a national company, or local; should it have a national brand name, or not)
- [A superior answer should also include the efficiency with which the interviewee moves through the case—don't get hung up on details that aren't central to the primary business issue]



## Magazine Market

**Inventory:** [no exhibits]

**Industry:** Magazine

### Potential applicable frameworks:

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> 3 C's             | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> 4 P's             | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

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### Introduction

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Your client is the CEO of a publishing company that produces a line of educational magazines as well as a line of women's magazines. Both businesses are profitable but are not growing quickly. He wants to start a third monthly magazine in the U.S. targeting 30 to 50 year old men. His stated goal is to generate circulation revenue of \$10 million in the first year. He has hired you to figure out whether this is possible.

**Case Details**

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**Question 1:** Is it possible to generate \$10 million in circulation revenue in the first year?

*Info to be given as case progresses:*

- This is an estimation case. The key is to clearly define your assumptions. The specific answer is not as important as long as you are making reasonable assumptions.

*Info to be given if asked:*

- o Hints on assumptions below

## Recommended Solution

---

### Question 1 Details

Sample assumptions:

- Based on normal distribution with a life span of 80 years, approximately 2/3 of the population is between 30 and 50, or 100 people. Half of these are men, or 100 million people.
- Of these men, approximately 1/2 would read a magazine (50 million)
- 10% of these would read a men's journal (5 million)
- 5% market share capture in first year (250k)
- Magazine cover price is \$2.50 to \$5.00 (\$3.00 news stand and \$2.00 subscription)
- 50/50 split between news stand and subscribers: \$250k + \$375k = \$625k per issue
- Assume monthly magazine x 12 = \$7.5 million annual revenue
- This is less than the \$10 million target

### Overall Recommendations

*A good answer includes:*

- Reasonable assumptions and logic about market size

*A better answer includes:*

- Above plus breakout of subscription and newsstand revenue

*A superior answer includes:*

- Detailed industry insight and practical recommendations for CEO



## ***New York Taxi Driver***

**Case Description:** This case explores the economics of a NY taxi driver and the decisions faced on a day-to-day basis

**Inventory:** [no exhibits]

**Industry:** Transportation

### **Potential applicable frameworks:**

<input checked="" type="checkbox"/> Profitability	<input checked="" type="checkbox"/> 3 C's	<input checked="" type="checkbox"/> Value Chain	<input checked="" type="checkbox"/> Microecon. Analysis
<input checked="" type="checkbox"/> Market Entry	<input checked="" type="checkbox"/> 4 P's	<input checked="" type="checkbox"/> Supply Chain	<input checked="" type="checkbox"/> Internal / External
<input checked="" type="checkbox"/> Competitive Threat	<input checked="" type="checkbox"/> Porter's 5 Forces	<input checked="" type="checkbox"/> Market Sizing	<input checked="" type="checkbox"/> Other

---

### **Introduction**

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For the purposes of this case, imagine that you are a New York City taxi driver. You have just dropped off a passenger at LaGuardia Airport, 12 miles from downtown Manhattan. You are now faced with a choice of returning to Manhattan with an empty cab or waiting in a two-hour line to pick up a passenger at the airport.

**Questions:** (to be asked and answered in order):

1. What are the things you would want to consider in order to answer this question?
2. What would you do?
3. Given what you would do, what does this mean for people who need taxis in Manhattan and at LaGuardia? What might you change?

**Case Details**

---

*Info to be given as case progresses:*

- The wait time at LaGuardia to pick up a passenger is two hours
- LaGuardia Airport is 12 miles from Manhattan

*Info to be given if asked:*

Most of this information can be estimated by the interviewee, but can be given in order to move the case along.

Fare structure	First mile	\$2
	Additional miles	\$1 / mile
	Average tip	10% of fare - rounded up to full dollar

Costs	Cost of cab	50% of meter revenue
	Bridge toll	\$2 (Paid by driver if cab is empty)
	Fuel / gallon	\$3
	Cab's fuel efficiency	24 MPG

Manhattan fare data	Average wait time to find a fare:	20 minutes
	Average distance to find a fare:	2 miles
	Average drive time of a fare:	10 minutes
	Average distance of a fare:	2 miles
	Average tip per fare:	\$1

*Exhibits*

- [none]



**Recommended Solution**

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This is a self-directed case that allows interviewees to control the speed and direction of the case, as well as determine what goes into the analysis.

***Staying at LaGuardia:***

**Revenue**

Fare	\$13
Toll	\$2
Tip	\$2
Total:	\$17

**Costs**

Gas	\$1.50 (12 miles @ 24 MPG = ½ gallon * \$3/gal)
Toll	\$2
Car	\$6.50 (\$13 fare * 50%)
Total:	\$10

**Profit**            \$7 (\$17 revenue - \$10 cost)

***Leaving for Manhattan with an empty cab:***

**Revenue once in Manhattan**

Fare	\$3 (average of 2 miles = \$2 for first mile + \$1 for second mile)
Toll	--
Tip	\$1 (average tip in Manhattan)
Total:	\$4

**Costs**

Gas	\$0.50 (4 miles @ 24 MPG = 1/6 gallon * \$3/gal)
Toll	--
Car	\$1.50 (\$3 fare * 50%)
Total:	\$2

**Profit**            \$2 (\$4 revenue - \$2 cost)

**Total Profit**    \$8 (it takes 20 minutes to find passenger +10 minutes per ride = 30 minutes)  
for the 4 taxi rides in Manhattan.

**We must include the gas and toll costs to get from LaGuardia to Manhattan with an empty cab = \$2 for toll + \$1.50 for gas = \$3.50**

**Therefore, the total profit is \$8 - \$3.50 = \$4.50 = less than staying at LaGuardia**

*New York Taxi Driver (continued)*

It is more profitable to stay at the airport rather than return to Manhattan to find fares. Since it is more profitable to wait at LaGuardia, more and more cars will wait until the wait time to pick up passengers becomes longer and longer (working toward an equilibrium waiting time). This increase in wait times will occur until the amount of expected profit for the two alternatives becomes equal.

**Overall Recommendations**

*A superior or answer includes:*

- A full discussion of the implications of differing profit expectations between the two decisions and of the non-financial decision factors that might affect a driver's decision (for example sitting in the car listening to the radio for two hours versus working in Manhattan)



## ***Champion's League***

**Case Description:** This case explores the economics of distribution rights for the Champion's League soccer tournament.

**Inventory:** [no exhibits]

**Industry:** Media & Entertainment

<input checked="" type="checkbox"/> Profitability	<input checked="" type="checkbox"/> 3 C's	<input checked="" type="checkbox"/> Value Chain	<input checked="" type="checkbox"/> Microecon. Analysis
<input checked="" type="checkbox"/> Market Entry	<input checked="" type="checkbox"/> 4 P's	<input checked="" type="checkbox"/> Supply Chain	<input checked="" type="checkbox"/> Internal / External
<input checked="" type="checkbox"/> Competitive Threat	<input checked="" type="checkbox"/> Porter's 5 Forces	<input checked="" type="checkbox"/> Market Sizing	<input checked="" type="checkbox"/> Other

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### **Introduction**

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Your client is an Italian television broadcasting company. It has rights for broadcasting Champions League Soccer Tournament in Italy. We have been asked to decide whether to broadcast it on pay-TV channel owned by the client or on the free channel also owned by the client.

**Questions:** (to be asked and answered in order):

1. What should our client do?

### Case Details

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*Info to be given if asked:*

- The revenue sources for the two options are:
  - Ads for free TV and additional subscribers for pay TV.
- 30 seconds of ads are \$70K at any stage
- Games have 25 minutes of advertising
- Tournament structure:
  - First round, 4 groups with 4 teams each. In the first round each team plays with each other team in their group on a neutral field (no home team). The top two teams in each group advance to the second round.
  - Second round is the quarterfinals with both home and away games.
  - Third round is the semifinals (also home and away games), followed by the final game.
- There are 3 Italian teams. They are all in different groups. Our client will broadcast only games with at least one Italian team. **Assume that the Italian teams advance through all rounds**
- Opportunity costs:
  - If we decide not to broadcast the game on free TV, we will still get the same minutes of advertising at \$20k/minute
  - If broadcast on pay-TV, we will get 1M more subscribers for the year
- Pay TV: Subscription fee is \$10. Price per month \$5.
- For pay TV customer acquisitions cost of \$5 and it costs \$6 per year to serve accounts
- No customers will leave if you decide not to broadcast on pay-TV
- Project only lasts 1 year

## Recommended Solution

---

This is a self-directed case that allows interviewees to control the speed and direction of the case, as well as determine what goes into the analysis.

### *Tournament Structure and games to broadcast*

- 1 round =  $3 \times 6 = 9$  games broadcasted
- 2 round = 6 games
- 3 round = 4 games
- Final = 1 game
- Total: 20 games.

### *Free TV scenario*

- Ad revenue per game =  $25 \times 2 \times 70K = 3.5M$
- We have also the opportunity cost. With no game broadcasting we can get \$20K per minute.
  - Incremental revenue per game =  $25\text{min} \times (140k - 20k) = \$3M$
- Total incremental revenue =  $20 \times \$3M = \$60M$
- No additional cost.
- Total scenario value = \$60M

### *Pay TV scenario*

- Incremental revenue will be  $1M \times (\$10 + \$5 \times 12) = \$70M$
- Acquisition cost is \$5 per new customer and it costs \$6 per year to serve one customer
- Incremental profit will be  $\$70M \text{ revenue} - 1M \times (\$5 + \$6) = \$59M$ .

Given this information, the incremental profit for pay TV is \$59M and for free-TV is \$60M. There are no other considerations but interviewee could be prompted to come up with some reasons to go with the Pay TV instead (such as Pay TV customers would be more likely to sign up again next year, etc.).

## Overall Recommendations

### *A good answer includes:*

- Clear grasp of case concepts and understanding of key case considerations

### *A better answer includes:*

- Crisply leads interviewer through rationale and explains opportunity cost analysis

### *A superior answer includes:*

- Synthesizes effectively, drives to conclusion and explains additional important issues to consider such as relative strength of scenario assumptions and impact of alternative assumptions



## ***Is This Seat Taken?***

**Case Description:** This case explores the economics of the airline industry

**Inventory:** [no exhibits]

**Industry:** Airlines

- |  |   |   |   |
|--|---|---|---|
| <input checked="" type="checkbox"/> Profitability      | <input checked="" type="checkbox"/> C's               | <input checked="" type="checkbox"/> Value Chain   | <input checked="" type="checkbox"/> Microecon. Analysis |
| <input checked="" type="checkbox"/> Market Entry       | <input checked="" type="checkbox"/> P's               | <input checked="" type="checkbox"/> Supply Chain  | <input checked="" type="checkbox"/> Internal / External |
| <input checked="" type="checkbox"/> Competitive Threat | <input checked="" type="checkbox"/> Porter's 5 Forces | <input checked="" type="checkbox"/> Market Sizing | <input checked="" type="checkbox"/> Other               |

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### **Introduction**

One of the aviation partners has just walked down the hall and asked us to look into a question he wants to address in a pitch for new business. He received a call from the CEO of a national airline based on the west coast. The CEO wants to increase his company's profits, and would like us to see what impact having an additional passenger on every flight would have and what it would take to achieve this goal.

### Case Details

---

Data to be given if asked:

- Information on the airlines operations, to be given as asked about
- Do not give interviewee Total Flights per Day, they should calculate this!
- Airline operates only 16 hours per day

<b>City Pair</b>	<b>Average One Way Fare</b>	<b>Total Time Including Load/Unload</b>	<b>% of Flights</b>	<b>Total Flights per Day</b> <i>(Interviewee calculates)</i>
LAX – SFO	\$100	2 hours	40%	16
LAX – SEA	\$250	3 hours	25%	10
LAX – ORD	\$500	4 hours	20%	8
LAX – JFK	\$600	6 hours	15%	6

### Recommended Solution

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*Selected key case points:*

- The interviewee should realize that that addition of one passenger has no impact on the cost of the flight, and therefore that each additional passenger's revenue goes directly to the bottom line
- The interviewee should confirm that there is capacity to add additional passengers on all flights, and that this would not result in any increase in fixed or other indirect costs
- Interviewee should realize that free capacity could vary based on time of day and caveat answer appropriately
- Assume that at any time a plane leaves one city, another plane leaves the paired city
  - For example: LAX-SFO: 16 hours / 2 hours = 8 flights each way \* 2 = 16 flights (LAX-SFO and SFO-LAX)
  - Likewise, LAX-JFK: 16 hours/6 hours = 3.2 = 3 flights each way \* 2 = 6 flights
- Weighted average fare =  $40\%*100+25\%*250+20\%*200*500+15\%*600=\$312.50$
- If interviewee wants to proceed the long way, following details are pertinent:
  - 200 seats per plane
  - 80% of seats are filled on average
    - If calculated this way, total revenue is \$2m per day, per flight revenues are \$50k, and average fare is also \$312.50
- Airline operates 365 days per year
- Total flight revenue of \$730m dollars (assuming \$2m per day)
- One incremental passenger on each flight is worth \$12,500 per day or \$4.56m per year
- This represents an increase in revenue of 0.6%, a relatively minor impact

*What it would take to achieve an additional passenger?*

- Interviewee should discuss main levers to increase the number of passenger, e.g. advertising, promotions, partnerships, fare-sales, etc.
  - Price or service as two main but opposing levers available for increasing passengers
- Interviewee may dissect two passenger types (business & leisure) and differences in price sensitivity
- Additionally some interviewees may also think about what the ultimate goal is (i.e. increased profit), and may talk about how it might be easier to cut costs than increase revenue.
  - Ideas here could include reduce turn time, partnerships with other airlines, sales of ancillary products/services (e.g. food), or other operational improvements.





## ***Cement It***

**Case Description:** Assessment of whether a cement company should acquire a rival

**Inventory:** [no exhibits]

**Industry:** Construction & Basic Materials

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Profitability      | <input type="checkbox"/> C's               | <input type="checkbox"/> Value Chain   | <input type="checkbox"/> Microecon. Analysis |
| <input type="checkbox"/> Market Entry       | <input type="checkbox"/> P's               | <input type="checkbox"/> Supply Chain  | <input type="checkbox"/> Internal / External |
| <input type="checkbox"/> Competitive Threat | <input type="checkbox"/> Porter's 5 Forces | <input type="checkbox"/> Market Sizing | <input type="checkbox"/> Other               |

---

### **Introduction**

Your client, Acme Cement, is a cement producer in rural New Hampshire. They have one facility where they produce and deliver pre-mixed cement to a range of customers (e.g. building firms) in special trucks designed to stop the cement setting in transit. You have been brought in by the CEO to answer a key question for the company – should he acquire the neighboring cement producer, which he believes is about to come available, and with whom they have been competing for the last several years.

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### Case Details

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**Part A:** What should the CEO be thinking about?

*Info to be given as case progresses:*

- Cement trucks typically only travels within a 2 hour radius before it becomes very costly

*Info to be given if asked:*

- There is one competitor (Cementco) in the area
- Acme and Cementco each have 50% market share
- The market for cement and related products is stable but saturated
- Customers are very price sensitive – cement is a commodity product
- Acme and Cementco charge the same price
- Cementco has always responded to Acme's price cuts
- A large majority of customers (of both Acme and Cementco) are happy with the service they are getting

*(Try to discourage the interviewee from going into great depth on any particular aspect of the acquisition, discourage the inevitable discussion of synergy and, if necessary push them towards discussing the revenue side of the decision whether or not to acquire Cementco)*

**Part B:** How much should Cementco be prepared to pay?

The client has just received a phone call from the owner of Cementco saying that he's decided to retire and is planning to sell the business. He has offered your client first refusal on the purchase of the company, otherwise it will be sold on the open market. What is the maximum price your client should pay?

*Info to be given as case progresses:*

- The current expected future cashflows for the company are \$2 million per year for only 10 years
- If consolidation occurs, cashflows probably would increase due to pricing power
- Current price Acme charges is \$70 per ton
- Profit margin for Acme and Cementco is approx. \$3 per ton
- Annual production for Acme and Cementco is approx. 700,000 tons each
- It is estimated that any synergies / economies of scale would be negligible
- Cost of capital is 10%

## Case Details

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### **Part C:** Revaluation

(Continue with Part C if the interviewee recommends a maximum price around \$10 – 15 million)

The client calls the owner of Cementco and offers \$12 million for the company. However the competitor says that he would not sell the company to your client for less than \$24 million. Why is the price so high and should Acme buy Cementco at this price?

*Additional info to be given as case progresses:*

- None

## Recommended Solution

### Part A Details

- Interviewee will typically explore issues on the cost side, looking for synergies, for example IT, Sales, Marketing, Facilities, Trucking fleet, Support staff etc. The interviewer should explain why none of these gives much return. (Interviewer will be assessing commercial understanding)
- Interviewee may advise not to buy, based on the lack of synergy, and may advise alternative revenue growth options, including:
  - Expanding into new markets - why do we assume they are attractive?
  - Expanding product line-up – but what do we know about adjacent products?
  - Compete on service – realistic?
  - Changing pricing to drive volume – what happens then?
- Interviewee should recognize that acquisition of the competitor is a good option – especially given the competitive uncertainty associated with the downside risk of an alternative buyer
- The interviewee may or may not recognize the potential monopoly play available to Acme.

### Parts B Details

- Part B assumes the interviewee to have failed to recognize the monopoly play, but continues to test for comfort with numbers. *If the candidate has recognized the monopoly potential, their analysis will most likely combine elements of Parts B & C.*
- Interviewee should set up a DCF and estimate an NPV of \$10 - \$15MM. (If interviewee realizes that prices can be increased the NPV will be a lot higher)

Year	1	2	3	...	9	10
<b>Cashflows (\$MM)</b>	2	2	2	...	2	2
<b>PV Cashflows (\$MM)</b>	$2 \times (1.1)^1$	$2 \times (1.1)^2$	$2 \times (1.1)^3$	...	$2 \times (1.1)^9$	$2 \times (1.1)^{10}$
<b>NPV</b>	~\$12 MM					

- Recognize that acquiring the competitor may result in economies of scale (reduced workforce, sharing of assets)

## Recommended Solution

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### Parts C Details

- Interviewee should recognize that if Acme buys Cementco it will become a monopoly and prices can be increased
- Interviewee should estimate the effect of a reasonable price increase (e.g. \$2 per ton / 3%), similar to the analysis shown below and thus be able to determine that a small price rise could result in the value of the acquisition increasing to \$24MM

	Acme	Cementco
<b>Current Price</b>	\$70	\$70
<b>Current Margin</b>	\$3	\$3
<b>Δ Price and Margin</b>	\$2	\$2
<b>Percentage Δ Price</b>	3%	3%
<b>Tons / Year</b>	700,000	700,000
<b>Δ Profit / Year</b>	\$1,400,000	\$1,400,000
<b>Total Δ Profit / Year</b>	\$2,800,000	

- Discuss the potential issues surrounding the purchase and analysis:
  - Potential regulatory blocking
  - Higher prices and margins will encourage new entrants into the market, thus depressing prices again

### Overall Recommendations

*A good answer includes:*

- Real world thinking in terms of possible operations of a NH cement company (e.g. no large back-office)
- Clear understanding of both the cost and revenue options and a quick understanding of opportunities associated with decreased competition / monopoly

*A better answer includes:*

- Quickly sees the commercial opportunities and undertakes DCF and pricing analysis on that basis
- Sticks to the advice to buy, even if paying up, to avoid encouraging an alternative player into the market

*A superior answer includes:*

- All of the above, but also pushes the interviewer on Trucking fleet rationalization or some other synergy, which, although small also drives profitability
- Thinks un-prompted of ways to structure the payment to the owners of the other firm so as to share the risks associated with price rises and lowers the overall cost of borrowing.



## ***Medicine, Please***

**Case Description:** This McKinsey style case looks at the economics of the healthcare payer / provider system. [Note: this case has a structured format different from others in the book]

**Inventory:** [no exhibits]

**Industry:** Healthcare

<input checked="" type="checkbox"/> Profitability	<input checked="" type="checkbox"/> 3 C's	<input checked="" type="checkbox"/> Value Chain	<input checked="" type="checkbox"/> Microecon. Analysis
<input checked="" type="checkbox"/> Market Entry	<input checked="" type="checkbox"/> 4 P's	<input checked="" type="checkbox"/> Supply Chain	<input checked="" type="checkbox"/> Internal / External
<input checked="" type="checkbox"/> Competitive Threat	<input checked="" type="checkbox"/> Porter's 5 Forces	<input checked="" type="checkbox"/> Market Sizing	<input checked="" type="checkbox"/> Other

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### Case

**Q1.** Tuck Health, which is based in Texas and New Mexico, is a non profit integrated health care system. Integrated health care systems have hospitals, philanthropic organizations, nursing homes, senior resident facilities, physician clinics, outpatient surgeries and diagnostic centers, community out reach programs.

The CEO wants to grow the organization – how would you say he achieve this goal?

*What does growth mean for a non-profit?*

- Service quality, fairness, reach etc, but in this case he wants to most importantly achieve profitability and increase in size.
  1. New Services
  2. New Markets
  3. New Channels

Which can be achieved through a JV, acquisition or by growing organically. Candidate should talk about influencers, which in this case, are the doctors who send patients to the hospitals.

## Case

---

**Q2.** At the time McKinsey was retained the CEO was considering adding additional capacity. Before he invested that amount what factors as an advisor to the CEO would you want him to consider?

*Demand:*

- How much is the extra demand?
- How sustainable is the extra demand?
- How much do you aim to capture?
- Competitor's reaction

*Time horizon:*

- How much time needed for capturing demand?

*Resources constraints:*

- Access to capital
- ROI needed, profit margins available
- Space/Labor etc

*Availability of alternatives:*

- Acquisition target

*Non profit:*

- Affect core goals

## Case

---

**Q3.** *Explain referrals in hospitals:* Few years back the company adopted the strategy of employing practices and hence the physicians so as to growth the system? How would you evaluate if this strategy has achieved success?

- Hospitals
  - Profitability
  - Growth in patients
  - Physicians
- Patients:
  - Service Quality/Flexibility (better care),
  - Better reach
  - Fair
  - Integrated services and more flexibility and reach
- Physicians
  - Compensation (benchmark – before and now)
  - Physician satisfaction – life style, other VAS

**Q4.** Let's focus on profitability. Tuck Health was formed by the merger of two IHS systems one operating in Texas and other in New Mexico. While Texas division has seen rapid growth as a result of this strategy the other has not? What could have caused this disparity?

Cost side is the same for both

### *Macro*

- Market factors: growth, size and age/health of population, per capita income of population
- Competition



## Case

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### *Micro*

- Management
- Service mix
- Price mix
- Location

**Q5.** Referral Analysis: Describe what referrals are. What are the ways to find out whether physician growth has resulted in facility/hospital growth?

- Simply increase in physicians correspond to facility growth
- Profile docs to see their referral patterns before joining our system versus after: what would you worry about this

**Q6.** What would you worry about when doing such analysis?

Effect of external factors such as

- Addition of new capacity
- Addition on new services
- Changes in market structure
- Changes in competition structure
- Changes in cost/pricing structure

**Case**

**Q7.** Here is some data on performance of physicians in Texas division in terms of getting in patients to our hospitals. Using a 5 year horizon, would you recommend that CEO employ this strategy of hiring new physicians

<b>Market type</b>	<b># of physicians</b>	<b>Total new patients added (2006)</b>
Markets with no physicians		1,000
Markets with no new physicians added	Existing: 100	2,000
Markets with new physicians added	Existing: 50 New:50	4,000

CM per new patient = \$ 10,000

One time new physician investment = \$ 900K

**Q8.** What would be your recommendation to the CEO regarding employing this strategy?

➔ Focus only on the high growth Texas market

- NPV = 0
- Achieves other growth goal of reach
- More services
- Better care
- New Mexico: need more information



## High Peaks Jacket

**Case Description:** This case looks at how to grow a specialty apparel manufacturer's business. [Note: A PowerPoint version of this case is available in the club folder]

**Inventory:** Three exhibits follow

**Industry:** Specialty Apparel

<input type="checkbox"/> Profitability	<input type="checkbox"/> 3 C's	<input type="checkbox"/> Value Chain	<input type="checkbox"/> Microecon. Analysis
<input type="checkbox"/> Market Entry	<input type="checkbox"/> 4 P's	<input type="checkbox"/> Supply Chain	<input type="checkbox"/> Internal / External
<input type="checkbox"/> Competitive Threat	<input type="checkbox"/> Porter's 5 Forces	<input type="checkbox"/> Market Sizing	<input type="checkbox"/> Other

---

### Case

Our client, High Peaks Jacket Company is a manufacturer of ski apparel located in Vermont. The company currently sells its products through specialty outdoors stores and ski shops throughout the U.S. After two years of flat revenue and profits the company has asked us to identify new avenues for growth.

What should High Peaks do to jumpstart growth?

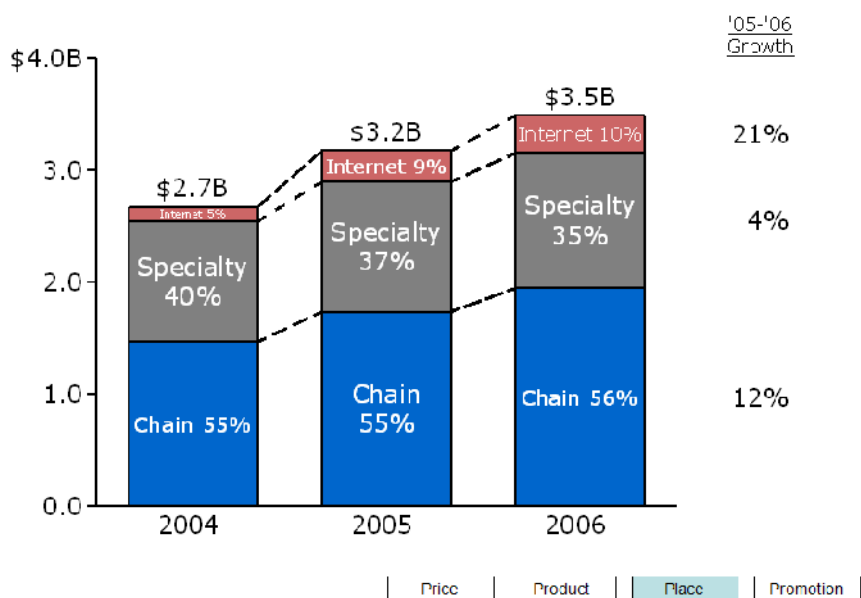
*If asked: High Peaks has \$20M in sales and net income of \$2M.*

- **The best structure to use here is some variation of the 4P's (Price, Product, Place, Promotion).**
  - *The key items are:*
    - New Channels
    - New Geographies
    - New Products
    - Pricing Adjustments
  - Note: if the candidate uses a profit tree the interviewer should guide them to the revenue side and then focus on factors that drive revenue.

*The candidate should ask for data on one of the 4P's. Interviewer provides relevant exhibits.*

Channels Exhibit

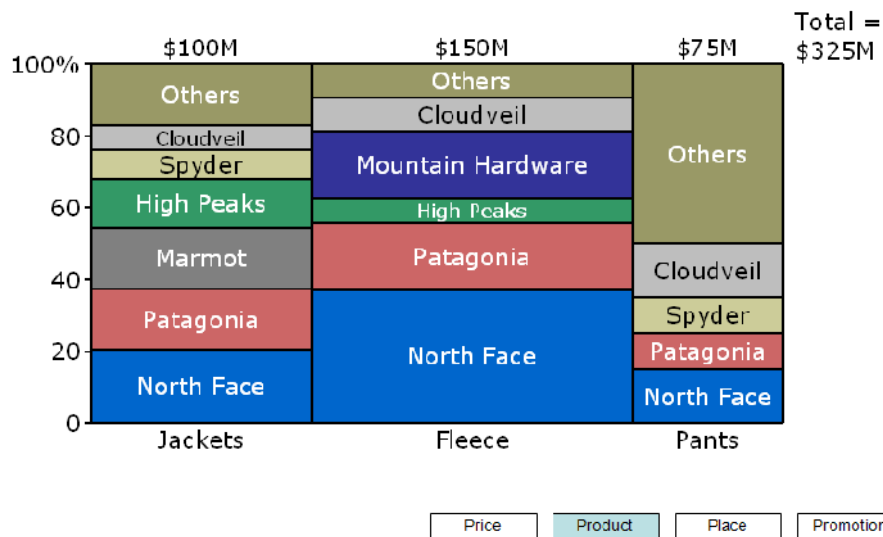
## Outdoor Apparel Sales by Channel



- The candidate should identify that:
  - The majority of industry sales come from the chain store channel which has the 2<sup>nd</sup> highest growth rate.
  - Specialty stores are the slowest growing channel
  - Internet represents only a small percent of industry sales but is the fastest growing channel
- The candidate should conclude that High Peaks should expand its distribution into internet and chain stores.
- An exceptional answer includes the observations that:
  - Internet is likely to be the highest margin channel
  - Chain stores have significant purchasing power and may pressure margins as well as posing a risk of degrading the brand and creating conflict with the specialty channel.
  - Therefore High Peaks should first focus on the Internet channel and should do additional research on the chain channel because of the risks it poses.

**Product Exhibit**

## Outdoor Apparel Revenue by Competitor by Product



Note: This exhibit contains data on revenue by product, segmented by the various leading manufacturers.

- Please walk me through some of the observations you can make from the exhibit?
- What recommendations would you make to High Peaks based on the data?

*If asked: "Other" represents various players with less than 5% market share*

- 
- *The candidate should identify that:*
    - Fleece is the largest market, but is also the most concentrated with North Face, Patagonia, and Mountain Hardware holding large shares. High Peaks has a weak position relative to the other players
    - Jackets is less concentrated and High Peaks has pretty good market share, roughly in line with Patagonia and Marmot
    - Pants is the least concentrated market, with over 50% of the market coming from “other”. No single player has greater than 20% market share. High Peaks does not current compete in Pants
  - The candidate should conclude that High Peaks should expand into pants and perhaps allocate efforts away from fleece. Not only is the pants market attractive from a structural point of view but there are obviously synergies in design and manufacturing of ski pants when you are already producing jackets.
  - *An exceptional answer may suggest:*
    - *That High Peaks consider acquiring Spyder or Cloudveil, both of which would provide an entry into pants and strengthen positions in its existing markets*

**Pricing Data – Do not give as exhibit**

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	<u>Current Pricing</u>	<u>Price Cut</u>	<u>Price Cut Impact</u>
Retail Price	200	180	-10%
Retailer Margin	100	90	
% Margin	50%	50%	
High Peaks Revenue	100	90	
High Peaks Manufacturing Cost	50	50	
High Peaks Shipping Cost	10	10	
High Peaks Contribution Margin	<u>40</u>	<u>30</u>	
 <b>Impact:</b>			
Jackets Sold	100	120	20%
Revenue	20,000	21,600	
Profits	4,000	3,600	

**If the company cuts prices by 10% they believe that they can increase sales by 20%. Is this a good idea?**

*Answer: No. The net impact will be a decline in profit*

## Geographies & Market Sizing

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If the company were to expand geographically beyond its base in the US, what other market should it explore?

*Answer: Canada, Alps, Scandinavia, Andes – Anywhere where it is cold and / or people ski*

Where would you recommend they expand first?

*Answer: Canada, closest proximity, similar to US market, decent size*

How large is the Canadian market for jackets?

*Answer:*

- Canada Population: 30M
- \* Skier Participation rate: 20%
- = Total Skiers: 6M
- Non-Skiers: 24M
- Likely to buy a ski-jacket: 1/4
- = Non-Skier Jacket buyers: 6M
- Lifespan of Jacket 5 years → 0.2 jackets per year
- 12M Jacket Buyers = 2.4M jackets per year
- Price per Jacket: \$150
- = Ski Jacket Market Size: \$360M



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**THANK YOU  
&  
GOOD LUCK!**



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