CASE BOOK 2014-15

MANAGEMENT CONSULTING ASSOCIATION

Columbia Business School

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Introduction and Acknowledgements

Included in this casebook are 9 cases contributed by students based on their interviews in 2014 and 2015. These cases demonstrate the best written cases and were selected to represent the diversity of firms that hire on the Columbia campus and the diversity of the cases those firms use in their interviews.

This casebook does not include a generic section on "frameworks" that you could use for solving these cases or case strategies. Please refer to Case in Point or other casebooks available from MCA site to fulfill this need.

Please remember also that a case interview is an interview. Remember this as you give a case and as you practice a case interview. Evaluations should not only be based on the content of this book but also on other interview criteria as well: body language, eye contact, presentation, and so forth.

This casebook would not have been possible without the contributions from the following people: Eric Morgenlender, Joseph Saia, Gillian Almeida, Alex Sun, Revti Gupta, Jon Robbins, Jason Finkelstein, Gairy Hall, Adrian Grabicki, Alanna Lopes Souza, and Kushal Sanghrajka.

Micah Chiles, '15
MCA, VP of Publications

Tips for Starting Case Prep

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1) **Case Smart, Not Hard:** Your "case prep" regimen should not be designed as a grueling marathon to do as many cases as humanely possible – it should be used to develop the necessary skills to a level where you can comfortably complete a range of case types. You may hear people brag about how many cases they did this week, but they are missing the point and likely misallocating their time. Instead, you should keep a measured pace, take time to reflect after each case, and keep a log of your performance (the Columbia Case Tracker tool is great for this); doing so will allow you to track your progress and smartly build upon any areas of weakness.
2) **Use Both 2Y's and 1Y's, and Just Dive in**: Your first case probably won't go well – acknowledge that fact and don't be afraid to just dive in. If you make a mistake, just brush it off and keeping going (plenty of people get offers after making mistakes in real interviews, in fact). Know also hat both first and second years are valuable resources for practice. Use second years for more pointed feedback (case with them whenever you can), but don't neglect fellow first years and sponsored consultants/students.
3) **It's 50% Case, 50% Fit:** Don't case for 100 hours and neglect fit prep entirely. Firms evaluate you equally on each component, and if you are a case rock star but can't relate your professional story in a meaningful way or can't talk intelligently and thoughtfully about leadership experience you've had, you're toast. Firms need to see both case proficiency and professional fit and poise.
4) **Seek variety:** Don't do 50 profitability cases, and don't just use a single casebook. Spread your practice among multiple types of cases and multiple case books from multiple schools; this is the best way to practice a range of skills necessary and increase your chances of being prepared on interview day.

Tips for Starting Case Prep, Con't

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5) **Do You Research on Industries & Firms:** Each firm has slightly differences in the way they interview, the types of cases they use, and the terminology they use to discuss themselves. Know the difference between a McKinsey structured interview and a Deloitte Group interview. Know these differences cold, and don't mix the firms up. Again, the differences are subtle, but they are there. Sounds simple, but it can make all the difference.
6) **Read the Business Press EVERY DAY:** No exceptions. You need to be able to discuss business concepts with great and convincing fluency, which you can't do if you don't stay up to date on the news. Doing so will also help build your implicit reservoir of industry knowledge and increase your level of comfort with topics outside your immediate area of expertise.
7) **Brush up on the basics:** If you struggle with simple things like basic business terminology (profit/loss/industry vs verticals/market segments) or high school algebra & mental math (multiplication tables up to 15, quick % calculations) go brush up on these first BEFORE you dive into casing. You have to learn to crawl before you can learn to walk.
8) **Remember the Goal and Purpose of Casing:** The purpose of the case interview is **NOT** to find people who are case robots, able to breeze through any case with 0 mistakes – the purpose is to find people who are **client-ready,** who demonstrate significant **structured problem solving & analytical capabilities**, and who would **fit at that particular firm from a cultural standpoint**. That's it. Keep these goals in mind as you practice, and know that the goal is to maximize along those three dimensions, not along how quickly you can breeze through a case or how amazing your mental math skills are.

Case: Lion King Bank

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Company: McKinsey, Round 1
Difficulty: Easy
Industry: Banking
Case Type: Profitability & Market Sizing

Written by Revti Gupta '15

Concepts Tested

Market sizing
Customer acquisition & segmentation

Problem Statement Narrative

Lion King Bank is a consumer bank in South Africa providing checking, savings, credit cards, loans, etc. They have branches in all 9 South African provinces. They have completed an aggressive cost-cutting program, but revenues are still low and profitability is also low. They are looking to fix this and improve profitability quickly, and they've come to us to help them find a solution.

Case Notes

- Although the case tests a student's market sizing ability, it's a good time to review basic industry knowledge for consumer banking in terms of product offerings, customers, competition, trends, etc.
- Understand the goal of the client (to **quickly** increase revenue) and recommend immediate actions accordingly.
- Be creative when asked to brainstorm ideas on how to implement the strategy you just came up with. Think freely, this will demonstrate your business sense.

Sample Framework

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Guidance for Interviewer

A good answer would identify that the **key is in the revenue** since we know costs have been cut, and would focus on the drivers of revenue- increasing number of customer accounts or increasing the money earned per account. (also talk about customer life time value, or LTV)

Eventually this case focuses on customers and their life time value.

Clarification Answers if Asked

Nothing has changed about the competitive landscape recently. Direct that candidate away from this area if they keep asking questions about it.

The sample framework to the right is JUST a sample. A candidate can come up with something radically different if it is structured, logical, and relevant.

Sample Framework

Product Mix

1. Existing product mix vs potential expansion opportunities

Customers: Who exactly is our customer?

1. Segments
1. Demographics
2. Growth opportunities
3. Revenue potential (life time value)
4. Customer acquisition & retention
5. Premium customer segment

Revenues

1. Number of accounts * money earned per account (fees/ spread between saving/ borrowing)

Competition

1. Benchmark fees and product offerings
2. Benchmarking is an important concept and a quantitative way of improve company's top line and bottom line.

Question #1

Question #1

The company is looking to dramatically increase revenues in 2 years, and has asked us to come up with ideas on how to do this.

Solution

- Increase number of customer accounts within existing market
    - Capture unbanked customers
        - Identify and penetrate underserved geographies/ segments, but high implementation risk and duration
    - Acquire customers from competition
        - Evaluating product mix against competition and improving offerings
        - Lowering fees/ interest rates
- Increase the money made from existing customers (customer life time value)
    - Sell more products to existing customer base
    - Increase rates
- Expand into alternative markets
    - Evaluate potential, competitive landscape and geographies

Question #2

Question #2

There are two customer segments they are evaluating: students & affluent middle class customers. They already have many mid-income customers, and are looking at expanding student customers. Focusing on students for now, how would you evaluate the market and how might you target the students?

Solution

Allow the interviewee to come up with a strategy for sizing the market, then give them Exhibit 1.
Solution to exhibit 1:

	Current- year 1	Year 3 potential	CAGR
Youth population	5,000,000	6,050,000	10%
% students	10%	6.05*.2= 1,210,000	100%
% using banking	50%	75%	
LKB share	10%	20%	
Number of accounts	25,000 accounts	181,500 accounts	

There is a 7x increase in number of student accounts which looks like an attractive growth opportunity if we are able to maintain/increase market share of a fast-growing market as projected.
Ways to reach student population:

- Campus branding & tie-ups, locating in and around campus
- Offer facilities like student loans, low/no fee accounts, low balance requirements
- Target parents with existing accounts

Exhibit #1

	Current- year 1	Year 3 projected	CAGR
Youth population	5,000,000		10%
% students	10%		100%
% using banking	50%	75%	
LKB share	10%	20%	

Question #3

Question #3

The company does some research on the marketing methods and identifies that students can only be acquired through heavy price discounts. Should the company focus on student accounts or affluent mid-income accounts?

Solution

Key is in the interviewee realizing that student accounts have:

- Very high growth potential in number of accounts
- High lifetime value, since these students might use other bank facilities over time
- However, will not translate into revenue growth, since they are unlikely to earn significant fees from student accounts
- Not viable since the firm is looking to improve revenues immediately.

Therefore they should focus on improving attractiveness to affluent mid-income customers for now by:

- Improving product range (maybe adding mutual fund/ fixed income accounts)
- Improving product attractiveness (low fees, etc.)
- Pushing more products on existing customers
- Offering better ease of access (evaluating brand network and geographies)

Conclusion

Recommendation

- Because the goal is to aggressively increase revenue, the company should focus on the mid-income segment of consumers rather than students to push revenues up in the short-term. They can target these customers by improving product range and attractiveness with aggressive sales and direct marketing.

Rationale

- Student accounts, while can grow 8x in number over the next 2 years, will not translate into significant revenue growth since LKB cannot earn fees from students.

Risks

- They cannot afford to ignore the student segment entirely, because students can turn into profitable customers over their lifetimes, and the switching cost for customers to change banks later in their lives is very high.
- By aggressively acquiring mid-income customers from competitors they may trigger price wars in fees/ rates.

Next Steps

- In-depth analysis of product mix to identify ways to optimize it
- Evaluate how to turn students into profitable customers
- Identify new sources of revenue (through geographic expansion perhaps)

Case: Timber Crisis

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Company: Bain, Round 1
Difficulty: Hard
Industry: Manufacturing
Case Type: Turnaround

Concepts Tested

- Creativity
- Endurance
- Market Fundamentals

Problem Statement Narrative

Our client is a Canadian-based Timber Company in 2009. It primarily makes 2x4s, and the U.S. Residential construction market is, by far, the largest consumer of these products. It also sells sawdust, which is a derivative of 2x4 production. The housing crash has just happened, and demand has dropped precipitously. The client is in dire financial straights and bleeding cash. What can we do to turn it around?

Case Notes

This case is a general brainstorming exercise and gives the appearance that there is some operational change that can happen. The reality is that nothing can be done– the company is the lowest cost player in a commodity industry and is already operating as efficiently as possible. There are no other revenue streams.

For the interviewer, most of this case will be giving periodic bits of information and then shooting down ideas – a classic pressure test interview with little data and a very intractable, unstructured problem. Have the candidate come up with a framework, and pressure test them on it. There is no math involved.

Exhibit #1

Bits of info that can be given as time goes on (not necessarily in this order):

1) Privately owned, family has cash to spend if it makes sense.

2) 2 step production process– trees cut down, sent to saw mill, sent on trucks to transportation warehouse.

3) All our equipment is brand new, our employees are optimized, running at full capacity, trucks are new and fuel efficient (we bought them during boom times). Interviewee should take away that we are the leanest, most-efficient operation in the business.

4) We have 1/3 Market share, rest of industry is small, fragmented and much higher on the cost curve.

5) We lease land for trees from Canadian government, cost of that lease is negligible– we pay government for each tree cut down.

6) Our 2x4s are sent by truck to the closest warehouse in Chicago, and then whoever needs them buys from there. Commodity market all products the same.

7) Candidate should try to look at various other potential revenue streams– we can't utilize them because our firm isn't set up to and doing so would be prohibitively expensive (shoot these down individually).

Answer

Solution

1) **Liquidation –** (not the best option given how we are lowest cost/huge market share), but not an unreasonable idea.

2) **Wait it out –** smaller, higher cost competitors will fail and adjust supply/demand balance to push up prices and help us. Plus, housing tracks GDP growth and that is bound to pickup at some point (can cite 2009 stimulus package, etc).

3) **Since family has cash, buy up smaller competitors to bring capacity offline sooner.** Candidate should mention that there may be anti-trust risk in this.

NOTE: Throughout the process, the interviewee might get frustrated at the lack of information, the lack of data, and the high level of pushback you give them – this is the whole point. The purpose of this case is to test the candidate's ability to stay calm and work in highly ambiguous situations.

End the case interview once the candidate has discussed these issues for 20-30 minutes, and force them to come up with a conclusion framework something like the one above.

Case: BSN Market Entry

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Company: BCG, Round 1
Difficulty: XX
Industry: Retail
Case Type: Market Entry

Written by Gillian Almeida '16

Concepts Tested

- Market Entry
- Mental math
- Brainstorming

Problem Statement Narrative

BSN is the largest player in the Pre-Workout supplement category and owns a few major brands, including N.O. Xplode, Hyper FX, and Isoburn. Profitability of the pre-workout supplement category has been shrinking over health concerns associated with the product. However, vitamins and supplements as a whole are one of the fastest growing industries in the US, growing at 6% a year and projected to generate $16.4 billion in revenues in 2016, of which pre-workout supplements make only a very small portion. BSN is considering the possibility of getting into the Whey protein market. Whey protein is a post-workout supplement that aids in muscle recovery.

Case Notes

A pre-workout supplement is a nutritional supplement that is meant to be consumed before the workout that often gets the user "pumped up to work out."

The most common ingredients in these supplements are caffeine and B-Vitamins along with a host of other energy inducing ingredients.

Sample Framework

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Guidance for Interviewer

This

Clarification Answers if Asked

- The firm's focus just on US market
- The firm is not cash constrained and has money to invest if it makes sense
- BSN would like to breakeven on their investment within 5 years

Sample Framework

Should enter market?

Whey Protein Market

- How large is the Whey market?
- Is the Whey market growing?
- Barriers to entry?

Other Whey Protein Competitors

- How many competitors?
- What is their market share?
- Competitive response?

BSN

- Do we have to capability to produce Whey Protein?
- Opportunity Cost?
- Will this cannibalize existing products?
- Can we sell our products through existing distribution channels?

How should enter?

- Build Capability In House
- JV
- Merger/Acquisition

Question #1

Question #1

What considerations and options does BSN need to take into account when deciding if and how to enter the market?

Solution

See Sample framework on next page – candidate should come up with something similarly well-structured and thoughtful.

Sample Framework

Sample Framework

- **Should BSN enter the market?**
  - Profitability
    - Revenue
      - Number of whey protein users
      - Number of consumptions per year
      - Price per consumption
    - Costs
      - Fixed: (overhead, factory, advertising)
      - Variable: (raw materials, labor, transportation)
      - Investment Cost
  - Whey Protein Market
    - How large is the Whey market?
    - Is the Whey market growing?
    - Barriers to entry?
  - Whey Protein Competition
    - How many competitors?
    - What is their market share?
    - What is their product mix?
    - Competitive response?
  - BSN
    - Capability to produce Whey Protein?
    - Opportunity Cost?
    - Will this cannibalize existing products?
    - Can we sell our products through existing distribution channels?
- **How should BSN enter?**
  - Build Capability In House
  - Joint Venture
  - Merger/Acquisition

Question #2

Question #2

What steps would you take to understand whether or not the Whey Protein market in the US is attractive and how much we could expect to make in profits in our first year of operations? Ultimately, what's the profit potential for us?

Solution

This question is meant to be very high level, eventually leading to a market sizing analysis that looks at the size of the Whey market and determines the market's profitability potential for our cleint.

As soon as the interviewee lists the following three items as areas to look into, provide them with Exhibit 1 and drive them to do the math:

- Overall size of the market
- Market Growth
- Market Share/Penetration Rate

Interviewee can assume profit margins will remain stable and BSN will have industry average profitability.
NOTE: Interviewee must ask for the percentage of the market that BSN can expect – don't let them assume some arbitrarily large amount. Research has shown that BSN can expect 10% in the first year.

Question #3

Question #3

Based on your research, BSN is considering either building the capacity to produce whey protein or acquiring a small player in the market. What are the considerations that BSN should take into account when evaluating each?

Solution

Build Capacity to produce?

- Does BSN management have knowledge to produce?
- How long is the lead time to build?
- Short and long term profitability?
- What's the basic cost/benefit of this approach?

Should BSN acquire a small player in the market?

- Is there a small company in the whey protein market that BSN could acquire?
- Does BSN have the cash on hand to acquire the company?
- Cost of integration with existing BSN operations?
- Will the company be a cultural fit?

Question #4

Question #5

BSN has determined if they build the Whey Protein capacity in house it will take a full year to enter the market and 10 years to break even on their investment. BSN has also received more detailed projections from ISO (a competitor) on their revenues and costs. Given this information, how long will it take BSN to breakeven if it acquires ISO?

Solution

Present the candidate with Exhibit 2. Note the exhibit does note include up front investment cost for $1,000,000, though this information is required to arrive at a complete answer. Only present the candidate with this information when requested.

Once the candidate has finished this, press them to summarize their findings for the entire case.

Conclusion

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Recommendation

- **BSN should enter the Whey Protein Market by acquiring Iso.**

Rationale

- BSN will breakeven on their investment in 4.3 years which meets their breakeven goal of 5 years.
- The Whey Protein Market has high profit margins

Risks

- Potential integration issues.
- Potential opportunity costs.

Next Steps

- Begin to integrate the firms and identify risks of integration (ie cultural).
- Try to identify growing customer segments to see if BSN can help grow their Whey protein presence in those segments to capture more of the market.

Exhibit #1

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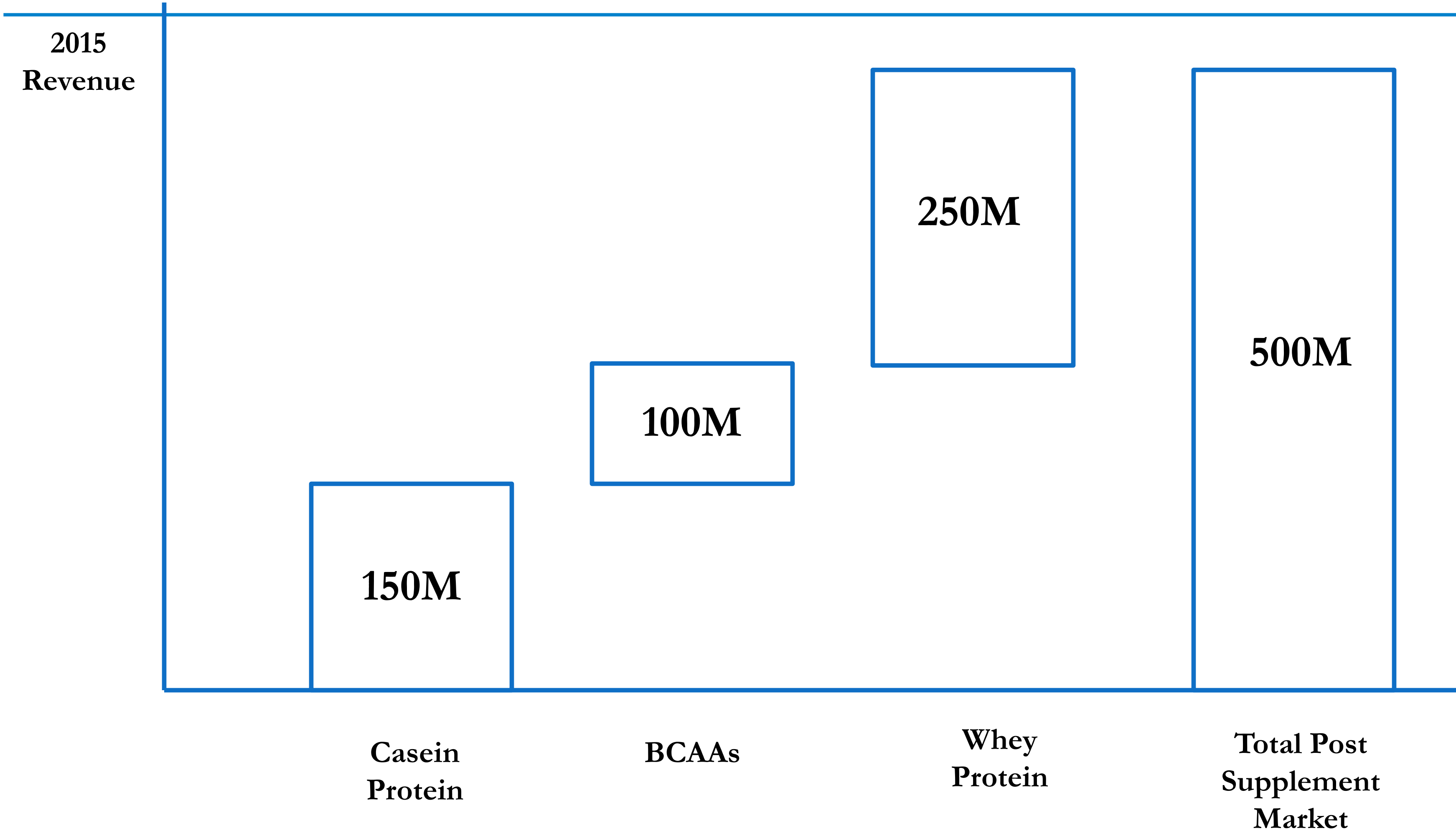

Profit Margin	5%	15%	X?	13%

Exhibit #1: Answers

Since revenue and profit margin are given, you can find profit margin for Whey Protein by weighting each of the other categories and subtracting them from the total weight.

X=17% Profit Margin
Total Revenue* Total Profit Margin=Total Weighted Profit Margin
500M*13%=65

Total Weighted Profit Margin- Weighted Casein Protein- Weighted BCAA= Weighted Whey Protein
65- 150*5% – 100*15%=42.5

Weighted Whey Protein= Profit Margin* Annual Whey Revenue
42.5=X% *250

Profit Margin for Whey Protein
X=17%

Profit Margin for Whey Protein x 2015 Whey Protein Revenue= Total Whey Protein Profit
17% x 250 M = 42.5 M

Total Whey Protein x BSN's penetration rate= BSN Year 1 Profitability
42.5M x 10% = 4.25 M

*Candidate may round

Exhibit #2

2015 ISO Information	
Price per Unit	$20
Number of Units Sold Monthly	15,000
Variable Cost per Unit	$15
Total Annual Fixed Costs	$200,000

Exhibit #2

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Price per Unit –Variable Cost Per Unit= Contribution Margin Per Unit
\$20-\$15= \$5

Total Annual Units Sold
15,000 x 12= 180,000

Contribution margin Per Unit x Annual Number of Units Sold= Total Annual Contribution Margin

\$5 x 180,000= \$900,000

Total Annual Contribution Margin-Total Annual Fixed Costs= Total Annual Profit
\$900,000-\$200,000=\$700,000

Investment Cost/Total Annual Profit= Number of Years to Break Even
\$3,000,000 / \$700,000 = 4.3 Years

Case: SoCal Hospital

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Company: Strategy&, Round 1
Difficulty: Easy
Industry: Healthcare
Case Type: Profitability, cost-cutting

Written by Revti Gupta '15

Concepts Tested

- Profitability
- Creativity
- Supply Chain

Problem Statement Narrative

Our client is a mid-to-large size hospital in CA. The hospital is struggling with falling profitability, and has asked us to help improve its margins.

Case Notes

The case is a bit more interviewer-led/ conversational than a typical Booz case, but the idea is to test the candidate's ability to quickly drill down to the root cause with very limited information about the hospital structure

Potential Areas for Analysis

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Market	Company
• All competitors facing same scenario because of the changing nature of the industry	• Hospital is not managed by professionals.

Revenues	Costs
• Falling, since patients and insurers willing to pay less, and fewer patients coming in. Hospital has tried increasing patients by improving its branding and service offerings, without much success	• Ask the interviewee to identify potential costs for the hospital

Sample Framework

Guidance for Interviewer

Probe the interviewee on the costs side of the framework. If he/she asks how the hospital supply chain/ procurement is set up, provide the information that it is decentralized, with doctors ordering parts like pacemakers, artificial hips, etc. directly as and when they need them. If not, guide them into thinking about how the procurement structure of a poorly-managed hospital might look, and zero in on the medical supplies procurement

Clarification Answers if Asked

Every surgeon orders their medical supplies directly from a different vendor.

If interviewee asks, there is no difference in the quality of the different supplies.

Sample Framework

Profit=

Revenues

- No of patients (insured v uninsured)
- Avg price paid by insurance/ patients per procedure
- No of days hospital stay required
- Price per night
- Other factors – pro bono patients

Costs

- Doctors & nurses
- Administrative staff
- Malpractice insurance
- Equipment & Maintenance of equipment
- Ambulances
- Basic medical supplies (gloves, scalpels, etc)
- Hi-tech Medical supplies (e.g. pacemakers, stents, etc)
- Supply chain/ sourcing

Other factors:

- Competition in area
- Brand value of hospital & doctors
- Service quality
- Relationship with insurers

Exhibit #1: Hip replacements

# of surgeons	25
# of procedures each per year	20

% of surgeries	Price of artificial hip ordered
10%	$1000
50%	$1400
20%	$2000
20%	$2200

Question #1

Question #1

For a sample procedure, hip replacements, you compile the data as given in Exhibit 1, which shows the different costs of the artificial hips ordered by different doctors from different vendors. What conclusions can you draw from this? There are about 30 basic procedures like hip replacements, which have similar costs and ordering patterns.

Solution

20*25= 500 hip replacements performed every year

% of surgeries	Price of artificial hip	Total expense	Potential saving
10%	$1000	=500*.1*1000= $50000	0
50%	$1400	=500*.5*1400= $350000	0
20%	$2000	=500*.2*2000= $200000	=600*500*.2=60000
20%	$2200	=500*.2*2200= $220000	=800*500*.2= 80000
		Average-price= 820000/500= $1640	Total savings= $140,000

By centralizing the purchase of artificial hips, the hospital can order the $1400 hip for 90% of the procedures (the $1000 one is also a fair answer but it may be a reasonable assumption to stick with the vendor half the doctors are comfortable with). We could allow the 10% that use the $1000 hip to continue ordering the cheaper one if they're happy with it.

Total potential savings across 30 procedures if this process is repeated= 140,000*30= **$4.2mn saved annually**

Conclusion

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Recommendation

- The hospital should institute a central purchasing department that orders expensive parts like artificial hips, stents, valves, pacemakers, etc, since this will save them over $4.2mn annually.

Rationale

- The current system results in wildly varying prices, without much difference in quality of supplies, and drives up average cost.
- Ordering in bulk would allow them to further negotiate prices than what we estimated

Risks

- They might damage some vendor relationships
- Surgeons may be upset about the change of their vendors, and may even leave the hospital
- Purchase department may not be as well informed about the technical specs for these supplies as the surgeons are

Next Steps

- They might need a proper inventory management system to ensure availability of these parts when needed

Case: LiquidCo

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Company: Bain, Round 1
Difficulty: Easy
Industry: Manufacturing
Case Type: Revenue Growth

Concepts Tested

- New product launch
- Creativity / brainstorming

Problem Statement Narrative

LiquidCo is a private label liquids manufacturer. The company produces liquid-based products and sells them at drugstores like CVS and Duane Reade, and the products are then branded with these stores' names. For example, LiquidCo will produce mouthwash and hand sanitizer which is then branded with the CVS brand. Top line growth has been less than stellar. Revenue and volume growth is flat. The CEO of LiquidCo has come to you to help them determine how they can grow.

Case Notes

There are no exhibits in this case. The numbers for market sizing should only be given one at a time as the interviewee asks for more information.

A lot of the case discussion should revolve around brainstorming.

Case Overview & Structure

Guidance for Interviewer

There are 3 parts to this case:

1. Brainstorm the ways in which LiquidCo can achieve revenue growth
2. Analyze the market size for two product expansions: Cough Syrup and Eye Care
3. Explore other channels of expansion

Clarification Answers if Asked

- Geography: US only
- Timeline goal: Recently bought by a PE firm so they want to increase revenue growth as quickly as possible

Sample Framework

Sample Framework

Financial Assessment

Revenues

Price

- Increase prices
- Change product mix

Volume

- New retail channels
- Launch other products
- Expand geographically
- Create our own branded products

Channels

- What outlets do we currently sell through?
- Would this change with new recommendation?
- Pockets of opportunity
- Shelf space

Company

- Competitive advantage
- Firm capabilities
  - Financial capacity
  - Production capacity
  - Distribution
  - People
- Cannibalization

Competition

- Competitive response
- Any gaps in the market?
- Acquisition of competitor

Potential Areas for Analysis

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Company

- Recently bought by a PE firm – wants to see revenue growth in a relatively short time frame
- LiquidCo currently sells to CVS, Duane Reade, Walmart and various other retailers
- LiquidCo has excess capacity to produce more of certain liquids

Channels

- LiquidCo has relationships with many retailers – not looking to expand to new drug stores or mass retailers (small opportunity)

Product

- Currently sells mouthwash, hand sanitizer, shampoo/conditioner, body lotion, and soaps (product mix and pricing not important)
- Cannot increase prices – retailers have power in this area
- Current product mix (%) should stay as is, but we can explore new products

Geography

- Only in US
- LiquidCo cannot expand geographically since liquids are extremely expensive to ship so the company would not be competitive

Question #1

Question #1

LiquidCo wants to explore a new product launch. What things would you want to consider?

Solution

- Market size
- Growth rate of the market
- Competitive landscape – Number of competitors? Market share? Fragmented or concentrated?
- Pricing
- Profitability – Revenue and cost projections
- Size of investment (if any)
- Raw materials sourcing
- Manufacturing – Do we need new machinery? Do we have excess capacity?
- Employees – Do we have people/training? Any impact on culture?

NOTE for INTERVIEWER: Don't accept a simple list like this – these are only general areas, many of which would be applicable in any case. See the "Sample Framework." Probe the interviews to discuss each in terms specifically relevant to LiquidCo – this is where the best candidates will distinguish themselves.

Question #2

Question #2

LiquidCo has identified two potential products to launch: 1) cough syrup and 2) eye care (contact lens solution). Which product would you recommend to LiquidCo? (*Only give info as requested by interviewee).*

Solution

Cough Syrup

- $100M in sales
- 30% of sales is in private label manufacturing
- Growth overall is 3% - growth within private label is 6% annually
- LiquidCo can use existing manufacturing facility to produce cough syrup
- Competition: 60% of the private label market is dominated by 1 competitor, this competitor is health care focused and has strong relationships with many retailers
- Calculation: $100M*30%*40 = $12M

Eye Care

- $75M in sales
- 10% of sales is in private label manufacturing
- Growth overall is 5% - growth within private label is between 5% and 6% annually
- Manufacturing: must be produced in a sterile environment so LiquidCo would need to purchase or build a manufacturing facility
- Risk of recalls
- Competition: Fragmented market, no competitor has more than 10% market share
- Calculation: $75M*10% = $7.5M

Question #3

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Question #3

LiquidCo also wants to explore some ideas for how the company can sell its main products to non-retailers. Its main products are mouthwash, hand sanitizer, shampoo/conditioner, body lotion, and soaps. What ideas can you think of?

Solution

- Hotels
- Athletic centers – gyms, yoga studios, cycling studios
- Hospitals
- Airlines
- Airports
- Schools
- Malls
- Cinemas
- Bars/nightclubs

NOTE for INTERVIEWER: Once again, probe for completeness of thought. Pressure test ideas presented, even if they're feasible on the surface. If a candidate produces a list like the one above, it's recommended that you question them on 1-3, asking probing questions like "Would that really work? Think about that again" to see how they react. The best candidates should stand by their conclusions and present logical rational to reinforce their recommendations.

Conclusion

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Recommendation

- Launch a private label cough syrup line
- Look to expand current private label products to non-retailers like hotels and gyms

Rationale

Cough syrup:
- Growth in private label is high at 6%
- Can utilize excess capacity and existing facilities
- Market is nearly double the size

Sell to non-retailers:
- Increase sales of main products without risking current retailer relationships

Risks

- May not be able to gain significant market share against main player who has 60% market share – LiquidCo must use current relationships to get shelf space or find a way to gain a cost advantage

Next Steps

- Meet with operations & manufacturing to determine best way to implement production of cough syrup
- Meet with sales to determine best way to market to retailers
- Have sales team meet with retailers
- Investigate market size of selling existing products to non-retailers, and which non-retailers to focus on

Case: BMW Market Entry

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Company: A.T. Kearney, Round 2
Difficulty: Easy
Industry: Automobiles
Case Type: Market Entry

Written by Kushal Sanghrajka '15

Concepts Tested

- Market entry
- Market sizing
- Creativity
- Mental math

Problem Statement Narrative

BMW is considering entering Pakistan. Should they?

Case Notes

The consultant should ask for the goal, which is a 3 year break-even.
The investment required is $25M.

This is a straightforward market entry case. It tests the consultant's ability to think about the various criteria involved in entering a market, both in the initial framework and during the case. The initial question is vague, but that's intentional. Pay attention to how the candidate reacts here.

Sample Framework

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Guidance for Interviewer

Even though this framework leads most people to start calculating profits, a good candidate will realize they need to size the market to get to the numbers first. The candidate should think about the different models available and different pricing of each model (even though this will be simplified later in the case).

A good candidate will also think about revenue generated from after sales scenarios (servicing/parts).

Clarification Answers if Asked

If asked questions about revenue and costs (especially about the volume of sales), tell the consultant to try and calculate that.

There is only 1 competitor (Mercedes)

Since it's an entry into a new market, BMW will import the car (the consultant should ideally think about this themselves) and will start with it's own dealership

Sample Framework

Breakeven in 3 years: Investment $\leq$ Profit of 3 years

- Economics
  - Revenue
    - # of cars sold * price of the car
  - Costs
    - Landed cost of car or cost of manufacturing
    - Labor
    - Distribution costs
    - Administrative costs
- Industry
  - Competition
    - Number of competitors
    - Market share
  - Suppliers
  - Distributors
  - Customers
- Investment and Opportunity cost

Potential Areas for Analysis

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Market Sizing

- Several ways to potentially do this but the most efficient way is to size the market based on the competitors sales
- Merc has sold 10,000 cars in the past 5 years
- That makes 2000 new buyers every year
- Additionally, every car owner replaces their car every 5 years

Industry

- Only 1 competitor (naturally has 100% market share)
- BMW thinks it's best to start with their own dealership – where should that be? What would the consultant base that decision on?
- BMW will import the cars to sell

Revenues

- Should think about various models and different price points. However, settle on 1 model (which model? How would you decide? Could be based on competitor sales).
- Average price = $100,000
- Ask what appropriate market share would be. Assume following market shares:
    - Year 1 = 10% , Year 2 = 20%, Year 3 = 30%

Costs

- Should think about the various costs:
    - Landed cost of car
    - Cost of transporting to dealership
    - Taxes / Customs
    - Labor
    - Administrative (utilities, SG&A, rent)

Question #1

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Question #1

What is the size of the market (in terms of number of cars sold each year)?

Solution

The ideal way to size the market is based on looking at the competitors sales
Mercedes sold 10,000 cars in the past 5 years, which gives us 2,000 new buyers every year
Every car owner also replaces their car every 5 years, which means there will be an additional 2,000 buyers every year
Total cars sold per year = 4,000

Question #2

Question #2

Should BMW enter the market?

Solution

BMW sales: Year 1 = 400 (10% market share); Year 2 = 800 (20% market share); Year 3 = 1,200 (30% market share)
Total sales for 3 years = 2,400
Average price = $100,000
Landed cost (including distribution to dealer) = $80,000
Customs = 2% of selling price
All other costs = 3% of selling price
Total cost = $85,000
Profit per car = 100,000 – 85,000 = $15,000
Total profit in 3 years = 2,400 * 15,000 = $36M
Which is far greater than the investment. Hence breakeven < 3 years
BMW should enter the market

Conclusion

Recommendation

- BMW should enter the market

Rationale

- The break-even is less than 3 years, which is the criteria the company uses
- There is only 1 competitor, and that too BMW's biggest competitor, so BMW will want to establish itself before Mercedes gets too big

Risks

- May not get the anticipated market share
- Total car sales could drop if economic conditions deteriorate
- Other competitors may enter as well
- There may be another more attractive market that the company should be considering (opportunity cost of capital)

Next Steps

- Start taking steps on market entry
- Ensure this is the best use of capital
- Analyze what locations may be the best for dealerships
- Initiate marketing efforts

Case: Swedish Death Metal

Columbia Business School

Company: Bain
Difficulty: Difficult
Industry: Entertainment
Case Type: Market Entry

Written by Ross Freilich '14

Concepts Tested

- Market Sizing
- Market Segmentation
- Break-even
- Algebra

Problem Statement Narrative

Your client is a record producer looking to bring a new music act to the United States. While traveling through Scandinavia he came across a Swedish Death Metal band he thinks would be a perfect fit for his label. There are currently no Swedish Death Metal bands on US labels and all of their music must be imported from Europe. Your job is to advise the client whether this is a good idea and give him some launch process suggestions.

Case Notes

If candidate asks what the difference between an import versus domestic is, inform him that imports eat into the margin of the album for the record company and there is no way to price higher.
This case will deal extensively with albums sold - if candidate requires clarification indicate that this metric includes digital sales.

Sample Framework

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Guidance for Interviewer

Guide candidate away from alternative revenue opportunities as this case is primarily about album sales

Clarification Answers if Asked

If interviewer asks for size of Swedish Death Metal market advise that there are no reliable metrics in the US as this is a relatively new market. The larger Death Metal market will serve as a proxy.

Sample Framework

How to introduce SDM band to US market
- Album Sales
- Touring as either opening act or headlining act
- Late night television appearances
- Music Blogs

Market Size
- Total Albums Sold in US
- Size of Death metal market
- Share of the market the SDM band can capture

Customer
- Willing to make transition from Death Metal to SDM?

Financials
- Will record label be able to charge standard pricing for a new album?

Risks
- Band breaks up
- Drugs

Question #1

Question #1

Last year 150 million albums were sold in the United States. 13% of them were Death Metal. How many Death Metal Albums were sold?

Solution

$$150mm \ * 13\% = 19.5mm$$

- For purposes of the case, have candidate round 19.5 million to 20 million.

Question #2

Question #2

The Death Metal market is segmented into three groups: hardcore, average and casual fans. They comprise 20%, 30% and 50% of the population, respectively. Each group buys 4, 2 and 1.2 albums per person per year. Solve for the size of each group and the amount of albums purchased by each group.

Solution

Candidates often confuse the size of the "population" with the 20 million albums sold per year. If the candidate multiplies the 20mm albums by the 20%, 30% and 50% guide him towards the proper path.

To solve the case

Let x = the size of the population

$$4 * (20\% * x) + 2 * (30\% * x) + 1.2 * (50\% * x) = 20mm$$

X = 10 million people, therefore there are 2 million hardcore fans, 3 million average fans and 5 million casual fans who buy 8 million, 6 million and 6 million albums, respectively, per year.

Question #3

Question #3

We'd like to know the breakeven volume of albums for three marketing programs. Each album is priced at $12. The three marketing options are: Internet - $300k, Internet & Radio - $1mm and Internet Radio & TV - $2mm.

Solution

The candidate should ask if there are any additional variable or fixed costs. Variable costs are: Manufacturing $2/CD, Distribution, $3/CD and Royalties of $3/CD. There are no other fixed costs.

$$Contribution\ Margin = \$12 - (\$2 + \$3 + \$3) = \$4$$

Breakeven Volume for Internet only:

$$Breakeven\ units = \frac{\$300k}{\$4} = 75k$$

Breakeven Volume for Internet & Radio:

$$Breakeven\ units = \frac{\$1mm}{\$4} = 250k$$

Breakeven Volume for Internet, Radio & Television:

$$Breakeven\ units = \frac{\$2mm}{\$4} = 500k$$

Question #4

Question #4

Which marketing option would you choose?

Solution

Candidate should ask if any of the marketing plans target any of the specific segments as there are 3 fan bases and 3 marketing plans. Provide info when asked:
Hardcore = Internet, Average = Radio, Casual = TV.

Referring back to Question 2, we see that there are 10mm potential customers in the market. To break even with the internet plan you require 3.75% market share, 5% with internet and radio and 5% for internet, radio and television, based on the populations of each fan segment. (Note: Candidate should not be expected to calculate market share, but should be given credit if he takes initiative).

Candidate should recognize that capturing significant for a sub-genre entirely new to the US is very unlikely, especially considering that either of the more expensive fans will be targeting average and casual fans.

Therefore, Internet is the correcting marketing option.

Conclusion

Recommendation

- Client should bring the SDM Act to the US using the internet only plan.

Rationale

- This is the first Swedish Death Metal Act to be based in the US. Death Metal is a relatively niche market and attracting hardcore fans are the best path towards gaining market share and expanding into other groups of fans.

Risks

- Band could be a complete flop, break up or have issues like drug addiction.

Next Steps

- Explore options for pilot launches i.e. singles before signing longer-term contract
- Explore other offerings like touring as opener for established act
- Appearances on late night television

Case: Gym - PE

Company: Bain, Round 1
Difficulty: Moderate/Difficult
Industry: Gyms
Case Type: Private Equity

Written by John Doe '14

Concepts Tested

- Mental math
- Creativity
- Break-even
- Capacity utilization

Problem Statement Narrative

Our client is a private equity firm that is looking to invest into a gym chain. They are looking at two potential acquisitions and are trying to determine which one is more attractive.

Walk me through how the private equity firm should evaluate the gyms.

Case Notes

- The difficulty of this case depends on how it is given by the interviewer. If data is easily provided, then the breakeven and the case are fairly straightforward.
- However, in the actual Bain interview, the interviewer did 3 things to make this case much more challenging:
  - Asked the candidate to draw out the framework on a whiteboard without any time to prep
  - Asked the candidate to do all the math *without* paper (rounding was acceptable)
  - Did not provide any additional information until prompted

Sample Framework

Guidance for Interviewer

- Profitability tree should be detailed – drill in to ensure most of the P&L line items are captured
- Ensure interviewee captures that this is a high fixed-cost business
    - Make sure candidate mentioned utilization

Clarification Answers if Asked

- Each gym has 150 gyms in U.S. across all geographies
- Assume no market growth
- Fragmented market
- Assume both are premium gyms and price themselves the same
- Assume both gyms are nationwide in same geographies
- Assume capital structure of PE deal is same for both; the price of both gyms will be good for PE
- Management is skilled and happy to sell to PE

Sample Framework

- Profitability
    - Revenue
        - Volume
            - # of gym members
        - Price
            - Monthly/ annual membership dues
            - Activation fees
            - Concessions (beverages, apparel, etc.)
    - Cost
        - Fixed
            - Gym equipment
            - Maintenance
            - Lease
        - Variable
            - Labor
            - Services (e.g. towel cleaning)
- Changes over time
    - Growth in members/ gym
    - Opening new gyms
- Utilization
    - Average annual
    - Peak vs. off-peak
- Competitive environment
    - Market share of 2 targets (by region and segment)
- Market attractiveness (growth, concentration, etc.)

Potential Areas for Analysis

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Costs

- Fixed costs are a substantial portion of the business
- Utilization is key

User growth

- What are drivers of users growth?
    - Seasonality (summer vs. winter)
    - Annual contracts expiring
- 2 key metrics are:
    - Churn – rate of churn and drivers of churn
    - Acquisition cost/ rate – why people might sign up at different times of year

Capacity/ utilization

- Discuss daily utilization
    - Peak before work/ after work
    - Gym is structured to not support all members at one time, but need to understand capacity at peak periods
- Even if gym has lots of average excess capacity, if it is over capacity during peak periods, members will churn away

Question #1

Question #1

Assume we are only going to look at the economics of a single gym from each company. What are the P&L line items? [After P&L line items are discussed, show Exhibit 1]. Tell me what you see here – which gym is more attractive? (assume each gym is representative of all 150 gyms in each chain)

Solution

NOTE: To make this more difficult, ask the candidate to not use paper. Furthermore, guide the candidate to arrive at a profit gap by using the % difference between each gym to make the calculations easier.

1. Candidate should identify that the difference in costs is greater than the difference in revenues
2. Intuitively, candidate should identify that Stallone is making lower margins than Arnie

	Gym Arnie	Gym Stallone	Difference
Annual lease	$180,000	$225,000	25%
Maintenance	$35,000	$50,000	43%
SG&A	$10,000	$25,000	150%
Staff	$120,000	$150,000	25%
# of members	600	720	20%
Annual fees/ member	$600	$600	
Monthly consession concession/ member	$5	$5	
Annual concession revenue/ member	$60	$60	
Total Annual Revenue per member	$660	$660	
Total Revenue	$396,000	$475,200	20%
Total Costs	$345,000	$450,000	30%
Profit	$51,000	$25,200	
Margin	12.9%	5.3%	

Question #2

Question #2

Is there anything else that we need to know? [press interviewee] *Answer: user growth rates!* If we assume that Arnie is not growing, but Stallone is growing at 10%, which one is more attractive? How many members would Stallone need to be as attractive as Arnie?

Solution

Try not to give away the answer that we need to know capacity of each gym/ user growth unless absolutely necessary.

1. **63 users to break even; Follow up: what % growth is that? – 8.7% - lower than 10% expected growth**
2. **Final follow up questions – Is that achievable? Why or why not?**
   - **Yes – attractive – but need to know capacity of Stallone**
   - **Would also need to know capacity during peak hours to ensure that we don't churn away members**
   - **Need to have marketing plan/ good understanding of cost of acquisition**
   - **Any incremental variable costs?**

$$\frac{\text{Profit} + \text{Revenue per member} * \#\text{ of members}}{\text{Revenue} + \text{Revenue per member} * \#\text{ of members}} = 12.9\%$$

Members required to make margin same		62.6
Total Profit required → 25,200 + 660*62.6		$66,516
Incremental profit → 66,516 – 25,200		$41,316
% growth in members		8.7%

$$\frac{25{,}200 + 660x}{475{,}200 + 660x} = 12.9\%$$

$$25{,}200 + 660x = 61{,}200 + 85x$$

$$575x = 36{,}000$$

$$x = 62.6$$

Conclusion

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Recommendation

- PE client should acquire Stallone assuming the economics of 1 gym apply to all gyms and that we will in fact increase membership by 10% without increasing our costs or hitting capacity constraints

Rationale

- Stallone has excess capacity that we can better utilize to ultimately be more profitable

Risks

- Excess capacity reached at peak times
- Lemons – there may be reasons why Stallone is unable to operate at capacity (e.g. lower quality equipment, poor marketing, etc.)

Next Steps

- Conduct deeper due diligence on peak capacity times
- Conduct deeper due diligence to ensure that 10% growth figures can be achieved

Exhibit #1

Select figures for 1 average gym from each chain

	Gym Arnie	Gym Stallone
Annual lease	$180,000	$225,000
Maintenance	$35,000	$50,000
SG&A	$10,000	$25,000
Staff	$120,000	$150,000
# of members	600	720
Annual membership fees per member	$600	$600
Monthly concession revenue per member	$5	$5

Case: Grill Co.

Company: Bain, Round 2
Difficulty: Easy
Industry: Manufacturing
Case Type: Outsourcing

Written by Gairy Hall '16

Concepts Tested

- Operations
- Business judgment
- Creativity
- Combining business situations

Problem Statement Narrative

Our client is a family-owned grill manufacturer based in the U.S. The client is the market leader but is considering outsourcing their grill production to increase margins. A large scale outsourcing move would be a first for the industry, and the client wants to know if this is a worthwhile proposition.

There are two options being explored: 1.) full outsourcing a plant in China 2.) outsourcing final production in Mexico with parts provided from China

Case Notes

Focuses on business argument for each option as the financial situation is made fairly clear through the analysis. It does not come down to pure costs since raw materials are the same (parts are provided from China in both options).

Sample Framework

Guidance for Interviewer

- Interviewee should focus on costs but ask about changes in sales. Focus should shift to other business considerations after quick cost analysis on transport costs has been done.

Clarification Answers if Asked

- Sales have been steady; they are seasonal in nature so timeliness of delivery is important
- They are the market leader in a fairly concentrated market (no specifics on other companies' shares)
- Products: three buckets of grills – basic, middle tier, and high-end
- The high-end grill production has been outsourced already with no drop-off in quality of sales
- Consumers care about brand, price, and quality
- Production is currently done in single plant in a small U.S. town

Sample Framework

1. Cost criteria – used for each of two options

- Production
  - Input costs (raw materials)
  - Manufacturing costs (labor, resources, overhead)
- Distribution
  - Transportation costs
  - Sales force
- Upfront cost
  - New infrastructure
  - Joint venture/partnership costs

2. Products

- Consumer preferences
  - Made in US?
  - Quality
  - Mix

3. Company ("Grill Co.")

- Experience in outsourcing?
- Domestic PR (layoffs, re-organization)
- Ability to work in new countries w/ new partners

Potential Areas for Analysis

Columbia Business School

Products

- Three lines of grills: basic, medium, high-end
- Each product line is priced competitively for the respective segment
- High-end is already outsourced
- Consumers focus on price, quality, and brand name

Company

- Have outsourced high-end grill production from end to end for a couple years with no drop-off in sales

Revenues

- Have been stable across lines for a few years now

Costs

- Focusing on cutting here

Cost Analysis

Columbia Business School

Cost Analysis

Which option (full outsourcing to China or production outsourcing to Mexico) makes the most sense financially?

Solution

Containers that Grill Co. uses to ship can hold 2,000 cubic feet of grills or 5,000 pounds of raw materials for grill production. An average grill is 4 cubic feet and 40lbs.

Amount to be shipped per container if used for production (China option):
2,000/4 = 500 grills
Amount to be shipped per container if used for final assembly (Mexico option):
5,000/40 = 125 grills

Interviewer should realize that cost of raw materials is the same since the parts are shipped to Mexico. Should then explore wage/overhead costs (wages roughly the same, overhead slightly higher in Mexico) and cost of doing business (Grill Co. would need to find a partner in Mexico, could just expand production with Chinese partner).

Conclusion

Recommendation

- Outsource all production to China

Rationale

- Distribution costs are ½ as much as Mexico option
- Existing partner
- No expected drop off in revenue

Risks

- PR and company morale from job cuts
- Scalability of Chinese production center
- Operational difficulty

Next Steps

- Evaluate plan to gradually shift production
- Possible company-sponsored plant to replace jobs in local town