

Case Studies in Accounting For MBAs: Computer-Assisted Instruction

G. Russell Barber, Jr.
Mercer University

The case method of instruction offers a unique opportunity to develop sound business judgment, but certain cases are conceptually difficult, particularly time-consuming and tedious for students to prepare. As a result, effective and efficient classroom discussion is impeded. I teach an MBA managerial accounting course using the case method. Some cases are adaptable to the use of spreadsheet models. The learning objectives of the use of these models are to: (1) enhance the effectiveness and reduce the amount of student preparation time; (2) enhance the effectiveness of classroom learning time by clarifying conceptually difficult points during preparation; (3) reduce tedious and repetitive calculation time; (4) provide supplemental information; and (5) increase interest levels by using the spreadsheet as a learning tool during classroom discussion. I will describe the computer assisted approaches I use with two example cases. The complete Lotus or Excel computer models can be downloaded by the reader from the web at <http://www.mercer.edu/ssbe/faculty/barber/models.exe>.

Lipman Bottle Company

The Lipman Bottle Company case (Harvard Business School 181-076) illustrates the use of full cost information to set printing prices. The company is a distributor which also prints labels on bottles.

The case provides a 10-month income statement, showing variable cost per machine hour and per 1,000 passes (or separations), and fixed cost. A schedule showing shipping and scrap costs is given. Difficult to understand information is provided about printing operating time and how setup time and cost might be figured.

Students are instructed to calculate variable cost per 1,000 bottles, and a suggested price list, with a 30% margin on sales, for printing of 24 alternatives of bottle sizes, order sizes, and one- and two-separation combinations for Albany and for New York-New Jersey. Students are told to calculate the costs and suggested prices for a specified alternative by hand. Next, they are to bring up the Lotus or Excel model which contains the solution. A highly condensed version of the model is shown below.

Instructions:

1. Input data in column D of the **Variables** section of the model, etc.

Constants that do not change:

Variable cost (VC) per machine hour, etc.	\$14.63
---	---------

Variables that can change:

Bottle size in oz (1 or 32)	1
Shipping, in \$ (\$1.06 or \$26.19), etc.	\$ 1.06

Output (per thousand bottles)

Total VC for Albany (details omitted)	\$22.56
Total VC for NY/NJ	\$22.22
Suggested price (details omitted)	Albany, \$41.77 NY/NJ, \$41.29

To calculate the other 23 alternatives (both before and in class) students must make careful decisions about the values and proper variables (bottle size, order size, shipping, etc.) to change, but the spreadsheet model clarifies and provides feedback on their analytical process, and is a significant time saver for discussion and analysis.

Birch Paper Company

Birch Paper Company (Harvard Business School, 158-001) is a vertically integrated manufacturer of paper and boxes. The case focuses on negotiations of a transfer price per gross for a retail display box that can be produced by the Thompson Division and sold to the Northern Division, which produces paper. A complicating factor is that Thompson can purchase materials internally, from the Southern Division. Northern's manager received two, lower outside bids. Erie offered to purchase some materials and printing services from Birch. The case gives just enough information so a student can dig out Birch's out-of-pocket (variable) costs, which suggest that from Birch's perspective, Thompson is the low bidder.

Neither the text nor the case provide sufficient information to explore complex issues of a lower limit for a transfer price, and the influence of full or excess capacity. I have developed a handout and a spreadsheet model describing and applying the transfer pricing formula to the facts of the case. A condensed version is shown below.

Instructions:

4. Enter your choices in Column G of the **Variables** section of the model, etc.

Constants that do not change:

Sales price of boxed paper, per gross, etc. \$1,000

Variables that can change:

Plant conditions of capacity: Full or Excess Full

Enter a 1 if Northern buys boxes from Thompson 1

Sales prices, per gross: Southern, for materials \$ 280

Variable expenses, per gross: Northern, for boxes, etc. \$ 430

Output, per gross:

	<u>Southern</u>	<u>Thompson</u>	<u>Northern</u>	<u>Eliminations</u>	<u>Birch</u>
Revenue (w/o detail)	\$280	\$430	\$1,000	(\$710)	\$1,000
Var exp (w/o detail)	168	400	930	(710)	788

Contribution margin \$112 \$ 30 \$ 70 \$-0- \$ 212

Using the model, one can quickly determine, in a complex, multi-tiered environment, how changes in assumptions and transfer prices (input variables) will result in a different (or sometimes the same) Birch Company contribution margin.

Conclusion

The simple evaluation procedure of observing student case manipulation and reaction before and after the use of computer-assisted learning clearly demonstrates the effectiveness of spreadsheet models in enhancing and reducing student preparation time, enhancing the learning process in the classroom, reducing calculation time, and effectively presenting supplemental information. The computer as well adds an attention-grabbing element to case development and discussion experiences.

References

Birch Paper Company. Copyright 8 by the President and Fellows of Harvard College. Harvard Business School case 158-001. Boston, Mass: Harvard Business School Publishing Corp.

Lipman Bottle Company. Copyright 8 by the President and Fellows of Harvard College. Harvard Business School case 181-076. Boston, Mass: Harvard Business School Publishing Corp.

fn: c:\data\ComputAssistCaseIn\ComputerCaseInst7