Entrepreneurial decision-making: The Best Backgammon, Inc. case

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ABSTRACT

This is an entrepreneurship case that although used for assessment, is not a case dealing with the process of accreditation. It is specifically a case designed to support AACSB International reaccreditation. The case provides an in-depth look at a recently started fictitious firm which produces and sells backgammon sets. This case blends specific analysis, such as finance calculations which have a single correct answer, with broader business decisions where there is no single correct answer. Most cases focus on one or the other, but not both. This is a significant strength of this case. The student is evaluated on accuracy, as well as the reasonableness of his or her recommendations and the presentation of supporting information from the case. All major student assumptions must also be clearly stated.

The instructor's guide consists of a sample rubric and assessor's quantitative answer sheet which are included in this paper. The traits shown on the rubric are directly related to assurance of learning goals developed by the business school.

After quantitative analysis has been performed, the student can take his or her analysis in one of many directions. For example, purchasing new equipment may increase profits, but at the cost of having to lay off a loyal employee. On the other hand, a student might focus upon the potential financial-related frictions between the president's strategy and her relatives who provided the initial funds for the corporation. Both have ethical implications.

This case is most suited for senior undergraduate business majors.

Keywords: Entrepreneurship, Case-based decision making, Integrative Case, Assurance of learning

INTRODUCTION

Unlike instructional cases, this fictitious case is used for "Assurance of Learning" (AOL). AOL is required by many accreditation bodies including the Association to Advance Collegiate Schools of Business (AACSB) International. Since AOL activities must reflect individual rather than group efforts, each student writes a report rather than engaging in a classroom discussion. Using cases for AOL is relatively new, but is particularly important because of their integrative nature. A student must examine a case in all of its intricacies.

At our school we assess 100% of our undergraduate seniors during a common 2 hour proctored session. The students receive the case prior to this session, but not the assessment questions. The questions require an essay outlining what actions the student would take, why he or she would take these specific actions, and the trade-offs related to alternative actions that went into his or her decision-making process.

Each student's analysis is rated by both a professor and an external business professional. These reports are evaluated using rubrics associated with specific learning goals and traits determined by the faculty and administration of the school of management. The specific learning goals for undergraduates are:

1. Each student will be an effective communicator with the ability to prepare and deliver oral and written presentations using appropriate technologies.
2. Each student will be skilled in critical thinking and decision-making, as supported by the appropriate use of analytical and quantitative techniques.
3. Each student will be sensitive to the ethical and justice ramifications of business activities.
4. Each student will be able to appreciate the importance of integrating business processes across functional areas.
5. Each student will be able to apply functional area concepts and theories appropriately.

Of course a single assessment instrument will rarely address all of the learning goals. A sample rubric used for instructor and business person evaluation is included at the end of this paper.

THE CASE

Best Backgammon, Inc. is a privately-held company which makes and sells a single product, a high quality backgammon set. It is just starting its third year of business and the company operates from a single location in Las Vegas, Nevada. The target market is the medium to high-end player and the backgammon sets are priced at US$200 each, plus shipping costs. Although the company has been in business only a short time, 80% of sales already come from world-wide on-line purchases. The company has a small store attached to its factory which accounts for roughly 20% of sales. Store sales are brisk when backgammon tournaments come to town.

The original business plan was to sell sets through backgammon clubs throughout the United States. However, with the emergence of the internet, on-line sales have skyrocketed and most on-line sales are now made directly to the final customers rather than to their backgammon clubs. Best Backgammon advertises heavily in individual club newsletters, as well as on-line.

Megan, age 45, who is the company founder and president, is considering what strategic direction the company should take. Megan is Tom's daughter. Tom along with Megan's uncle

Jim provided all of the capital to get the business started. (The two brothers, currently ages 70 and 77, are retired.) Megan handles all of the administrative work and other functions normally performed by the president of a company. Strategically, Megan walks a fine line. She would like to grow the business, but at the same time, her father and uncle want some of current cash flow from the business profits and they cannot afford to put any more capital into the business.

One full-time person operates the store and two part-time production employees work as needed, 52 weeks per year. However, being semi-retired, neither of the two production workers is willing to work more than 32 hours per week. So far product demand has not required them to exceed 32 hours per week. Of course, when product demand dictates, they work less time per week. In fact, during the last two summers demand was so low that there were several weeks when production was stopped.

THE ASSIGNMENT

You are a good friend of Megan, and serve as a trusted advisor to her. You have created a variety of company reports for Megan. These are shown as Reports 1 – 5 on the following pages. The reports are based upon facts and several reasonable assumptions. Megan has asked you to use all of your reports to evaluate and to prepare a set of recommendations (a plan) to maximize the current (third) year profitability. The five reports are sufficient for your task. Most, BUT NOT ALL, of the information in the reports is needed to complete your assignment.

You have come up with three possible marketing recommendations. Various pricing options, advertising levels, and the possible purchase of new equipment will play a significant role in preparing your final recommendation. Megan has also asked you to provide interest expense numbers for the next two years in the event that she can take out the loan.

You should prepare a two-page single-spaced report outlining and defending your final recommendation. The report should include:

1. Your recommendations.
2. A "quantitative summary" of your analyses, including possible effects of purchasing new equipment and receiving a bank loan.
3. Identification of possible effects on Sean's and Samantha's (the two part-time production workers) weekly hours.
3. An analysis of specific relationships between functional areas, such as between marketing and production.
4. A statement of possible changing business conditions which might most affect your recommendation.
5. A statement relating possible ethical issues to your recommendation.

REPORT 1 – Best Backgammon, Incorporated: Marketing Options

After researching the market, the three best scenarios and their anticipated results are outlined below. Given the desire of Megan to grow the business, the possible effects of purchasing new equipment should be considered for each scenario. (The instructor's answer sheet for this is shown as Table 2.)

Scenario 1 – Keep price and product features/quality the same. Increase advertising by 40%. It is anticipated that the sales volume (units) will increase by 15% over last year's level.

Scenario 2 – Raise the price of a set by 20%. Increase advertising expenses by 10%. Keep product features/quality the same. It is anticipated that the sales volume (units) will remain unchanged from last year.

Scenario 3 – Decrease the price by 10%. Maintain the current marketing budget and product features/quality. It is anticipated that sales volume (units) will increase 30% over last year.

REPORT 2 – Best Backgammon, Incorporated: Financial Statements

Income Statement	Second Year in Business	First Year in Business
Sales (Net of Shipping)	$440,000	$540,000
Cost of Goods Sold	$242,000	$297,000
Gross Profit	$198,000	$243,000
Administrative Expenses	$87,000	$84,000
Store Operating Expenses	$21,000	$19,000
Marketing Expenses	$20,000	$43,200
Interest Expense (6% of Principal)	$2,000	$1,500
Internet/Payment Services Expenses	$6,000	$6,000
Net Income Before Taxes	$62,000	$89,300
Taxes (30% Rate)	$18,600	$26,790
Net Income After Taxes	$43,400	$62,510
Sets Sold	2,200	2,700

The current loan interest (shown above) is not amortized since the total principal on these loans will come due in two years.

Balance Sheet (As of the end of year two)	
Current Assets	
Cash	$10,000
Inventory	$50,000
Long-Term Assets	
Land	$50,000
Plant & Equipment (net)	$90,000
Total Assets	$200,000
Current Liabilities – Accounts Payable	$70,000
Long-term Liabilities – Bank Loan	$33,333
Total Liabilities	$103,333
Common Stock	$80,000
Retained Earnings	$16,667
Stockholders' Equity	$96,667

Total Liabilities and Stockholders' Equity	$200,000

REPORT 3 – Best Backgammon, Incorporated: Production Information

The Production Process:

1) Receive raw materials (2 weeks after order is placed)
2) Put raw materials in inventory by type (wood, felt, glue, leather, etc.)
3) Pull required inventory and produce wood frames in 100 unit batches (average excessive waste due to existing second-hand equipment is 5% of materials)
4) Put frames in wood frame inventory
5) Pull required inventory and produce interior of backgammon set (average excessive waste is 10% of materials)
6) Put completed items in interior finished inventory
7) Pull required inventory and produce exterior of backgammon set (average excessive waste is 10% of materials)
8) Put completed items in exterior finished inventory
9) Conduct final production inspection (defect rework costs are not material)
10) Insert checkers and dice
11) Complete final wrapping and boxing for shipping (10% excessive waste in wrapping materials)
12) Place in finished goods inventory (0% shrinkage)
13) Send lot completion slip to accounting to trigger reorder of materials
14) Maintain level of 200 finished sets in inventory

Current Plant Capacity (9,000 units)	
Unit Production Components	Current Unit Costs
Purchased and Inspected Dice and Checkers	$11.80
Wood and Framing Materials	$12.00
Interior Materials	$24.00
Exterior Materials	$30.50
Wrapping and Boxing	$1.00
Variable Factory Overhead (Electricity, etc.)	$5.70
Total Non-Labor Cost (Materials/Overhead)	$85.00
Labor (Sean & Samantha work the same hours)	$25.00
Total	$110.00

The possibility of switching to a just-in-time inventory system at the beginning of next year would quickly reduce inventory levels by 40%. The cost of implementing this system would be an $800 expense for each of the next three years. Two percent interest can be earned on any resulting increase in cash. However, as just stated, this program could not start until next year.

REPORT 4 – Best Backgammon, Incorporated: Production Improvement and Related Financing Information

The existing equipment is very old. A new equipment package would cost $200,000 and last 25 years with a maintenance agreement included. At the end of 25 years the equipment would have a salvage value of $20,000. With this new equipment, 100% of total excessive production material waste could be eliminated. Also, unit production could be completed in 75% of the production time it currently takes to manufacture a set. Finally, a major advantage is that the new equipment can be used by a person with an intermediate rather than an advanced skill level.

The cost of the proposed new equipment is so large that only a bank loan can be considered to pay for a proposal to purchase the equipment. The best deal available is a 25-year, 7.25% interest loan with monthly payments. Megan or her family would have to personally guarantee the loan.

Equipment-Related, Personnel, and Loan Proposal Data	
Annual Straight-Line Equipment Depreciation	$7,200
$200,000 25-Year Bank Loan @ 7.25% Interest – Monthly Payments	$1,446
First-year Amortized Interest Expense on Loan Above	$14,403
Sean's Unit Wage Cost	$15.00
Samantha's Unit Wage Cost	$10.00
Current Productivity	1 Set/Hour per employee

REPORT 5 – Best Backgammon, Incorporated: Human Resource Information

Sean Rogers, age 70, has worked for Best Backgammon on a part-time basis since its inception. Five years ago he retired from a company that was owned and run by the two brothers that provided the capital for Best Backgammon. He worked for this other company, Kage Cages Manufacturing, for thirty-five years. Naturally, with so much experience, Sean is the most skilled production employee. He has stated that he finds the work very relaxing, as long as he does not have to face the pressures of periods of heavy production requirements. He needs this job to make ends meet financially. Although he appears to be in good health, he has gone to the hospital two times in the last year, complaining of chest pains. He makes 50% more than the Samantha (the other regular part-timer) earning $30.00 per hour with no benefits. In addition to being an expert he is very loyal to Megan and her family.

Samantha McKinsey, age 54, is retired from the army. She has worked for the company for one year and gets along well with Sean. Although she does enjoy the work, she does not need the money. Samantha sees herself as an apprentice to Sean and continues to learn from him. Sean often helps Samantha with difficult production problems. Having an intermediate skill level, she can only work at the same time as Sean does. She enjoys the pressure of heavy production needs and earns $20.00 per hour with no benefits.

Peter Wessel, age 25, operates the store. He has also worked for the company since it started. Store hours are 10AM – 6PM daily. Although he only makes $16,000 per year, health insurance coverage, provided as part of the job, is very important to him. The store hours are great for Peter because they allow him to work in a casino during the busy evening hours and sleep in a little the following day. During his two week vacation, Megan fills in for him. Peter has developed a close relationship with Sean.

TABLE 1 – Best Backgammon, Incorporated Case Assessor's Report Rubric
Assessor's Instructions: There is no single correct answer to most of this exercise. However, recommendations that are made must be consistent with the "evaluator's spreadsheet" shown on the next page (Table 2). Check that spreadsheet and evaluate each student report using the following rubric. Include comments on the back of the rubric sheet.

Assessor: _____ Student: _____

TRAIT	Does Not Meet Expectations 1	Meets Expectations 2	Exceeds Expectations 3	Score
Specificity of Recommendations	Brief statements are made about what needs to be done, but few specifics are provided.	Recommendations contain specific actions that are realistic and measurable.	Predictions are made about expected outcomes for each recommended course of action.	
Feasibility of Recommendations	Feasibility of some recommendations can be questioned or include actions that have not been evaluated in any of the reports.	Recommendations are reasonable and are based on an accurate interpretation of the data provided in the reports.	Conclusions drawn reflect clear and logical links between the information provided and the interpretations made from them.	
Appreciation for Interrelatedness of Functional Areas	Recommendations hint at a relationship among functional areas but fail to paint an integrated picture of a solution.	Recommendations seem to originate from an understanding of the interrelatedness of two or more functional areas.	Recommendations clearly reflect a deep understanding of the relationship between two or more functional areas.	

TABLE 2 – Case Answer Spreadsheet

		With Equipment			Without Equipment	
	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3
Sales						
Sales Units	2,530	2,200	2,860	2,530	2,200	2,860
Unit Price	$200	$240	$180	$200	$240	$180
Total Sales	$506,000	$528,000	$514,800	$506,000	$528,000	$514,800
COGS						
Material	$185,070	$160,930	$209,209	$200,629	$174,460	$226,798
Labor	$40,300	$33,000	$47,710	$63,250	$55,000	$71,500
Fixed Overhead	$7,200	$7,200	$7,200	$0	$0	$0
Variable Overhead	$14,421	$12,540	$16,302	$14,421	$12,540	$16,302
Total COGS	$246,991	$213,670	$280,421	$278,300	$242,000	$314,600
Gross Profit Margin	$259,010	$314,330	$234,379	$227,700	$286,000	$200,200
Operating Expenses						
Administrative	$87,000	$87,000	$87,000	$87,000	$87,000	$87,000
Store Operating	$21,000	$21,000	$21,000	$21,000	$21,000	$21,000
Marketing	$28,000	$22,000	$20,000	$28,000	$22,000	$20,000
Internet Service	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000
Existing Interest	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Machine Financing	$14,403	$14,403	$14,403	$0	$0	$0
Total Operating Expenses	$158,403	$152,403	$150,403	$144,000	$138,000	$136,000
Net Profit Before Taxes	$100,607	$161,927	$83,976	$83,700	$148,000	$64,200
Taxes	$30,182	$48,578	$25,193	$25,110	$44,400	$19,260
Net profit After Taxes	$70,425	$113,349	$58,783	$58,590	$103,600	$44,940
Maximum Profits		X				