

PICTURE THE NUMBERS: A CONCEPTUAL ILLUSTRATION OF LINKING MARGINAL REASONING, MARKETING ACTIONS, AND PRO FORMA CVP ANALYSIS WITH A SPREADSHEET PICTURE

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ABSTRACT

Often undergraduate students are unable or poorly motivated to recognize, link, and apply concepts from economics, finance and accounting courses to profit results of marketing plans. Economics and marketing textbooks typically use one format for Cost-Volume-Profit (CVP) data while accounting and finance textbooks present identical data in another. When students see data in one layout, they don't recognize it in the other. This manuscript presents a simple spreadsheet approach aimed at helping marketing instructors illustrate how concepts from economics and accounting courses connect to income statements produced by alternative marketing plans. In the real world accounting managers and financial managers talk to marketing managers and others to make sure they deploy corporate resources effectively and efficiently in pursuit of profit and ROI goals. The spreadsheet approach proposed in this paper is a viable approach to helping marketing educators reinforce the profit impact of marketing actions to future marketing managers – their students. Additionally the paper reports student responses and results from using a similar but simpler exercise in two groups of marketing principles classes.

INTRODUCTION

The Problem and the Need

Many business students, at the upper-division and even the graduate levels, seem to have difficulty with applying concepts from the disciplines of accounting, economics, and finance to marketing and management decisions. Students seem to have particular difficulty when it comes to applying and integrating marginal reasoning with income statement data and marketing decisions. It is certainly our experience that students often fail to integrate marginal reasoning from economics with income statement data from accounting and relate both to marketing plans, budgets, and profit.

This paper presents a simple spreadsheet-based framework to help students integrate some basic ideas from principles of economics, accounting, and finance courses and visualize how to merge them into *pro forma* CVP Analysis for marketing decisions. A spreadsheet exercise based on the framework proposed herein assumes students have completed first courses in accounting, economics and spreadsheets, covering basics of income statements, demand and cost data and curves and electronic spreadsheets such as Microsoft Excel. It shows how to transform traditionally formatted income statement data

into a format typical of economic reasoning and how to use the accounting data and associated graphs to analyze results of different marketing actions. The framework and exercise is appropriate for upper division students in marketing principles and marketing-management as well as MBA students in introductory marketing courses.

Many marketing educators assert the need for marketing managers to be accountable for the profit- and cash-flow results of their actions. Mossman, Fischer, and Crissey (1974), Kotler and Keller (2007), and Kerin and Peterson (2007) are among those stressing profit responsibility for marketing decision makers. Current textbooks in marketing and business that ignore profit- or cash-flow are almost nonexistent. Educators endorse the notion that business schools provide students with competence across several well-recognized business and related disciplines, as outlined in the business core curriculum standards of AACSB (AACSB 2006, p. 70). Traditional core requirements include accounting, economics, finance, marketing, and management, among others. Often, however, students perceive courses in these subjects to stand alone, and do not see their relevancy to each other.

Relevancy, grounded in practical knowledge, adds value to marketing and business classes and increases marketability of business degrees. Berry (1993), Abernethy and Gray (2000). Satisfying customers *profitably* is

a basic marketing principle, articulated by Lamb, Hair, and McDaniel (2006), Pride and Ferrell (2006), Perrault, Cannon, and McCarthy (2008), Kotler and Keller (2007) and numerous others.

Marketing students, as future marketing managers, must therefore understand, link, and apply some fundamentals of economic analysis along with the cost-volume-profit (CVP) results of marketing actions as they are reported in traditional income statements. Chonko (1993), Chonko and Caballero (1991), Peterson et al. (2002), Malhotra (2002), and Pharr (2003) are among many documenting concern for integrated understanding of such concepts and using technology tools for integrated analysis. All areas of marketing management require understanding and analysis of the profit impact of actions. Marketing educators must therefore reinforce the concepts of CVP analysis and teach students how to integrate marginal thinking into it using typical income statement data.

Picturing the numbers of marginal reasoning, marketing actions, associated costs and revenues to get the profit- or financial picture can be particularly challenging for undergraduate marketing students as well as for small businesses or those using small teams for managing products or projects. While not a substitute for knowledge of subject matter, presentation skills, and good face-to-face interaction with students, technology-based resources improve curricula by helping develop skills important to career success (Ferrell and Ferrell 2002). Rudelius et al. (1992), Monti et al. (1994), and Eckhardt, Janus, and Rudelius (2003) suggest computer-assisted exercises add to students' learning through reinforcement, application, and visualization, thereby bringing them closer to active learning. Computer-assisted exercises can also contribute to overcoming the complaints identified by Chonko and Roberts (1996) and can help to integrate cross-functional training in undergraduate business programs as advocated by DeMoranville, Aurand, and Gordon (2000), Corsini et al. (2000), Wilson and Harris (2001), and Sautter et al. (2000).

The authors (2008) of this paper used an elementary exercise similar to the one presented here in four undergraduate marketing principles classes in 2007. Students in the test group, comprised of two sections, ($n = 59$) scored about twenty percent higher on a ten-question, thirty-point quiz than did a control group of about the same size. The control group and the test group also completed a survey comprised of a nine-point, fifteen-item Likert type scale adapted from Abernethy and Gray (2000). Compared to neutral points of 75.0 for the total scale and 5.0 for the individual items, students evaluated the exercise favorably. Mean response was 99.54 for the total ($p = .000$) and 6.63 for the items ($p = .000$). Differences in test group means of 111.97 (total) and 7.64 (items) and control group means of 90.23 (total, $p = .000$) and 6.02 (items, $p =$

.000) suggest that students feel the exercise contributed to their understanding of how to link marginal analysis with marketing plans and CVP analysis. Spreadsheet pictures facilitate student's learning by helping them visually link marginal reasoning to marketing actions.

MARGINAL REASONING AND MARKETING ACTIONS

Among the business disciplines, economics (particularly microeconomics and economics of the firm) provides the most thorough treatment of the concept of "marginality," or the notion that achieving efficiency very often involves calculations of cost and revenue "at the margins" of business activity, where "a little more" or "a little less" is at issue, rather than "all-or-nothing" decisions. The language of economic decision-making is chock-full of terms such as "marginal revenue," "marginal cost," "marginal product," and "marginal profit." Confronted with decisions in areas of marketing, management, or business strategy, many students struggle to relate concepts of cost, revenue, volume and profit numbers reported in income statements to the "marginal" concepts of economics – although the information contained in both may be essentially identical. Likewise, many students find it difficult to apply marginal reasoning, and ask "is-it-worth-it?" as they try to merge demand, cost, investment, marketing actions, and results from CVP analysis into *pro forma* income statements. Understanding how to merge marginal analysis rationale with traditionally formatted income statements is crucial to effective marketing planning and budgeting.

To a large degree this failure to integrate principles and categories from the various disciplines with economic concepts and "marginal" reasoning emanates from differences in the way economics textbooks present demand and cost data, and accounting texts lay out income statements and CVP data. Many economics and marketing principles textbooks use one layout while accounting and finance principles textbooks use another. The following two sections show a closer look at each.

The "Economics Layout"

Most examples in economics present both per-unit and total CVP data in tabular format. Column headings name demand and cost variables. Rows contain values for each variable named in the column heading. This tabular format shows the independent x-variable in one column and the dependent y-variables in others. Graphical presentation of the price-quantity-cost data usually shows quantity as the independent variable on the horizontal x-axis and dollars (price, cost, revenue, and profit) as dependent variables on the vertical y-axis. The marketing literature usually follows a similar format in the discus-

sion of profit-related pricing strategy. Table 1 is a typical example of this layout adapted from McConnell and Brue (1996, pp. 460-464).

The “Accounting Layout”

Unlike the tabular format common to the economics layout, traditional presentations of income statement data in accounting and finance usually place income statement data in columns. Column headings name accounting periods or particular scenarios for revenue, cost and profit projections. Rows contain line-item values for the revenue and cost variables for the scenario under the column of interest. Discussion or analysis of data may focus on vertical relationships between the variables for a given period or on comparing one scenario with another. Table 2 shows simplified operating results of this nature. It shows the same information as Table 1, however, Table 2 breaks total cost into total fixed cost (TFC) and total variable cost (TVC), assumed here to equal cost of goods sold (COGS).

Certainly, there is more within these two cost categories than presented in Table 2. TFC includes fixed administrative cost and marketing program cost, fixed for program duration. TVC includes COGS (variable manufacturing, or merchandise-acquisition cost) plus other variable costs including variable marketing cost. For simplicity all costs are shown here in two cost line items, TFC and

TVC. A complete analysis would include as much line-item detail as necessary for the purpose at hand.

Each column shows the operating- or income results for the accounting periods or scenarios of concern. For example, a column scenario may depict the projected results of a proposed selling price associated with a cost for a budgeted marketing program (included here within fixed costs for simplicity). Marketing program costs are assumed constant for all prices to simplify the analysis that follows. Realistically, marketing managers would vary budgets to correspond to the marketing plans under consideration and would estimate the revenue results of each. The columns then, show *pro forma* or projected operating results for the prices and budgeted marketing programs considered. Each column contains data that corresponds to specific points on each curve. Presenting the data as projected or *pro forma* operating statements more clearly connects marginal reasoning with *pro forma* CVP analysis presented in income statement format. The following sections discuss these connections.

PAINT WITH NUMBERS USING SPREADSHEETS AND GRAPHS

Graphing the demand and cost data from Table 1 produces the familiar per-unit curves usually presented in economics and marketing literature: the average revenue

Revenue Data					Cost Data				
Price = Average Revenue (AR)	Quantity Sold	Total Revenue (TR)	Marginal Revenue (MR)	Total Cost (TC)	Total Fixed Cost (TFC)	Total Variable Cost (TVC)	Average Total Cost (ATC)	Marginal Cost (MC)	Profit or (Loss)
\$172	0	\$0		\$100	\$100	\$0			(\$100)
\$162	1	\$162	\$162	\$179	\$100	\$79	\$179	\$79	(\$17)
\$152	2	\$304	\$142	\$236	\$100	\$136	\$118	\$57	\$68
\$142	3	\$426	\$122	\$277	\$100	\$177	\$92	\$41	\$149
\$132	4	\$528	\$102	\$303	\$100	\$203	\$76	\$26	\$225
\$122	5	\$610	\$82	\$319	\$100	\$219	\$64	\$16	\$291
\$112	6	\$672	\$62	\$327	\$100	\$227	\$55	\$8	\$345
\$102	7	\$714	\$42	\$331	\$100	\$231	\$47	\$4	\$383
\$92	8	\$736	\$22	\$334	\$100	\$234	\$42	\$3	\$402
\$82	9	\$738	\$2	\$339	\$100	\$239	\$38	\$5	\$399
\$72	10	\$720	-\$18	\$350	\$100	\$250	\$35	\$11	\$370
\$62	11	\$682	-\$36	\$370	\$100	\$270	\$34	\$20	\$312
\$52	12	\$624	-\$58	\$402	\$100	\$302	\$34	\$32	\$222
\$42	13	\$546	-\$78	\$450	\$100	\$350	\$35	\$48	\$96
\$32	14	\$448	-\$98	\$517	\$100	\$417	\$37	\$67	(\$69)
\$22	15	\$330	-\$118	\$606	\$100	\$506	\$40	\$89	(\$276)

TABLE 2
CVP DATA – “ACCOUNTING LAYOUT”

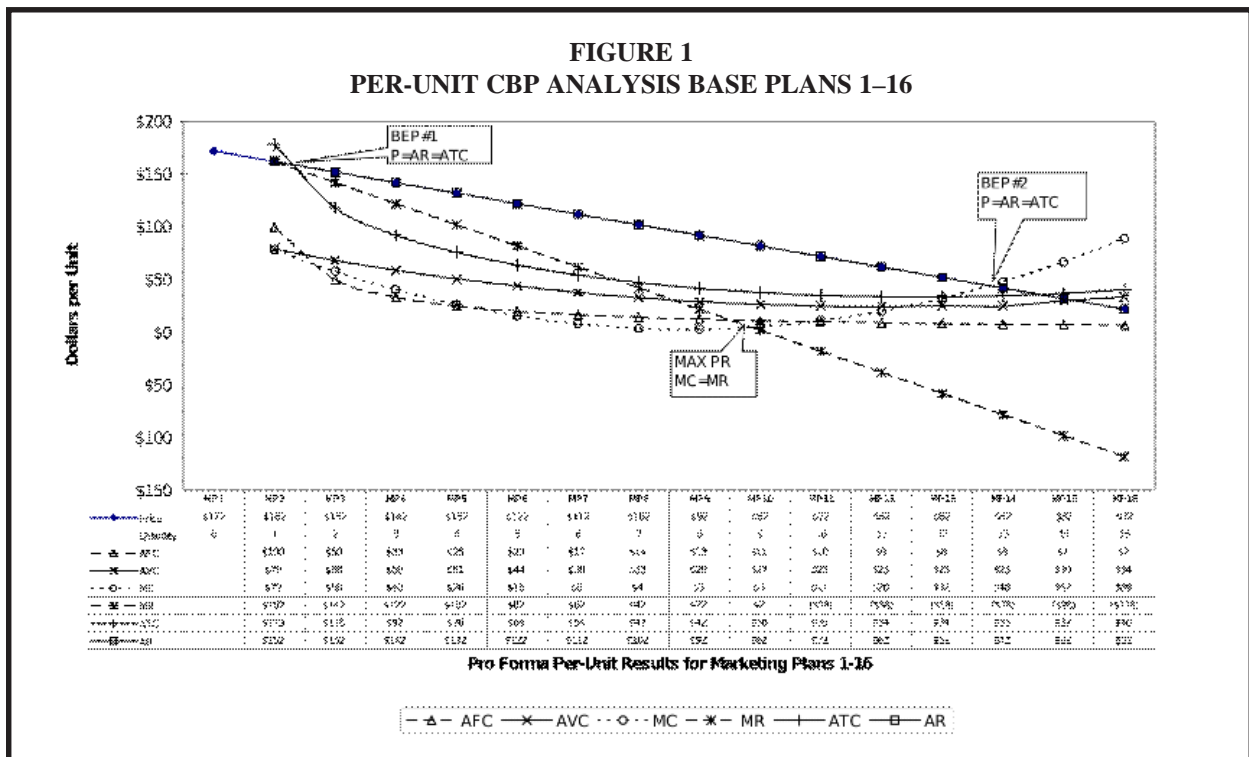
Accounting Period, Scenario, or Marketing Plan																
	MP-1	MP-2	MP-3	MP-4	MP-5	MP-6	MP-7	MP-8	MP-9	MP-10	MP-11	MP-12	MP-13	MP-14	MP-15	MP-16
Price	\$172	\$162	\$152	\$142	\$132	\$122	\$112	\$102	\$92	\$82	\$72	\$62	\$52	\$42	\$32	\$22
Quantity	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Total Revenue	\$0	\$162	\$304	\$426	\$528	\$610	\$672	\$714	\$736	\$738	\$720	\$682	\$624	\$546	\$448	\$330
Cost of Goods Sold	\$0	\$79	\$136	\$177	\$203	\$219	\$227	\$231	\$234	\$239	\$250	\$270	\$302	\$350	\$417	\$506
Gross Profit	\$0	\$83	\$168	\$249	\$325	\$391	\$445	\$483	\$502	\$499	\$470	\$412	\$322	\$196	\$31	(\$176)
Less: Fixed Cost	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100
Net profit	(\$100)	(\$17)	\$68	\$149	\$225	\$291	\$345	\$383	\$402	\$399	\$370	\$312	\$222	\$96	(\$69)	(\$276)

(AR) or demand curve, and associated marginal revenue (MR) curve, relevant unit cost curves, average variable cost (AVC), average fixed cost (AFC), and average total cost (ATC). Figure 1 shows the per-unit data plotted from Table 1. Each column in the data table below the graph area of Figure 1 shows per-unit financial performance for each marketing mix scenario. Identified as marketing plans (MP-1 to MP-16), the proposed plans show prices ranging from a high of \$170.00 (too high to sell a single unit) to a low of \$22.00. These prices combine with other marketing plan elements prescribing a program of mar-

keting effort and budgeted program cost, included within fixed cost, to generate sales and revenue.

In Figure 1 either price or quantity may be the horizontal-axis x-variable. Traditional economic theory considers price and quantity to be interdependent, but by convention plots quantity on the horizontal axis as the ‘independent’ variable. Marketing literature, on the other hand typically treat price and other marketing mix elements as ‘independent’ variables that drive quantity sold. Quantity sold, in turn drives cost, and multiplied by price, determines sales revenue.

FIGURE 1
PER-UNIT CBP ANALYSIS BASE PLANS 1-16



Transforming unit demand and cost data into total revenue, cost and profit data and associated graph produces the curves in Figure 2. Educators in economics typically emphasize per unit revenue and cost analysis as presented in Figure 1, encouraging students to think in marginal-revenue (MR) and marginal-cost (MC) terms. In pricing discussions, most marketing educators also give attention to the per unit analysis and iterate the $MR = MC$ axiom for profit maximizing firms. As the discussion moves from profit maximizing goals to breakeven analysis and other profit or sales-related goals, it typically abandons the per-unit analysis in favor of analysis based on total revenue (TR) and total cost (TC) curves and data. Discussions of breakeven analysis customarily show linear TR and TC curves, emphasizing the usual assumptions and shortcomings of such simplified analysis. Even when the discussion presents more realistic non-linear revenue and cost curves, it usually retains the “economics-marketing” layout for cost, revenue, volume, and profit data rather than income statement format. Students however, typically grasp the ideas of the analysis without inordinate difficulty and can identify the relevant points on both sets of graphs: breakeven (where $TC = TR$ and $ATC = AR$), the profitable range of sales volumes (between the break-even points), maximum profit point (where $MR = MC$), maximum revenue point (where $MR = 0$), elastic demand range (left of $MR = 0$) and inelastic demand range (right of $MR = 0$), and so forth. The key to linking the concepts presented in Figures 1 and 2 with income statement data is the fact that *the data table column numbers connect to the points on the curves*, clearly painting a picture of projected marketing plan results.

As long as they remain in the “economics” frame of mind, students can usually apply the concepts to applications where they see data in “economics” format. The challenge occurs, however, when they are confronted with explaining how the analysis links to income statement data in traditional “accounting” layout. Transferring their grasp of CVP analysis to *pro forma* income statements produced by alternative marketing plan and budget scenarios, or environmental conditions evade all but the most astute marketing student. Students who may be poorly motivated or have difficulty transferring from an “economics-marketing” mindset to one of “accounting-finance” are highly unlikely to use these analysis tools when the need arises. Pursuing multiple, seemingly contradictory and vague, marketing goals may seem impossible.

How does the marketing educator bring order to the confusion between: market share (sales volume) goals and target profit; a prestige price and a minimum ROI; a low price and satisfactory earnings; or a prestige price and an acceptable sales volume? What techniques can help the marketing educator bring the appropriate analysis tools together to reconcile this seeming contradiction in desired outcomes and move in the right direction? And how can

the marketing educator present these reconciled contradictions in goals and translate them into a format familiar to income-statement oriented approaches?

PICTURING CVP ANALYSIS WITH A SPREADSHEET

As pointed out by Abernethy and Gray (2000) and Davis, Misra, and Van Auken (2002), educators and business practitioners alike embrace electronic spreadsheets for analyzing business data, pedagogy, training, and presentation. Connecting CVP performance data in income-statement format to per-unit or total revenue and cost curves and presenting it understandably is straightforward with spreadsheet software. Once the relevant data is collected, the spreadsheet task is a clear-cut process of entering data into a spreadsheet, using the “accounting-finance” layout described earlier. Creating the graphs requires the educator and/or student to think of using the column scenarios as the x-axis variable and the rows as data series for the y-axis variables. The resulting curves show the familiar CVP analysis typical of that found in the economics and marketing literature. Analysis that uses actual data, however, will seldom produce the smooth, continuous curves normally presented in discussions/lectures or examples as illustrated here. Two resources are available for those who might wish to use a similar exercise. Table 3 lists and explains the steps in the exercise. The JAME website has a link to the Excel spreadsheet for the example presented in this paper.

The data in Tables 1 and 2, and associated graphs in Figures 1 and 2 show TFC to be \$100. Realistically, total fixed cost consists of three elements: (1) Fixed administrative overhead charges, (2) Budgeted program cost for the proposed marketing plan, and (3) Capital charges for assets employed in the proposed marketing plan. The firm’s historical ROI, associated with its weighted average cost of capital (WAAC) normatively establishes rates for imputing capital charges as well as for establishing target profit goals. For purposes of illustration, assume the elements that comprise the \$100 in fixed cost are \$50 for administrative overhead and \$50 for marketing program cost which also includes imputed capital charges for assets used in marketing. Assume further the hypothetical firm deployed total assets valued at \$500 and has a target ROI of twenty percent, thereby establishing a net profit goal (NPG) of \$100. The assumption of a NPG of \$100, equal to TFC is for convenience. It permits using the plotted TFC curve as a reference line for the profit goal without the clutter of another curve to represent the NPG. Asking “what-if?” and “is-it-worth?” questions, analyzing proposed plans and presenting their *pro forma* results is a simple matter. The educator or student must enter data corresponding to alternative prices and marketing plan expenditures and estimate or forecast sales and income results. Of course estimating or forecasting marketing

TABLE 3
STEPS FOR CREATING PAINT WITH NUMBERS EXERCISE

Step and Brief Explanation

- Step 1. Propose a number of marketing plans in the relevant range of operations – minimum to maximum. A starting point might be last year’s plan (real or hypothetical) judgmentally adjusted for pessimistic/likely/optimistic conditions, thus producing plans for each set of conditions.
- Step 2. Create budgeted income statements for each plan, including quantitative dollar or numerical estimates for the following line items. Enter the values into an electronic spreadsheet such as Microsoft Excel®. Use one column for each income statement.
1. Total Revenue. Include Price and Quantity.
 2. Total Variable Cost. Include unit cost and quantity to arrive at cost of goods sold, other variable costs; include variable marketing cost as a separate line item or as part of the total, depending on detail desired.
 3. Gross Profit/Contribution. Subtract 2 from 1 to get contribution to fixed cost and profit.
 4. Total Fixed Cost. Include fixed administrative overhead costs and fixed marketing program cost as a separate line item or part of the total, depending on detail desired. Include here any assigned charges for administrative overhead or capital charges for assets employed.
 5. Subtract 4 from 3 to get a profit estimate. This may be called “controllable contribution” as it reflects the contribution that is under control of the manager responsible.
- Step 3. Undertake “What If” analysis as described in the paper to evaluate and refine marketing plans based on management’s judgment about CVP effects of marketing actions.

plan results is more easily said than done and beyond the scope of this paper.

Goal Hierarchy Narrows Plan Choices

Depending on the firm’s goals, Figure 2 suggests the following for choosing marketing base plans: (With continuous curves, optimality points do not precisely match data points that are centered over the MP columns of the figures’ data tables.) Therefore:

- MP-9 is the appropriate basic marketing plan for a firm having the profit-maximizing goal usually assumed. It generates a maximum NP of \$402, substantially above \$100.
- MP-4 is a fitting base plan for firms willing to forfeit some profit and unit market share (volume) in the quest for a high-price/high quality image. This plan is consistent with a skimming price strategy for markets that are quality-conscious and not price-sensitive. It satisfies the \$100 NPG at a higher prestige price, but yields lower unit volume and market share.
- MP-13 is a starting plan for a firm willing to surrender a portion of current profits as it seeks to maximize market share or sales volume *and* produce a minimum NP of \$100. MP-13 matches a penetration-price strategy for price sensitive markets. It produces the largest unit volume or share consistent with the \$100 NPG, yielding NP of \$221.
- Any base plan between MP-4 and MP-13 can be a relevant beginning for firms whose capital charges and minimum profit requirements are factored in, as all satisfy the minimum NPG of \$100. Plans within this range also have some flexibility (profit cushion) to offer alternatives for responding to competition or pursuing other strategies, such as a status quo- or related-product pricing. Firms with a primary goal of satisfactory (target) returns may combine it with a subordinate goal of either market share or quality image. Whereas a primary target profit goal coupled with a subordinate goal of high quality/prestige image will lead to lower numbered plans. A primary goal of target profit, combined with a secondary goal of market share, lead in the direction of higher numbered plans. Plans for firms with a higher order goal *and* a subordinate goal must satisfy both.
- The appropriate base plan depends on the firm’s goal hierarchy. More specifically, a firm may seek (1) to maximize profit, (2) to maximize

FIGURE 2
TOTAL CVP ANALYSIS BASE PLANS 1-16

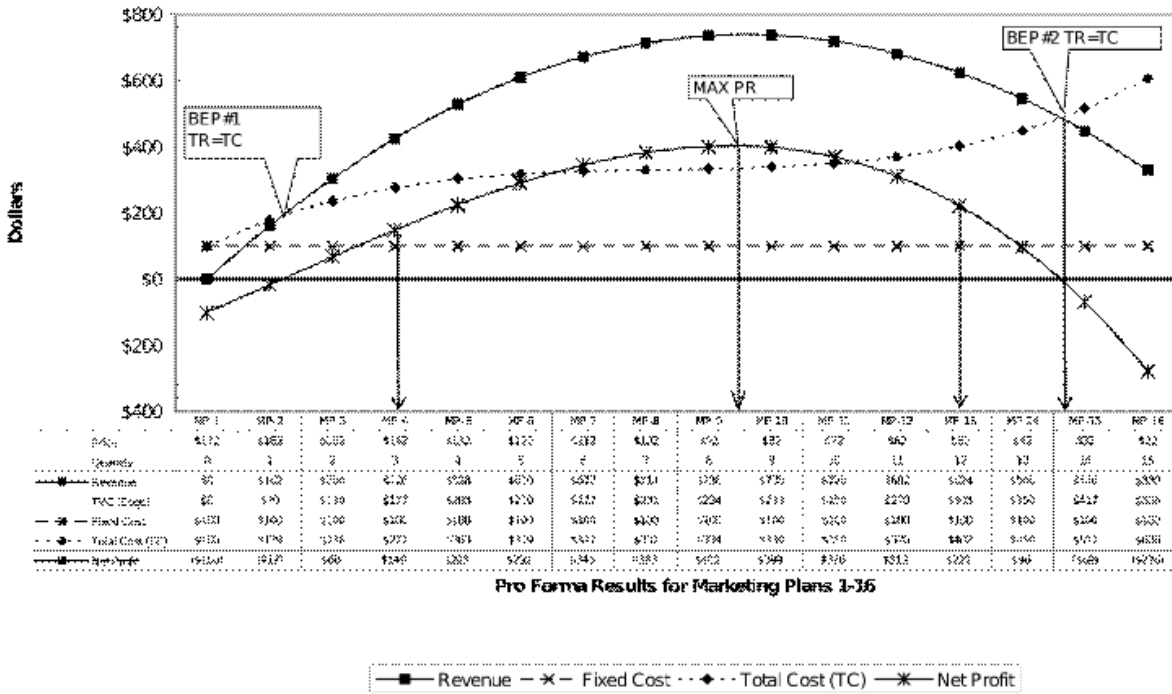
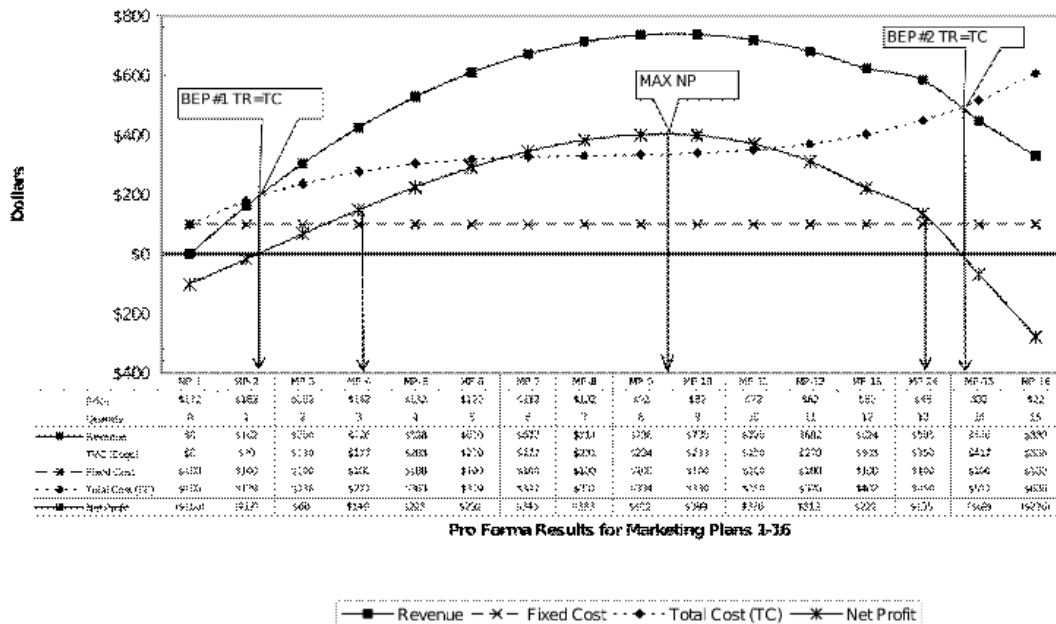


FIGURE 3
REVISED TOTAL CVP ANALYSIS, HIGHER PRICE IN MP-14



sales volume (share) *and* satisfy a target profit minimum, or, (3) to maximize a price-quality-prestige image *and* satisfy a profit minimum. The analysis as proposed in this discussion gives students a good picture of the trade offs involved in these three main goal hierarchies.

Narrow Base Plans with “What If Scenarios”

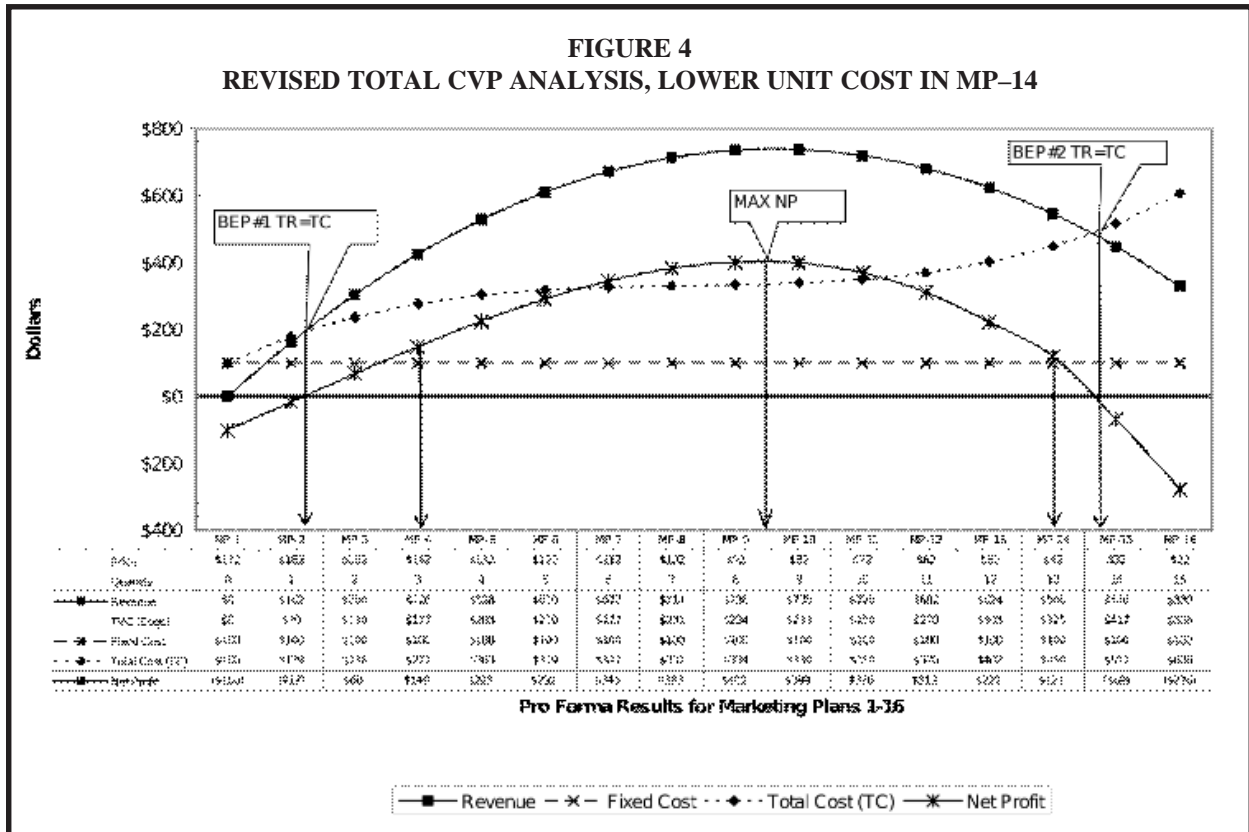
Students can narrow base plan choices down to those near the point consistent with goal hierarchy and overall strategy. A penetration strategy suggests base plans near the low-price end of the spectrum, say, MP-13 or MP-14. Prestige pricing leads to plans near the other end. Once narrowed, students can then adjust *pro forma* plans with “what if” alternatives and ask “is it worth” questions to further refine plans and budgets.

Net profit from MP-14, for example, falls a little below the NPG of \$100 but MP-14 is consistent with a goal of high unit sales volume or market share. Since MP-14 is in the inelastic price range, students may ask if small adjustments to MP-14 plan elements, e.g., a slightly higher price (\$45 vs. \$42) associated with a modest trade sales promotion might overcome the profit shortfall. Or, alternatively, could cost savings based on long-term purchase agreements with suppliers lower AVC (unit COGS) to \$25, vs. \$27? Plan MP-13, on the other hand, exceeds the NPG slightly. Students may debate whether minor adjustments to elements of MP-13, lowering selling price down with a coupon, rebate or consumer trade promotion,

may be easier, less risky or more effective than adjusting MP-14.

Entering estimated results of these proposed adjustments to MP-14 immediately structures the illustration in Figures 3 and 4 to help answer these questions. As Figure 3 shows, MP-14 with a higher price, \$45, and the same unit volume, produces greater TR and NP of \$135. Therefore, it meets the NPG and produces substantial volume/share. Similarly, as shown in Figure 4, lowering AVC from \$27 to \$25 reduces TVC (COGS) to \$325, and with price at \$42, meets the NPG, yielding \$121 in net profit along with considerable volume. Alternatively, students may consider MP-13 to be the better (less risky) starting point since it more than adequately meets the NPG at the outset, providing a modest profit cushion (\$224 vs. \$135 or \$121), and flexibility to adjust prices or other plan elements slightly as conditions may warrant.

Marketing educators or students can perform similar analyses for plans at the high-price end of the spectrum, evaluating the implications of changes in price, unit cost, target profit, and other decision variables on various marketing plans for prestige or skimming price strategies accompanied by target profit considerations. The examples presented here assume a constant marketing budget. Realistic “What If” analysis should include program and budget changes along with price changes and the projected effects on cost, volume, and profit for plans in the range appropriate to the firm’s goal hierarchy and overall marketing strategy.



CONCLUSIONS

Many undergraduate marketing students appear unable or unwilling to integrate and apply basic tools from accounting, economics, and finance to marketing decisions and application exercises. Their motivation and ability to do so is frustrated by the differing formats that accounting, economics, finance, and marketing educators use to present pro-forma cost-volume-profit data. This paper offers a simple spreadsheet approach to help educators and students integrate the concepts of demand and cost analysis as presented in the economics and marketing disciplines with pro forma CVP analysis as presented in income statement format used in accounting and finance disciplines. The approach has several advantages. One it clearly pictures the relationship between unit demand and cost curves and data and the associated total revenue and cost curves. It therefore adds to learning by enabling students to reinforce, apply and visualize concepts as

argued by Rudelius et al. (1992), Monti et al. (1994), and Eckhardt, Janus, and Rudelius (2003). Two it converts traditionally presented demand and cost data to financial statement format connecting concepts learned in economics and marketing with those learned in accounting and finance, overcoming some of Chonko and Roberts (1996) complaints. Three it clarifies how a manager can establish basic marketing plans that reconcile seemingly contradictory goals. Four it clearly links traditional break-even and target profit concepts to pro forma financial statements, contributing to cross-functional training for business students advocated by DeMoranville, Aurand, and Gordon (2000), Corsini et al. (2000), Wilson and Harris (2001), and Sautter et al. (2000). Finally, it provides a simple “what if” procedure students or other analysts can use to refine marketing base plans, helping students develop skills important to career success (Ferrell and Ferrell 2002).

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