TUCK CONSULTING CLUB
CASE BOOK

2006-2007 Edition

TUCK CONSULTING CLUB CASEBOOK

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I. 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

II. RECRUITING INTELLIGENCE

Interview process timeline

- Over the summer
  - **Prepare your resume**: Think of succinct ways to describe your main achievements. Try to 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.

- 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 specific industry experiences (panels range from consulting to banking, to non-profit to general management). Ask questions and decide what is important to you in your choice of career. Decide whether consulting meets your objectives.

- 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. (Note - 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 and the values it holds.. Do your best to understand how the firms differ.
  - **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.

- 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.
  - **Partake in Boston/New York visit:** This three-day trip over the October break provides a comparative look at all the major firms. We visit each

firm at their home office – another opportunity to find the firms with the best fit for you.
    - **Establish links with Tuck Alumni:** Building relationships at your firms of choice will express your interest and help develop you 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")

- November/December
    - **Apply to firms:** Deadlines and methods vary for each firm. If in doubt, then ask. You should also have a back up plan in case you are unsuccessful with your first choice career. 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

- 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**.

- February
    - **Formal on campus interviews**. First round interviews are typicall 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.

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 through practice and refined through additional 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.

- **Syntheses 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 competitive group of applicants that all have similarly impressive lists of academic and professional achievements. Distinguish yourself by showing that you are equally successful in your personal life by using examples from outside work/school whenever possible. This will add a breadth and interest 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 yourself.

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., 4 P's/3 C's)
4	Develop a framework to solve	10-15 min	Analytics, problem solving, and public math	• Frame problem • Make hypotheses • Walk the interviewer through the solution
5	State the conclusion	1-2 min	Big picture thinking; synthesis	• 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 to 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.

III. STRATEGIC TOOLS AND FRAMEWORKS

General Tools for Case Interviews

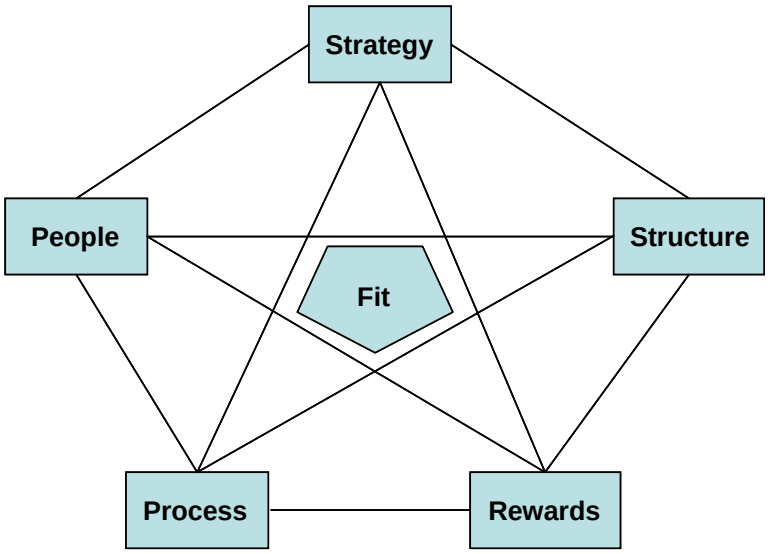
When preparing for case interviews, you will hear repeatedly, “Learn the frameworks,” and “develop the analytical tools." The problem for most people is that nobody ever explains exactly what frameworks and tools they are talking about. The list presented in the following sections, though not exhaustive, 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 problems. 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



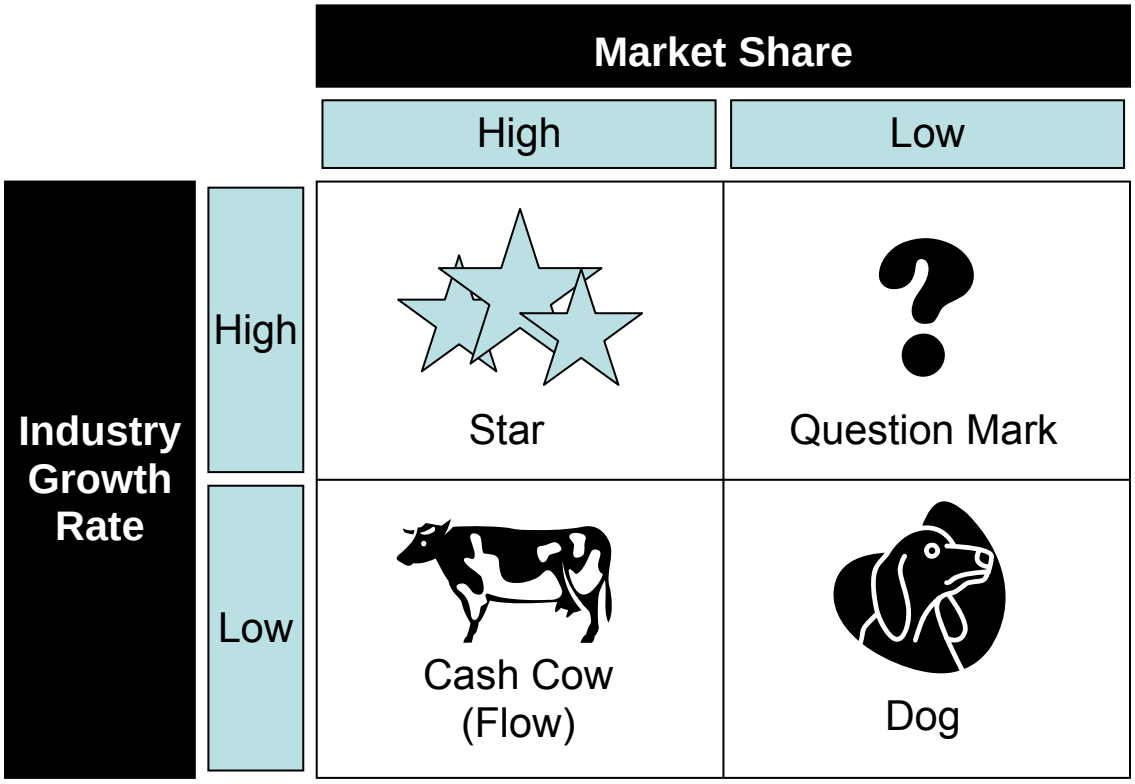
SWOT Analysis

SWOT (Strengths, Weaknesses, Opportunities and Threats) provides a simple structure for evaluating a position of 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	**Strengths** Use/Leverage	**Weaknesses** Stop / Minimize
External Factors	**Opportunities** Exploit / Expand	**Threats** Defend

BCG Matrix

This matrix, often referred-to as the "Growth/Share Matrix", is named after its originator, the Boston Consulting Group. The matrix is a simple way to prioritize investments across a company's various business units or divisions. The 2X2 matrix that maps industry growth and current market share often looks like this:



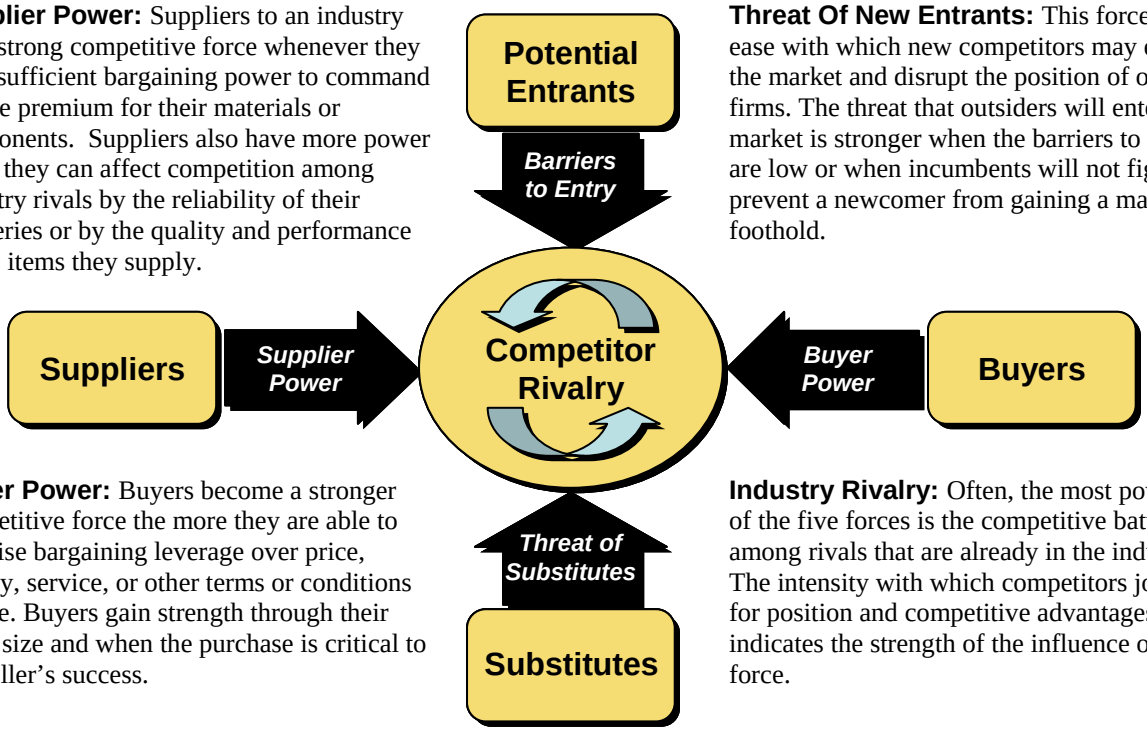
The strategies associated with this matrix are to hold stars, build question marks, harvest cash cows, and divest dogs. In other words, as a corporation looks at its business units, it should use cash cows to provide funds to build its question marks and to maintain its stars. It should sell its dog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

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:

Supplier Power: Suppliers to an industry are a strong competitive force whenever they have sufficient bargaining power to command a price premium for their materials or components. Suppliers also have more power when they can affect competition among industry rivals by the reliability of their deliveries or by the quality and performance of the items they supply.

Threat Of New Entrants: This force is the ease with which new competitors may enter the market and disrupt the position of other firms. The threat that outsiders will enter a market is stronger when the barriers to entry are low or when incumbents will not fight to prevent a newcomer from gaining a market foothold.



Buyer Power: Buyers become a stronger competitive force the more they are able to exercise bargaining leverage over price, quality, service, or other terms or conditions of sale. Buyers gain strength through their sheer size and when the purchase is critical to the seller's success.

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

Threat of Substitutes: The threat posed by substitute products is strong when the features of substitutes are attractive, switching costs are low, and buyers believe substitutes have equal or better features.

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

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.

GE / McKinsey Matrix

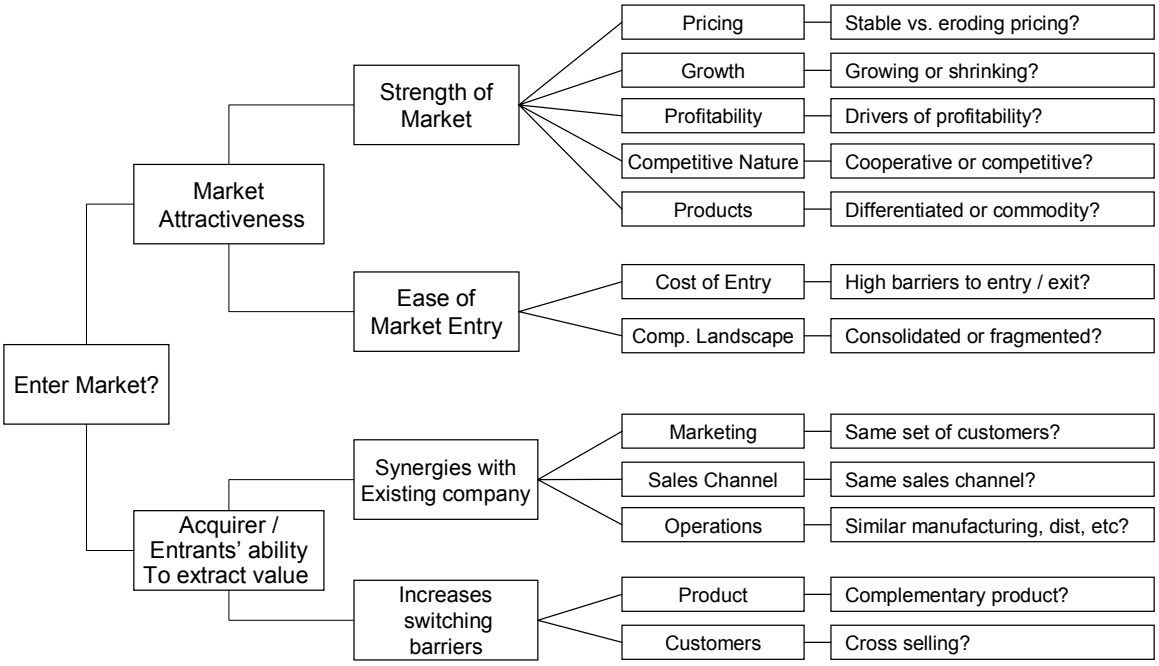
This framework provides a method to evaluate business opportunities or different business units. It is useful for assigning investment priorities and resource allocation. Its use is similar to that of the BCG matrix, but replaces "Industry Growth" and "Market Share" with "Market Attractiveness" and "Competitive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

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

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
- Psychographic variables
  - attitudes
  - life style
- 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

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.

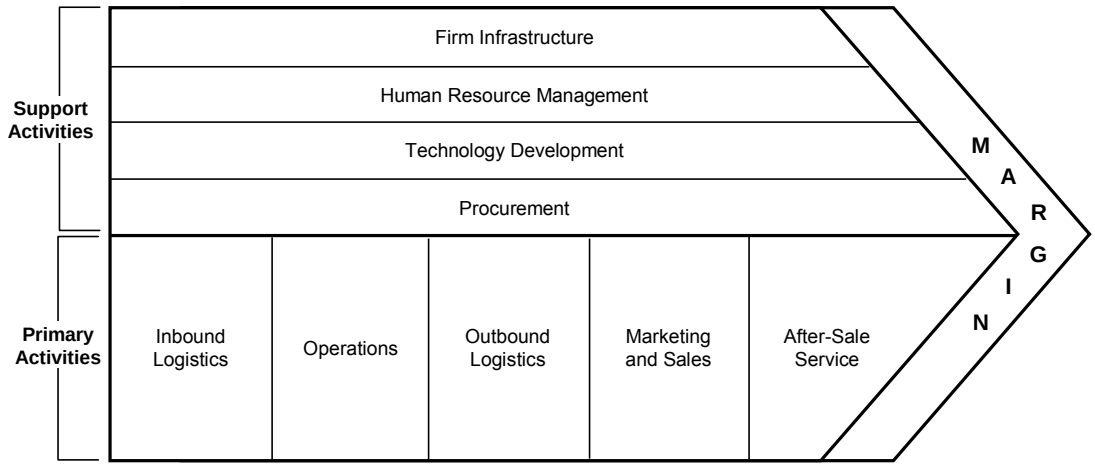
Delivery: Has two dimensions: speed and reliability

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:

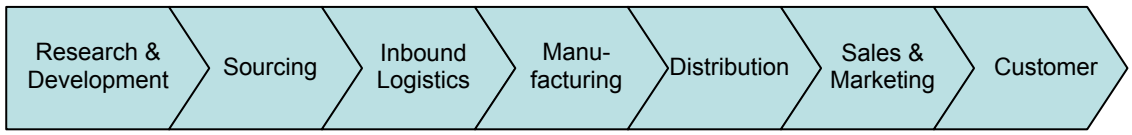


Value chain analyses step you through the company's processes and help you understand how much value each step adds. Through this type of analysis, you can discern possible

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:

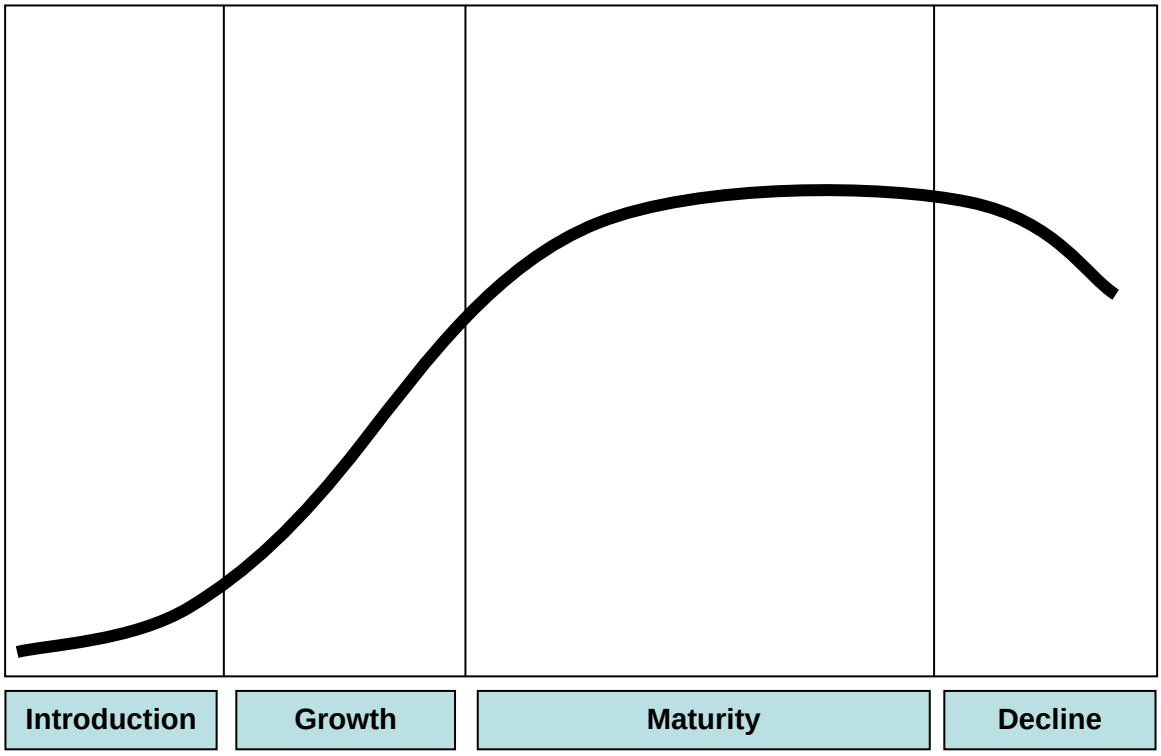
- Spreading fixed costs over greater production levels
- Gaining sales from having a larger product line and extending brands
- Better capacity utilization of plants
- Better penetration of new geographic markets
- Learning valuable management skills
- Obtaining higher prices from eliminating competition (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.



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.

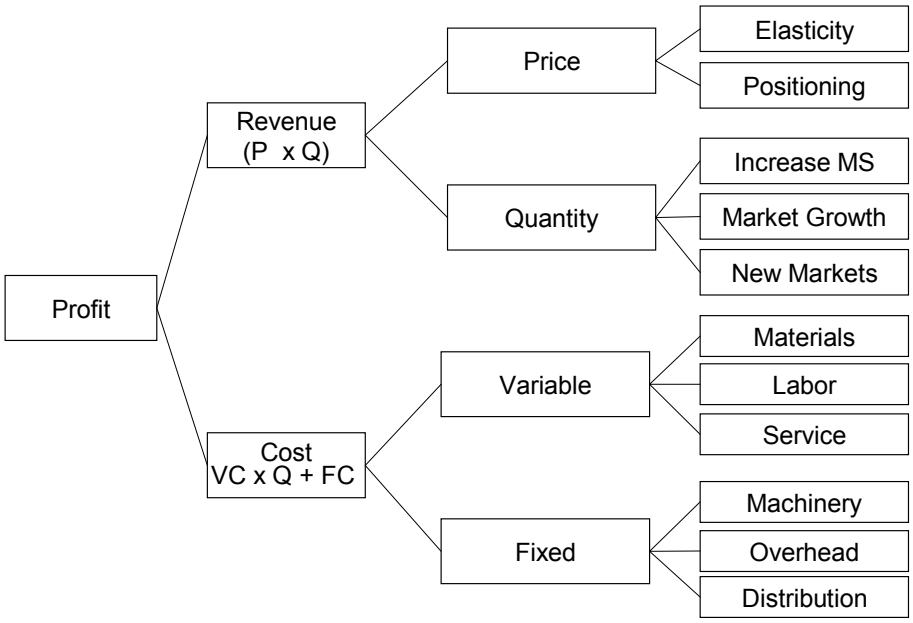
Total Quality Management (TQM)

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.

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 nearly 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

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 you’re 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.

Breakeven Point

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

$BEQ = FC/(P-VC)$

The price minus the variable cost per unit is called the contribution margin. The contribution margin 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 subtract the total fixed cost.

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

Additional Resources

Other School Casebooks
JobJuice cards
http://www.bschooljobs.com/ Consulting Guide
http://en.wikipedia.org/
http://www.trumpuniversity.com/learn/trump360.cfm
http://www.valuebasedmanagement.net/

IV. PRACTICE CASES

Tuck Consulting Club

Chateau

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

Inventory: [no exhibits]

Industry: Hospitality

Potential applicable frameworks:

■ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ Other

Introduction

There is an investment company that has purchased a 12th 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.

Chateau (continued)

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
    - $750K investor money
    - $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?
        - Competitors in area? ($50 - $125 per night)
        - Castle B&Bs in other parts of France? ($300-$500 per night)
        - 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?
        - Price estimate: $200/night (I'll let them choose and run with it if their # is supported with logic)
    - Calculate breakeven occupancy
        - 6 rooms x 400 nights/year: 2400 potential nights
        - 2400 x $200/night: $480K
        - 50%: $240K...Chateau is profitable at 50% occupancy or 3 rooms filled throughout year
        - 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?
        - 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
        - Tiny marketing budget
        - Location is not ideal- how do you get people there????
    - Execution
        - Timing with French contractors
        - 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
        - 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 fast-food business

Inventory: [no exhibits]

Industry: Retail/Consumer Goods [Fast Food Chain]

Potential applicable frameworks:

■ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ 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%?

Bun on the Run (continued)

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

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:

■ Profitability	□ 3 C's	□ Value Chain	□ Microecon. Analysis
□ Market Entry	□ 4 P's	□ Supply Chain	□ Internal / External
□ Competitive Threat	■ Porter's 5 Forces	□ Market Sizing	□ 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.
        - e.g. less than $15 might allow client to still claim to customers to be cheaper than competition, strengthening relations.
        - $15 could be passed off as price parity
        - Greater than $15 is possible is 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:

Profitability	3 C's	Value Chain	Microecon. Analysis
Market Entry	4 P's	Supply Chain	Internal / External
Competitive Threat	Porter's 5 Forces	Market Sizing	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?

Chicken Pox (continued)

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

Chicken Pox (continued)

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
    - 300M/75 = 4M people of each age. 4M*18/2 = 36M
    - 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:

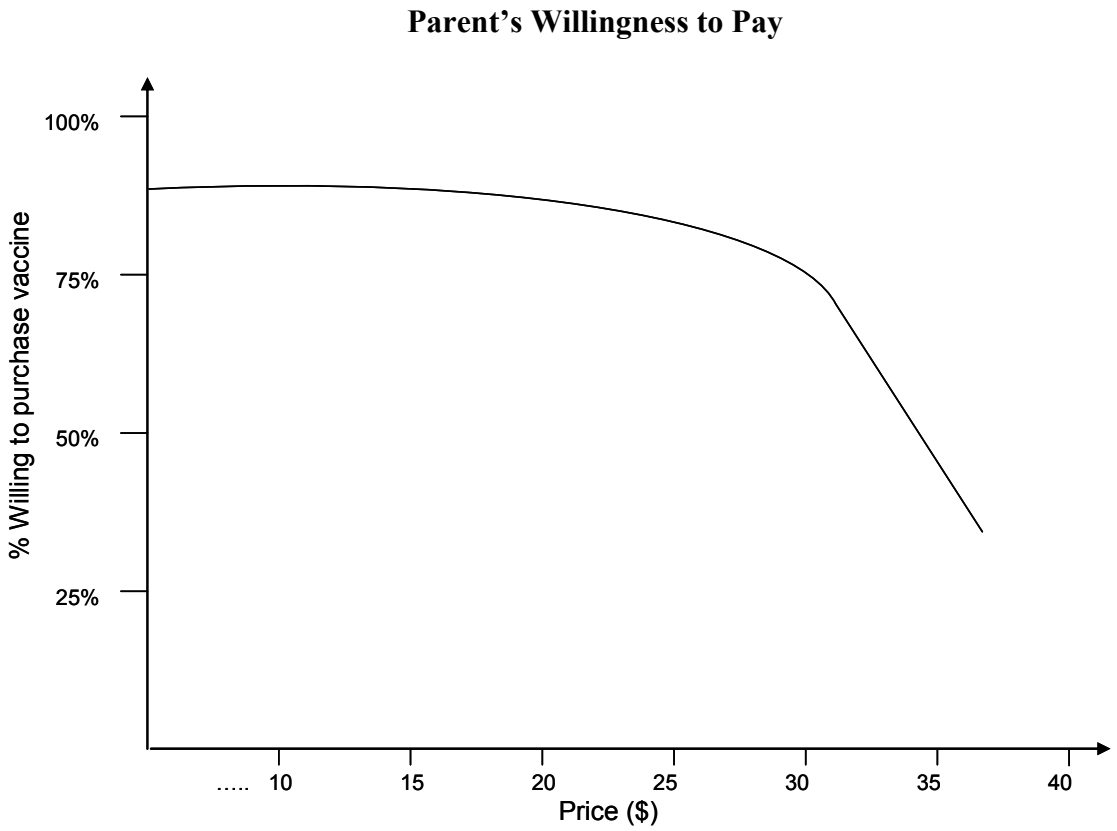
- There are two key insights:
  - "Market" segments into existing population and annual babies born
  - Competitors have no incentive to enter

  These 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 3rd phase.

Exhibit #1

Cumulative Distribution of Chicken Pox Exposure

Exhibit #2



Credit Card Collections

Case Description: The case investigates the margins of bad debt recovery in the credit card business

Inventory: [no exhibits]

Industry: Consumer finance

Potential applicable frameworks:

■ Profitability	☐ 3 C's	☐ Value Chain	■ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ Other

Introduction

Your client is the director of the collections division of a large credit card company. Each year, the credit division sends a certain number of customers over to the collections division in the amount of $500M annually. About $250M is recovered annually through a phone bank at a cost of $20M. The client wants to increase that margin.

Question 1: How would you go about thinking about this problem?

Question 2: What is the break even point of debt recovery?

Case Details

Question 1: How would you go about thinking about this problem?

Info to be given as case progresses:

- 3 segments of delinquent behavior after the company contacts the customer:
  - people who never pay (25%)
  - people who pay some of the balance (50%)
  - people who pay all the balance (25%)
- Delinquents average $10K of debt.
- Cost of a call: $10; takes average of 20 calls to get someone to pay for those who pay something.
- Costs $200 a visit to outsource to a company who will go out and knock on doors.

Info to be given if asked:

- As number of calls increases, yield per call decreases.

Exhibits

- None

Question 2: What is the break even point of debt recovery?

Info to be given as case progresses:

- None

Info to be given if asked:

- None

Exhibits

- None

Recommended Solution

Question 1 Details

- The interviewee should estimate the profitability of customers
- To increase revenue:
  - Address yield issue by automating first rounds of calls to all delinquents, then continue automation for those who are unlikely to pay
  - Concentrate most calls/in person visits on those most likely to pay all or some balance
  - You can identify those customers through income and employment records
  - Those who are more likely to pay are those with higher incomes to debt ratios, more white-collar jobs and who own substantial assets
- To decrease costs
  - Outsource
  - Automation should reduce costs as well

Question 2 Details

- Public Math: pretty minor, though asked to draw a graph showing the client when to stop making calls (MC met MR.)

Overall Recommendations

A good answer includes:

- The profitability of the business
- Some solutions for controlling reducing costs

A better answer includes:

- A curve showing the break even point
- Solutions for improving revenue/cost structure

A superior answer includes:

- Consideration of the big picture of the recommendations for improving the business
- Going beyond the above recommendations

The End of the Road

Case Description: This case explores the economics of fleet car after sales and the value chain

Inventory: [no exhibits]

Industry: Automotive

Suggested frameworks:

■ Profitability	□ 3 C's	■ Value Chain	□ Microecon. Analysis
□ Market Entry	□ 4 P's	□ Supply Chain	□ Internal / External
□ Competitive Threat	□ Porter's 5 Forces	□ Market Sizing	■ Other

Introduction

Car manufacturers (this case will use GM as a proxy for the hypothetical client name) sell vehicles to car rental agencies, corporations, and nonprofits under the umbrella of "fleet sales." At the end of that period, GM essentially recalls the vehicle and manages its sale into the aftermarket (used car market). It is easiest to think of this as GM owns the car and leases it out for a fixed period. The client has initiated a small pilot that is exploring more profitable ways of disposing of fleet vehicles. Your job is to determine if we should roll out this pilot more broadly.

Under the old system, a fleet vehicle comes available in LA. GM contacts an auctioneer who purchases the vehicle from GM for $500. The auctioneer picks up the vehicle, refurbishes it, and sells it to a local dealer. The local dealer sells the car to local customers.

Under the pilot scheme, GM has built an online auction site for customers located in Milwaukee. Online customers visit the site and can choose from fleet cars located anywhere in the US. Once a customer chooses a car, she can buy it online using GM financing or other personal means. The average auctioned car price is $2500, so the new system has incremental revenue of $2000.

Case Details

Question 1: Should we roll it out further?

Info to be given as case progresses:

- GM would continue to sell other fleet vehicles through the existing channel. It would cherry pick the best 30-50% of cars for this program.
- An auctioneer *near the vehicle* would pick up the car and refurbish it
- The vehicle would be transported to a dealer *local to the customer*
- The customer would test drive the vehicle at the local dealer, confirm terms, and take home the vehicle

Info to be given if asked:

- Customer can buy a car from any physical location
- The customers are the same type as before
- The auctioneer realizes the same margin on refurbishment but loses the margin on sale to dealer
- The dealer sells both new and used GM cars. The dealer realizes the same margin on services, but loses the margin on sale to customer
- Fleet sales comprise 10% of sales
- Resale revenues(profits) under the old system comprise $25 MM (on 50K vehicles)
- GM costs under new system:
    - $600—Auctioneer for refurbishment
    - $100—Transportation to customer
    - $400-$700—Dealer for transfer costs / warranty service
    - $200—Administration and online infrastructure

Recommended Solution

Question 1 Details

- Additional GM profit per vehicle is $400-$700. ($2000 incremental revenue minus costs GM now bears as the car owner, totaling $1300 - $1600)
- Total profit is now $900-$1200 (ask them this, they will likely forget that the $400-$700 is incremental and think the new system only generates $400-$700 profit)
- So the new system is more profitable for GM
- Auctioneer and dealers lose out on margin from value chain sales

Overall Recommendations

A good answer includes:

- Calculating the math to derive unit profits
- Understanding that auctioneers and dealers lose out on this

A better answer includes:

- Reference to the fact this is creating only $20-$35 MM additional profit for GM, and yet is disrupting the channel to do it
- Reference to the complicated logistics of owning the vehicle in the channel, including when GM should post the vehicle? Where does the vehicle sit while waiting to be bought online? Is there a time limit?
- Reference to the microeconomic effects that cherry picking cars for GM program will have on fleet sales that continue to operate though original channel

A superior answer includes:

- Recognizing that GM could lose significantly if the channel revolts or if customers react to lesser quality vehicles available through existing sales channels
- A very measured approach for rollout that monitors effect on channel / partners with channel in a unique way
- Alt: Cancels the pilot to protect the channel
- Alt: Recognizes that the problem is having two channels; migrates all sales to online and eliminates old system

Things to avoid:

- Spending a long time calculating total MM impact – unit is sufficient
- What goes into GM profit calc in old system – auctioneer buys from GM for $500. Done. Profit. Don't talk about depreciation – assume fleet sales prices cover all that

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:

☐ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ Other

Introduction

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

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.

Everlasting Light Bulb (continued)

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 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:

☐ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ 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?

Fine China (continued)

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.

Fine China (continued)

Recommended Solution

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…**	
Revenue (have interviewee calculate)	10,000 sets @ $1,500/set =	**$ 15,000,000**			**$ 15,000,000**	
Costs: (figures given once cost head is named)	***% of of $12mm Total Cost*** *(to be given to interviewee)*		***Expected % Reduction*** *(to be given to interviewee)*	***WHY:*** *(Interviewee should give intuition behind each number)*		***increase/decrease***
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)*
Total:	**GIVEN:**	**$ 12,000,000**			**$ 8,700,000**	***$ (3,300,000)***
Profit Margin		**20%**			**42%**	
		Just need approx….			***Just need approx….***	

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:

■ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	■ Market Sizing	☐ Other

Introduction

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

Got Gas? (continued)

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:

■Profitability	□3 C's	□Value Chain	□Microecon. Analysis
□Market Entry	□4 P's	□Supply Chain	□Internal / External
□Competitive Threat	□Porter's 5 Forces	□Market Sizing	■Other

Introduction

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:

☐ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ Other *(Pricing)*

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

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):
        - End user (car driver)
        - Other individuals (family, other party in accident, community)
        - Insurance companies (primarily health, but also life and P&C)
        - Government
        - OEM's (i.e. Ford)
        - Mechanics
        - Medical community, including emergency services
        - Competitors
        - Investors
        - 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?)

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:

Profitability	3 C's	Value Chain	Microecon. Analysis
Market Entry	4 P's	Supply Chain	Internal / External
Competitive Threat	Porter's 5 Forces	Market Sizing	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
	$ 20.00	**1.00**			**$ 30.70**	**$ 5.16**	
					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

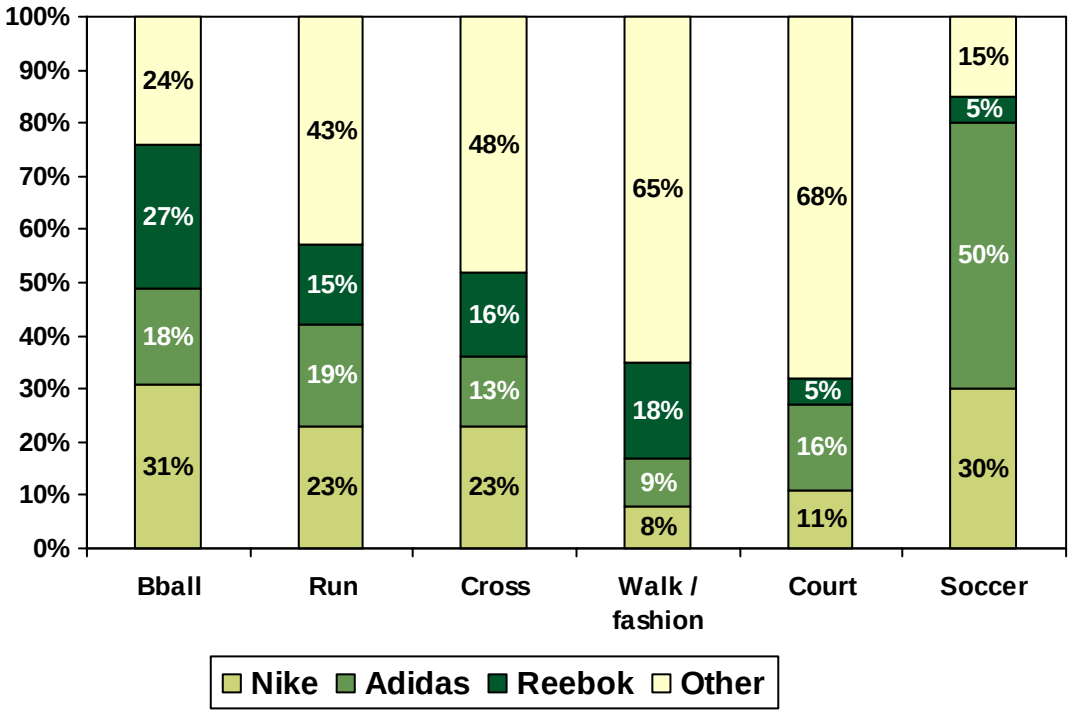
- Offer Exhibit 1(market size, growth, and margin data) at outset

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?
        - 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]

Recommended Solution

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
		$ 20.00	**1.00**			**$ 30.70**	**$ 5.16**	

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
Walking / Fashion	**3**	**2**
Court	**2**	**1***
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:
  - 3rd 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.

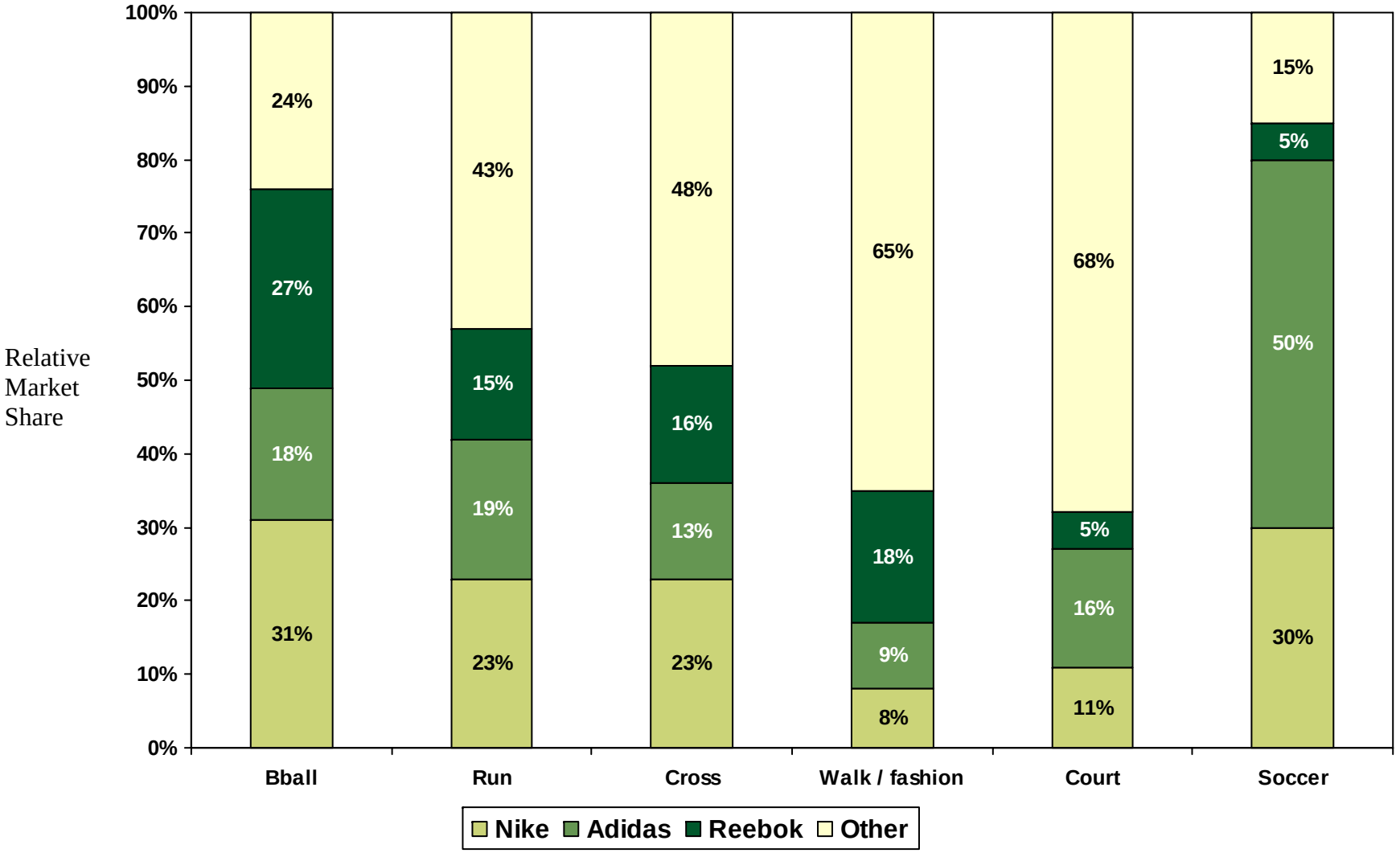
EXHIBIT 1: Market Size Statistics

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:

■ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ Other

Introduction

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?

Case Details

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

Question 1 Details

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

Revenues:

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

Costs:

Variable:

- Rafting instructors = 4 instructors * $15/hour * 8 hours/day * 84 days/year = $40,320 **≈ $40,000/year**

Fixed:

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

Total costs ≈ 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:

  $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:

Profitability	3 C's	Value Chain	Microecon. Analysis
Market Entry	4 P's	Supply Chain	Internal / External
Competitive Threat	Porter's 5 Forces	Market Sizing	Other

Introduction

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 our 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

	Old	***New***
Grease Resistant Sheets Needed	2	1
Cost per Sheet	$0.20	?
Cost to Glue Sheets	$0.12	$0.00
Total Packaging Costs	$0.52	?

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:

☐ Profitability	■ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	■ Market Sizing	☐ 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 x 10% x 10% x 1 x $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.

Splat! (continued)

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

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

Go to China

Case Description: An office furniture manufacturer is considering entering the Chinese market

Inventory: [no exhibits]

Industry: Manufacturing

Potential applicable frameworks:

☐ Profitability	☐ 3 C's	☐ Value Chain	■ Microecon. Analysis
■ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	■ Porter's 5 Forces	■ Market Sizing	☐ Other

Introduction

You are hired by a European furniture manufacturing company, who enjoys a significant market share in the middle to high end office furniture industry in Europe. The client is considering entering China's market and would like to know the addressable market size and how they may approach this market.

Question 1: How large is this market opportunity (estimate the market size)?

Question 2: Suppose the client has decided to enter China's market. What are the options for the client to enter this market? What are the pros and cons of each option?

Optional Question 3: Which one do you recommend? Why?

Case Details

Question 1: How large is the market size?

After the interviewee gets the number, ask what he/she thinks about it, conservative or optimistic?

Info to be given as case progresses:

- The client is the market leader in Europe in the middle to high end office furniture market. It offers all types of furniture in office settings.
- The client views China as an integrated market, thus want to know the total market size of China (excluding Hong Kong and Taiwan).

Info to be given if asked:
There are different approaches to get the number. The interviewee is supposed to make certain assumptions and estimate some numbers. In case the interviewee can not figure out any clue or go down the wrong path, you may want to provide some of the following information to guide her/him.

- The client is targeting customers in China who need high-quality foreign brand office furniture. (multi-national companies plus some local companies)
- There are six major cities where most multi-national companies have local offices. The interviewee can estimate the market size of one city and get the total size by multiplying it by six.
- Over 80% of Fortune 500 companies have set up offices in China. One can estimate over 1000 multinational companies actively operating in China. An office with average size is estimated to accommodate about 100 employees.
- In these offices, the average spending on office furniture per year per employee is estimated to be around $500. (any number between $200-$1000 should be fine)

Some interviewees may want to get the market size by finding how many office buildings in a major city. With average spending per floor/square foot, they should come up with a quite similar number in the end. It is a valid approach as well.

Some may want to differentiate the companies who are setting up new offices in China and the companies who have offices set up already, thus only need regular replacement of office furniture. This approach is very practical and the interviewees need to make more assumptions accordingly.

Question 2: What are the options for the client to enter the market? Pros and Cons?

This is an open question. The interviewees are encouraged to come up with any possibilities regardless of any constraint. After they list all the options, ask them to analyze the pros and cons of each option.

Go to China (continued)

Recommended Solution

Question 1 Details

- Assume there are 1000 multinational companies in China as our targeted customers. (could be more if include large local companies and government, NGOs etc.)
- 6 offices with 100 employees in each. Average spending on office furniture is around $500 per year.
- 1000*6*100*$500= $ 300 million
- The number is quite conservative and any number falling in the range of $200 million to $1 billion should be fine.

One of the alternative approaches: 6 major cities*50 office buildings in a city*20 floors/building* $50,000 spending/ floor=$300 million.

Question 2 Details

- Main options include:
    - Direct investment to build their own plant,
    - Joint Venture with local companies,
    - International Trade without local production.
- The analysis of pros and cons of above options should include the following key elements
    - control of product quality,
    - brand management,
    - distribution network,
    - cost advantage,
    - amount of investment,
    - regulatory environment/entry barriers,
    - speed of starting the business.

Overall Recommendations

A good answer includes:

- Check the approach with the interviewer and make necessary assumptions.
- Get the overall number right.
- List major options of market entry.

A better answer includes:

- Define the target customers very carefully.
- Provide comprehensive view about the different options.

Go to China (continued)

A superior answer includes:

- Offer insight about the dynamics of the market, e.g., as more and more foreign companies are entering China's market (as the client is), the market size is growing very fast. Further, the new offices to be set up will spend much more than average spending of the existing offices.
- Conduct complete and thorough analysis about the pros and cons of each option. Define the most critical factors for the client, e.g., the speed to capture the growing market. Finally provide your recommendations accordingly.

Home Security Systems – The Right Move?

Inventory: [no exhibits]

Industry: Telecomm

Potential applicable frameworks:

☐ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	☐ Other

Introduction

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
    - $500-$1500 (1 time fee)
    - Average 10% margin
  - Monthly service
    - $20/month (retail)
    - 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:

☐ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
■ Market Entry	■ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	■ Porter's 5 Forces	■ Market Sizing	☐ 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 ½ 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:

■ Profitability	☐ 3 C's	☐ Value Chain	☐ Microecon. Analysis
☐ Market Entry	☐ 4 P's	☐ Supply Chain	☐ Internal / External
☐ Competitive Threat	☐ Porter's 5 Forces	☐ Market Sizing	■ Other

Introduction

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

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)