

Project

Senior Capstone: Business

By

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About the Author

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Contributing Authors

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Welcome to your senior capstone project! You'll begin your course by planning the meetings you'll attend for your professional development assignment, which requires that you participate in two networking activities to expand your knowledge, experience, and contacts in the business world. Then you'll analyze two cases that draw on and integrate much of the material you've learned throughout your business coursework. Both cases were developed from real fact patterns and real data.

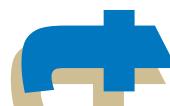
Your professional development work requires you to evaluate, choose, and make arrangements to attend two workshops, business meetings, or similar events. You'll also document your planning time and report on the activities you attended. By beginning with this assignment, you'll be able to plan and attend your activities while you also work on the two cases.

Case 1 is from a firm called Purchase Point Media Corporation, or PPMC. PPMC was a thinly traded over-the-counter stock that issued some detailed financial projections. The data was presented in a very poor form; however, the substance and sequence of the data was organized in such a way that it was possible to compute a break-even point. You'll study PPMC's "Projected Statement of Net Income" and additional information provided, then integrate marketing and finance techniques to write a report on your findings.

Case 2 is quantitative and involves the analysis of selected financial data for a firm we'll call "Motomart." Motomart was a retail automobile dealership seeking permission to relocate in an area already served by a similar automobile dealership. The existing dealership brought a lawsuit to block the relocation. Although the data provided by the company is flawed, you'll prepare a summary of your observations and answer several questions about problems with the case.



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Professional Development Project: PD Seminars and Community Networking

INTRODUCTION

Professional development (PD) is an important aspect of business that enables you to network with other professionals, continue learning, and expand your business experience. For this part of your senior capstone project, you'll plan, attend and reflect upon at least two approved workshops, conferences, seminars, or professional business meetings at the local, state, or national level. These activities or events must represent a learning experience that contributes to your development as a business professional.

You'll earn credit for your 15 hours of assigned PD-related activities, including your attendance at two events. To receive credit, you must provide documentation of your planning efforts (approximately one hour for each event), your two approved professional-development activities (approximately three hours each), and a thoughtful report (approximately four hours) reflecting on and summarizing your professional-development activity and/or event.

Note: Read all the way through the assignment before you begin, to make sure you choose acceptable activities, collect the necessary information, and complete all the requirements for the project.

OBJECTIVES

When you complete this professional-development assignment, you'll be able to

- Explain the benefits of professional-development activities
- Evaluate the professional-development potential of specific workshops, conferences, seminars, and professional business meetings
- Plan for and arrange to attend professional-development events
- Present your reflections on the value of professional-development activities

RECOMMENDED ACTIVITIES

The following are suggested activities to consider for your professional development activities. There may be other opportunities in your area, but whether you choose one of the suggested activities or find something on your own, your instructor must approve your choices before you begin.

Attend a Local Chamber of Commerce Meeting

A local Chamber of Commerce meeting is a good place to meet people and to see what's going on in business in your area. You can Google the U.S. Chamber of Commerce Web site or contact your local Chamber of Commerce for its meeting schedule. Spend some time navigating through the local Chamber's Web site to familiarize yourself with their mission and/or vision statement, officers, members, and activities. Typically, local Chamber of Commerce Web sites provide information that's valuable to the local members.

Rather than just showing up at a meeting, first call the local Chamber and speak with the staff. Tell them that you're completing a coursework assignment and would like a mentor, if available—someone willing to introduce you to Chamber

members and assist you in learning more about the organization. Doing so will enhance the quality of your experience and afford greater success in both networking and maintaining your connection with new contacts.

Attend a Guest-Speaker Event at a College or University

Every college and university presents outside speakers to enrich their students' education and to attract local leaders and community members to the campus. Look for a college or university event in your area that's related to business, economics, or public-policy issues. Events are often publicized in newspapers and on the institution's Web site. You may wish to call the university's business department to ask if any public events are coming up or contact several institutions and ask to be placed on their mailing lists to receive e-mail or printed notices for these opportunities.

Attend an Institute of Management Accountants Chapter Meeting

The membership of the Institute of Management Accountants (IMA) includes professionals in accounting, finance, and information technology. The vast majority of those attending will be Certified Public Accountants (CPAs) and Certified Management Accountants (CMAs). However, the CMA exam, unlike the CPA exam, tests all business disciplines, so you also may find attorneys and real estate brokers at these meetings. Membership in each group will vary.

Begin planning to attend a local meeting by reviewing the IMA Web site. You should be able to locate a nearby IMA chapter on this Web site; if not, send an e-mail asking for the nearest group. Once you make contact, ask if they'll recommend a mentor to introduce you to chapter members and improve the quality of your networking experience.

PROFESSIONAL DEVELOPMENT PLANNING TOOLS AND FORMS

The following is a summary of your professional development (PD) planning tools and submission requirements. Check each step to help you organize and complete your assignments for this part of your capstone project.

1. Professional Development (PD)—What Counts

Read the “What Counts” requirements and the section on self-evaluation and planning before you choose your PD activities. Then discuss your ideas with your instructor and make sure you have approval for the activities before you attend.

2. Self-Evaluation and Planning Framework

Use the criteria to plan your intended PD activities and to evaluate their value after you complete them. If you’re not satisfied with the potential value of one or both of them, look further to find a more worthwhile experience. For instance, you may live in a small town and learn that your local Chamber of Commerce or business professionals’ organization has a very small membership and isn’t very active. You might decide to call an organization in a larger community or a nearby city to make arrangements to attend their meeting instead. On the other hand, if you plan to work in your small town, the local group might be a better choice, since any contacts you make through networking will be more helpful you once you’re working.

3. Professional Development Sessions Essays

During or immediately after an event, make notes on the people you’ve heard speak, your mentor, and others you’ve been introduced to. Answer the questions and note the relationship of each aspect of your experience to your area of interest. Also note important points and new ideas that were part of the presentation or meeting discussion.

4. Writing Guidelines

See the writing guidelines in the “Submitting Your Work” section at the end of this book.

5. Sessions Summary

Log the time you spend in planning, attending, and reporting on your PD sessions.

Professional Development Activities: What Does and Doesn’t Count

To clarify what kind of activities are acceptable as professional development activities for your assignments, use the guidelines that follow.

What Doesn’t Count

The following activities *do not* qualify as valid experiences for your professional-development assignment:

- Staff meetings at work with your present employer—these are required as part of your current employment and don’t contribute to the development of new PD skills or experiences.
- Mentoring others—the PD experience should represent a new or novel experience and be directed by others.
- Time spent reading a book, an activity that’s not interactive or directed by others.
- Renewal courses for current position or certifications, which are generally part of employment requirements.

What Does Count

The following activities *do* qualify as valid experiences for your professional-development assignment:

- PD activities outside of or beyond the minimums required by your current employer
- Workshops, seminars, or meetings held by local professional societies, including the American Marketing

Association, American Management Association, Institute of Management Accountants, Society of Certified Public Accountants, or others closely linked to your area of interest and associated with your degree program

- PD activities requiring involvement and exposure to the local community, such as a local Chamber of Commerce meeting; a county commissioners' or city council meeting, where the agenda includes the approval process for new or local businesses; a local, significant college or university seminar; a conference or presentation by relevant guest speakers
- Other PD activities approved by your instructor

Self-Evaluation and Planning Framework

Use the following criteria to evaluate your proposed professional-development activities. Make sure your plan meets each standard in relation to your area of interest or specialization. If an activity doesn't meet the criteria, continue searching until you find one that does.

Make sure each activity meets the following criteria:

- It's relevant to your area of interest.
- It provides significant interaction with business professionals.
- It has potential to improve your future achievement in business.
- It offers a significant opportunity for learning.
- It provides an opportunity to integrate what you've learned in your business and writing courses.

Your Professional Development Sessions Essays

You must complete one essay for each PD event you attend. Essays will be graded according to the guidelines provided. Essays that don't meet minimum criteria may, at the instructor's discretion, be returned to the student for revision.

Note: Read the project submission instructions at the end of this book before beginning your session essays.

Each essay should be well written and should describe your activity and present your opinion on the applicability of your new knowledge and PD experience. Each PD experience will be unique, depending on your interests, expectations, and results.

Make sure you answer the following questions:

- What were the educational benefits of the PD experience?
- Did you meet people who work in your area of interest? If so, how do you plan to stay in contact with them?
- Were you able to use your education and prior coursework experiences to identify any theoretical or methodological strengths or weaknesses in the materials presented for your PD experience?
- How will you apply the PD experience to your future professional goals and objectives?

Writing Guidelines

Briefly describe the content of the session (fewer than 750 words, typed, double-spaced). Include a description of how you prepared for your PD session, what you expected prior to participating in it, and how this compared with your actual PD experience. Where possible, reflect on how your session relates to the coursework you've completed.

Refer to the "Submitting Your Work" section at the end of this book for details on submission requirements for the Professional Development Project.

Sessions Summary

In addition to writing your summary or report, you must log the time you spend on preparation, event attendance, and writing the report. Record your PD activity hours on a separate page and send it to your instructor with your reports. Use the information below to create your time log.

Professional Development Session Summary

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Include a separate “sessions summary” page when you send your PD activity reports to the school. Record a PD activity summary for each of your two required experiences using the following guidelines:

Your name and student number

Event information and contact hours Include the name of the activity and attach a copy of the agenda or flyer, if available

Date and time of session

Names of instructors and/or presenters (include titles and credentials)

Preparation hours Preparation date(s) and number of hours spent planning

Activity hours Event start time and end (subtract break time from total hours)

Reflection/summary hours Time spent on your summary report preparation, including date(s) and hours

TOTAL TIME SPENT ON ACTIVITY

Case 1: Purchase Point Media Corporation (PPMC)

INTRODUCTION

This case is based on actual financial projections developed and provided by a publicly traded firm, Purchase Point Media Corporation (PPMC). Carefully examine the PPMC projections, which are presented in a sequence and format suitable for break-even calculation and analysis. After you calculate the break-even point, use additional, publicly available information to come to a decision with respect to market potential. The increase in the price per share of PPMC stock suggests that, over time, the market may have reacted to their results and analyses, using a comparable methodology.

OBJECTIVES

When you complete this case, you'll be able to

- Identify discernable errors, irregularities, and improprieties in style and format within publicly reported data
- Meet financial statement presentation requirements for a specific “real world” example
- Determine whether financial information provided follows generally accepted accounting principles (GAAP) or is presented in “good form”
- Distinguish between the *substance* and *form* of financial statements
- Estimate variable and fixed costs for a publicly traded company
- Assess publicly disseminated information from publicly traded companies to determine the feasibility of market potential and market penetration
- Exercise enhanced critical-thinking skills

CASE BACKGROUND

Purchase Point Media Corporation (Pink Sheets: PPMC) is what some refer to as a thinly traded “corporate shell.” The firm held patents in the United States, Canada, United Kingdom, and Germany for a shopping-cart display device, but was a nonreporting and nonoperating entity.

On March 18, 2002, PPMC reported its intention to sell these patents and related trademarks. The initial estimates suggested a stock price of nearly \$2.50 per share, before related per-share deductions for sale-related broker's commissions and legal fees. At the time of the news release, the firm's stock was trading at \$0.04 per share. In less than 60 days the stock was trading at more than \$0.60 per share (Cataldo 2003, 55–60), for a 1,400 percent increase in price per share. (Note that investors and speculators alike would view this as a very risky investment, and the price per share for PPMC stock would be expected to fall short of or sell at a significant discount to the “anticipated” selling price for the firm's intangible assets. See Arbel and Strelbel 1982 and 1983; Arbel, Carvell and Strelbel 1983; and Arbel 1985 for guidance on thinly traded or “neglected” firms.)

While this initial news release attracted speculators, causing the stock price to rise, after months without any additional news releases, the stock price drifted down again. On August 20, 2003, PPMC again announced its intention to sell the firm's intangible assets (*Business Wire* 2003).

In the second announcement, PPMC management referred interested investors to their corporate Web site. Among the data provided, PPMC included a financial projection and other items they felt might be of interest to potential purchasers of the firm's intangible assets (see Exhibit 1, Purchase Point Media Corp. statement, which follows).

To begin this case, review and comment on the “form” of the public disclosure circulated by PPMC. Then use the “substance” of this information to develop per-unit, sales-based contribution margins and break-even points for the first year of operations. Last, gather other publicly available information to determine the market feasibility of achieving its break-even point.

PURCHASE POINT MEDIA CORP.

Projected Statement of Net Income

For the first twelve months of operations

Safe harbor statement under the private securities litigation act of 1995. This project statement of net income contains forward looking statements, all such forward looking statements are by necessity only estimates of future results and actual results achieved by this company may differ materially from these statements due to a number of factors. Both the Corporate house and Purchase Point Media Corp., assumes no obligation to update these forward-looking statements to reflect actual results. Changes in assumptions or changes in other factors effecting such statements. You should independently investigate and fully understand all risk before making investment decisions.

Suite 100 - 141 5th Ave., New York, NY. 10010

C O R P O R A T E H O U S E

Purchase Point Media Corp., 141 5th Ave., Suite 1100, New York, NY 10010

Attention: Albert Folsom

Dear Sirs:

We have prepared the attached *Projected Statement* of Net Income for a twelve Month period for Purchase Point Media Corp., (The Company") from information supplied to us by management and from various other periodicals and reports. These figures do not include start-up and development costs.

We have made basic assumptions in compiling the information given to us in that revenue will commence to be generated once the Company's patented display panels have been installed in 1,200 stores, and a total of 1,200 stores subsequent to the first month will be added to the Company's list of clients each month thereafter for a total of 14,400 stores in year one.

The *Projected Statement* of Net Income has been prepared in accordance with generally accepted accounting principles except that no consideration has been given for Federal and State taxes which, had the taxes been calculated at the statutory rates in effect, would have had an impact on net income.

If the Company decides to remain with only 14,400 stores during its second year of operations and does not expand at all, projected gross revenue will increase to approximately \$150,000,000.

If you have any questions regarding the above please feel free to contact us at any time.

Yours very truly; Corporate House

Per: /S/ _____

Richard T. Hethay, Director, Attachment

PURCHASE POINT MEDIA CORP.

NOTES TO THE PROJECTED STATEMENT OF NET INCOME

1. Advertising Revenue It is expected a minimum of 14,400 stores will be using the Company's unique display panel by the end of the first year. The Company expects to affix its display panel on 100% of the grocery carts or the equivalent of 200 carts per store.

<u>Month</u>	Number of Stores at <u>End of Month</u>	Gross Advertising		Gross Advertising Revenue by Quarter
		(i)	(ii)	
1 st	1200		1,620,000	
2 nd	2400		3,240,000	
3 rd	3600		<u>4,860,000</u>	
				\$ 9,720,000
4 th	4800		6,480,000	
5 th	6000		8,100,000	
6 th	7200		<u>9,720,000</u>	
				24,300,000
7 th	8400		11,340,000	
8 th	9600		12,960,000	
9 th	10800		<u>14,580,000</u>	
				38,880,000
10 th	12000		16,200,000	
11 th	13200		17,820,000	
12 th	14400		<u>19,440,000</u>	
				53,460,000
Total				<u>\$ 126,360,000</u>

(i) As mentioned above, 14,400 individual supermarkets have been selected for the first year of operations. The estimate assumes 1,200 new stores each month subsequent to the initial opening of 1,200 stores in the first month. The Company required a minimum of 300 stores in the first month to qualify for contracting with advertising agencies since they require a \$5,000,000,000 annual sales figure from the companies they will be advertising with.

(ii) Statistics indicate there are on the average 60,000 customers per month shopping at any given supermarket in the United States. The cost to the advertiser is \$2.25 per 1,000 customers, which equates to \$135.00 per month for display on the advertising panels. The advertiser is under a quarterly contractual agreement. With 10 advertisers on a display panel each supermarket will provide a gross revenue of \$1,350 per month. With 1,200 stores coming on stream in the first month, the total gross revenue is projected at \$1,620,000.

2. Amortization of Display Panels The display panel is manufactured using an injection mold process. The end product is made of heavy durable plastic. In addition to the display panel itself, fastenings are an integral part of the assembly of the panel on the grocery cart. Total manufacturing and installation cost is \$6.22 per display unit.

It is assumed the display panel will be affixed to 100% of the carts in the supermarket. Statistics show the average supermarket uses 200 grocery carts. Therefore, 200 carts will have the Company's panel installed. It is assumed the panels will have a life expectancy of 5 years or longer. The total cost in the first year of operations is \$17,913,600. For conservative purposes, amortization of the display panels is taken over a two-year period rather than a five-year period. Assuming a two-year amortization based on the straight-line method, the annual expense will be \$8,956,800. Therefore, in the first year, each quarter will bear the cost of \$2,239,200

3. Printing of Inserts The advertising agreement with an advertiser will be for a three-month period after which the advertiser is free to renew or discontinue the service. If one advertiser decides not to renew the agreement or is willing to renew but wishes to use another product, the entire insert must be reprinted. This assumes that every quarter a new set of inserts must be printed. The cost to print each of the inserts is \$0.11, which covers freight and spoilage. The figure of \$0.11 is conservative based on quotes received by management which indicates 300,000 inserts can be printed on #50 Smooth White Offset paper in four colors one side process for \$8,454 or \$0.03 per insert. The following analysis determines the expense each month and by quarter for printing charges.

<u>Month</u>	<u>New Grocery Carts with Advertising</u>	<u>Renewal Printing</u>	<u>Total Per Month</u>	<u>Quarterly Total</u>	<u>Quarterly</u>
1 st	240,000	-	240,000		
2 nd	480,000	-	480,000		
3 rd	720,000	-	720,000	1,440,000	
					158,400
4 th	960,000	240,000	1,200,000		
5 th	1,200,000	240,000	1,440,000		
6 th	1,440,000	240,000	1,680,000	4,320,000	
					475,200
7 th	1,680,000	240,000	1,920,000		
8 th	1,920,000	240,000	2,160,000		
9 th	2,160,000	240,000	2,400,000	6,480,000	
					712,800
10 th	2,400,000	240,000	2,640,000		
11 th	2,640,000	240,000	2,880,000		
12 th	2,880,000	240,000	3,120,000	<u>8,640,000</u>	
					950,400
				<u>20,880,000</u>	<u>\$ 2,296,000</u>

4. Replacement Due to Vandalism Regardless of the security precautions taken by the individual supermarkets, vandalism and theft will occur. This will represent a cost to the Company since it cannot be charged to either the supermarkets or advertisers. Management is currently seeking insurance, which will lessen this expense, but for conservative purposes no consideration has been given to recovery of these costs by way of insurance benefits.

It is estimated vandalism will effect 5% of the display panels. This is relatively high but until facts are known a conservative approach has been adopted. Vandalism will occur in two different fashions: first, by placing graffiti on the display unit and, secondly, by smashing the unit in some way. Both will result

in the replacement of the unit. No consideration has been given for grocery carts that have been stolen from the supermarkets since until the cart is located no replacement of the display unit will occur and might not be required.

The panels are fully recyclable and therefore will have the effect of reducing the overall cost of manufacturing the pane. No recovery from this source has been considered in this projection of net income during the twelve-month period.

Since there are 2,880,000 panels installed at the end of the first year, this would mean 144,000 would require a replacement panel. Assuming an even distribution by quarter over the year, each quarter would result in 36,000 panels being replaced at a cost of \$223,920 and the printing of inserts will add an addition cost of \$3,960 for a total replacement cost of \$227,880.

5. Cart Rentals to Supermarkets The Company will enter into a five-year contract with each supermarket chain to ensure longevity for its advertisers. Under this contractual commitment, the Company will pay the supermarket chains 10% of the gross revenue each quarter for the rental of space on a grocery cart.

6. Marketing, Sales and Commissions The Company has contracted with a media company to handle all marketing materials and advertising, their budget for the first year is \$2,500,000. And has contracted with an advertisement sales company that is responsible for booking the advertisements, their budget for the first year is \$2,000,000. The Company has allowed for a 15% Commission to be paid to the advertiser in the form of a discount or in some cases paid to their ad agency of record.

	Marketing &	Bookings	15%	
Quarter	Advertising	Advertisers	Commissions	Total
1 st	\$ 625,000	\$ 500,000	\$ 1,458,000	\$ 2,583,000
2 nd	625,000	500,000	3,645,000	4,777,000
3 rd	625,000	500,000	5,382,000	6,957,000
4 th	625,000	500,000	8,019,000	9,144,000
	\$2,500,000	\$2,000,000	\$18,954 000	\$23,454,000

7. Grocery Store Operations The Company has contracted with ITG Retail Services Group LLC., a company that has relationships with most of the leading grocery chains in North America. ITG's responsibilities includes signing up the various grocery chains (see note 5 above), installing the advertisement display device and changing the advertisements inserts. The cost to perform this service is as follows:

Signing up the store	\$1.00 per cart
Per annum, store contract fee	\$0.50 per cart
Installation of Ad Holder	\$2.00 per cart
Changing the Advertisement	\$0.50 per cart

Based on 240,000 carts being commissioned each month from 1,200 new stores being introduced into the system, there is a charge for signing up the stores of \$240,000 per month or a quarterly charge of \$720,000.

Based on a per annum store contract fee for the number of carts employed each month there is a charge of \$120,000 per month or \$360,000 per quarter.

The installation of Ad Holders is \$2.00 per cart. With 1,200 new stores using the Company's advertising system each month and each store have 200 shopping carts in use this results in 240,000 installation each month. This would result in \$480,000 being paid each month to the Distribution company performing this service for the Company.

It is estimated that advertising will be changed on a quarterly basis. As noted above the cost to change the advertisements is estimated at \$0.50 per Ad Holder. The following represents the cost to change the advertisements:

	<u>Number of new Cart at End of Month</u>	<u>Number of Cart to be Changed Each Quarter</u>	<u>Monthly Cost to Change Advertising</u>	<u>Gross Quarterly Expense</u>
<u>Month</u>				
1 st	240,000	-	\$ -	
2 nd	240,000	-	-	
3 rd	240,000	-	-	
4 th	240,000	240,000	120,000	
5 th	240,000	240,000	120,000	
6 th	240,000	240,000	120,000	
7 th	240,000	480,000	240,000	
8 th	240,000	480,000	240,000	
9 th	240,000	480,000	240,000	
10 th	240,000	720,000	360,000	
11 th	240,000	720,000	360,000	
12 th	240,000	720,000	360,000	
				<u>360,000</u>
				<u>720,000</u>
				<u>1,080,000</u>
				<u>\$ 2,160,000</u>

The total cost of maintenance and service each quarter based on the above figures is as follows:

	<u>Signing up</u>	<u>Store</u>	<u>Installation of</u>	<u>Changing of</u>	<u>Total</u>
<u>Quarter</u>	<u>Fee</u>	<u>Contract Fee</u>	<u>Ad Holders</u>	<u>Advertisements</u>	<u>Expense</u>
1 st	\$ 720,000	\$ 360,000	\$ 1,440,000	\$ -	\$ 2,520,000
2 nd	720,000	360,000	1,440,000	360,000	<u>2,880,000</u>
3 rd	720,000	360,000	1,440,000	720,000	<u>3,240,000</u>
4 th	<u>720,000</u>	<u>360,000</u>	<u>1,440,000</u>	<u>1,080,000</u>	<u>3,600,000</u>
<u>TOTAL</u>	<u>\$ 2,880,000</u>	<u>\$ 1,440,000</u>	<u>\$ 5,760,000</u>	<u>\$ 2,160,000</u>	<u>\$12,240,000</u>

8. Accounting and Audit The accounting functions required are as follows:

Ensuring the revenue derived from each advertiser and/or ad-agency is received and deposited on a timely basis;

Administering monthly payroll, creditor invoices and expense advances;

Preparation of quarterly financial statements to meet listing requirements; and

Ensuring adherence to budgetary requirement.

It is assumed an accountant will be hired initially to set up the accounting, payroll and other office functions. This person will be paid \$6,000 per month, which will include the preparation of all filings with regulatory bodies. It is assumed a junior clerk will be hired in the last quarter to assist with filing and other work around the office. This junior clerk might be a part time accountant initially and later in the second year would be hired full time. Salary compensation for this clerk will be \$2,000 per month in the last quarter. Therefore, the first three-quarters will bear a cost of \$18,000 and the last quarter will have a cost of \$24,000. In addition, to the estimate of salaries, the will be a cost for the year-end audit to meet the listing requirements of regularity bodies. It is estimated this audit will cost the Company approximately \$15,000.

9. **Advertising** The Company will advertise extensively in trade journals, newspapers and other media such as the following:

Leasing top 10 Advertisement Agency magazines in the Untied States which specialize in the food and grocery industry and are distributed to the top Ad-Agencies monthly;

Packages of advertising material to the top 10 grocery store chains in the country;

Brochures and pamphlets will be sent to the 3 top executive in 35 grocery chain stores in the United States;

Advertising packages will be sent to the top 100 food manufacturing companies which will be directed towards the advertising executives;

Other media to be identified as required.

The cost of printing and assembling of brochures and pamphlets is estimated to be \$35.00 each. A minimum of 1,500 brochures will be used during the first year for a total cost of \$52,500. For simplicity, this cost will be spread evenly over the four quarter. Advertising in magazines and periodicals is a major cost but this form of advertising will alert advertisers and their agents to the services being offered by the Company. It is estimated each article in a magazine will cost approximately \$3,500. If advertisements are placed in the top 10 Ad-Agencies magazine, each results in a monthly cost of \$35,000 or \$105,000 for each quarter. Total advertising costs for each quarter, including brochures and pamphlets, is \$118,125.

10. Automobile Expenses Automobiles will be leased for the top three Executives at \$6,000 per quarter.

11. Bank Charges Bank charges will represent the transfer of funds from various advertisement agencies in payment on behalf of their clients, monthly service charges, etc. It is assumed this cost will be \$500 per quarter.

12. Entertainment and Promotion Entertainment and promotion mainly covers the cost of “wining and dining” advertisement agents and other media personnel and on occasion holding seminar-style meetings. Since money must be spent in this area to create a willingness to use the Company’s display panels, it is estimated that \$10,000 a month will be allotted. This results in \$30,000 a quarter.

13. Insurance Insurance coverage will have to be obtained for general liability, office contents, directors’ liability insurance and gross profit protection. Additional insurance will be carried for protection in the event a malfunction of the display unit causes harm. The chances of this ever happening is extremely remote. Insurance coverage is estimated \$25,000 per quarter.

14. Legal Legal costs are associated with preparation of advertising contracts with the supermarket chains, advertising agencies and advertisers themselves as well as employee contracts and various other contracts as required. In addition, legal services will be needed for the filing of the documents with the regulatory bodies. Legal expenses will vary depending upon the needs of management. For conservative purposes, legal expenses have been assumed at \$10,000 per month or \$30,000 per quarter.

15. Management Fees Management fee comprises the following individuals:

<u>Position</u>	<u>Annual Remuneration</u>	<u>Quarterly Remuneration</u>	<u>Monthly</u>
President	\$ 120,000	\$ 30,000	\$ 10,000
Vice-President – Marketing	9,000	22,500	7,500
Treasurer/Controller	80,000	20,000	6,667
Total	\$ 290,000	\$ 72,500	\$ 24,167

16. Office and Sundry Office and sundry expenses comprise photocopying paper, office supplies, envelopes, binders, coffee, pens and pencils, computer tapes and paper, postage, filing cabinets, adding machines and other items of lesser dollar value which are normally required in an office. Initially, the cost of starting two offices; one in the eastern part of the United States and the other in the western part, which will require a greater outlay than in subsequent months. Therefore, the following has been budgeted by quarter:

First Quarter	\$ 15,000
Second Quarter	\$ 9,000
Third Quarter	\$ 12,000
Fourth Quarter	\$ 15,000

17. Public Relations Public relations are a high priority for management. Public relations firms will be hired to search for new institutional investors and to prepare the required information to be circulated monthly to current and potential shareholders. There will be a constant need to inform the public-at-large and private institutions of the Company's achievements and its direction in the future. It is projected, as a minimum, the quarterly charge for public relations will be approximately \$100,000. In future years with more stores being added to the client base, the public relations budget will be increased substantially.

18. Rent The Company will require two offices; one located in the East and the other located in the West. The offices will not have to be large in space since limited personnel will be required to manage the operations. Nevertheless, the executives will each require an office, a boardroom for meeting customers and advertising agents, an office for accounting, a reception area, storage facilities and a general working area. The building does not have to be a class A rating and can be located outside of the busier section of a city. Therefore, estimated rent expenses each month will be \$5,000 for each of the two buildings for a total of \$10,000 per month.

19. Salaries and Benefits The accountant's and assistant accountant's salaries have been covered under *Accounting and Auditing* noted fewer than 8 above. There are employees other than the aforementioned; being two receptionists, two girl Fridays and two account representatives to sell the advertising. Other employees will be hired either on a part time basis or else as demand requires. The estimated cost of the above noted employees is as follows:

<u>Personnel</u>	<u>Monthly Salary</u>	<u>Employee Benefits</u>	<u>Total</u>	<u>Quarterly</u>
	(i)	(ii)		
Executive Secretary	\$ 3,000	\$ 600	\$ 3,600	\$ 10,800
2 Girl Fridays	\$ 4,000	\$ 800	\$ 4,800	\$ 14,400
2 Receptionists	3,000	600	3,600	10,800
2 Account Representatives	10,000	2,000	12,000	<u>36,000</u>
Total				<u>\$ 72,000</u>

(i) Monthly salaries are distributed as follows:

Executive Secretary	\$ 3,000 per month
Girl Friday	\$ 2,000 each per month
Receptionist	\$ 1,500 each per month
Accountant Representative	\$ 5,000 each per month

(ii) It is assumed employee benefits will be 20% of the salaries paid. The type of benefits available to the employees will be dental, extended health and life insurance. The Company will absorb one half the cost and the employees will be responsible for contributing from their salaries the balance.

20. Stationery and Printing Office stationery will be purchased during the first quarter in sufficient quantities to last the entire year. Said cost is estimated at \$10,000. Printing expense will comprise mainly office photocopying since the brochures and pamphlets are covered in section 9 - *Advertising* above and the inserts are covered under section 3 – *Printing of Inserts*.

21. Telephone and Fax Telephone and fax charges will be relatively constant over the year. For conservative purposes, telephone charges for the two offices are estimated at \$3,500 per month or \$10,500 per quarter.

22. Travel and Accommodation Travel cost for the executives and account representatives is relatively high due to the nature of the business. Initially, the main travel will be based in the United States but eventually consideration will have to be given to extending travel to include the European countries where the Company has obtained patent protection for its display panel. It is anticipated this will occur in the last quarter of the year. As the year progresses, travelling in the United States will increase. Therefore, it is anticipated travel costs will be \$10,000 a month for the first quarter, increasing by 100% for each the second and third quarters. In the last quarter it is anticipated travel locally in the United States will amount to \$35,000 per month with the added cost each month of trips to Europe. The European trips are estimated to add an addition \$10,000 per month to the travel costs. Therefore, travel costs by quarter is calculated as follows:

First Quarter	\$ 30,000
Second Quarter	60,000
Third Quarter	90,000
Fourth Quarter	135,000

These attached schedules are an integral part of

this Projected Statement of Net Income

SUPPLEMENTAL INFORMATION

Brand Name versus Generic Stocks

Brand Name Stocks	Generic Stocks
Less information risk	More information risk
Higher quality of information	Lower quality of information
Large sample of consensus estimates	Small or no sample of consensus estimates
Monitoring service or fee	No monitoring service or fee
Lower return	Higher return
Higher price (premium)	Lower price (discount)
Lower uncertainty	Higher uncertainty
More consistency	Less consistency

Graphs

Supplemental information is provided in [Figures 1](#) and [2](#). [Figure 1](#) illustrates the price per share for PPMC common stock for the time period August 20, 2003 through September 27, 2004. The latter date represents the specific event when PPMC filed their 10QSB. [Figure 2](#) compares the PPMC price per share with comparable index measures, such as the Dow Jones Industrial Average, Standard and Poor's 500, NASDAQ, and Russell 2000 indices, for the same period of time.

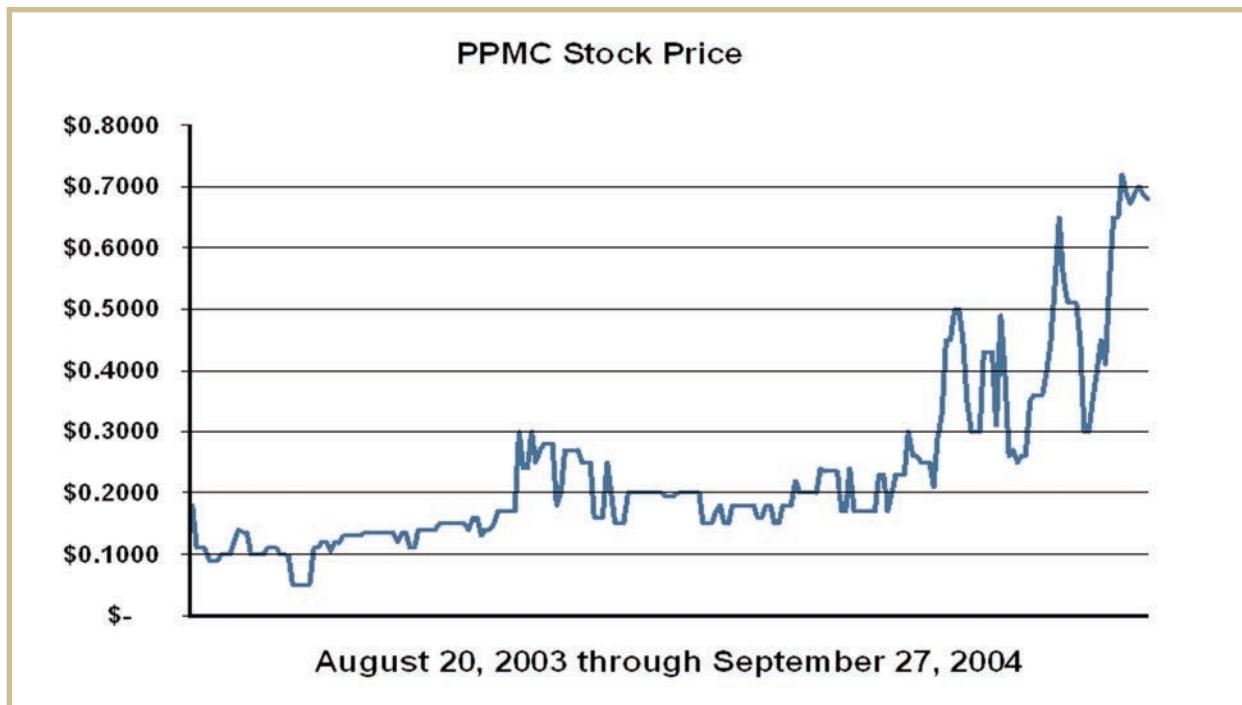


FIGURE 1—The price per share for PPMC common stock, August 20, 2003 through September 27, 2004, when PPMC filed their 10QSB

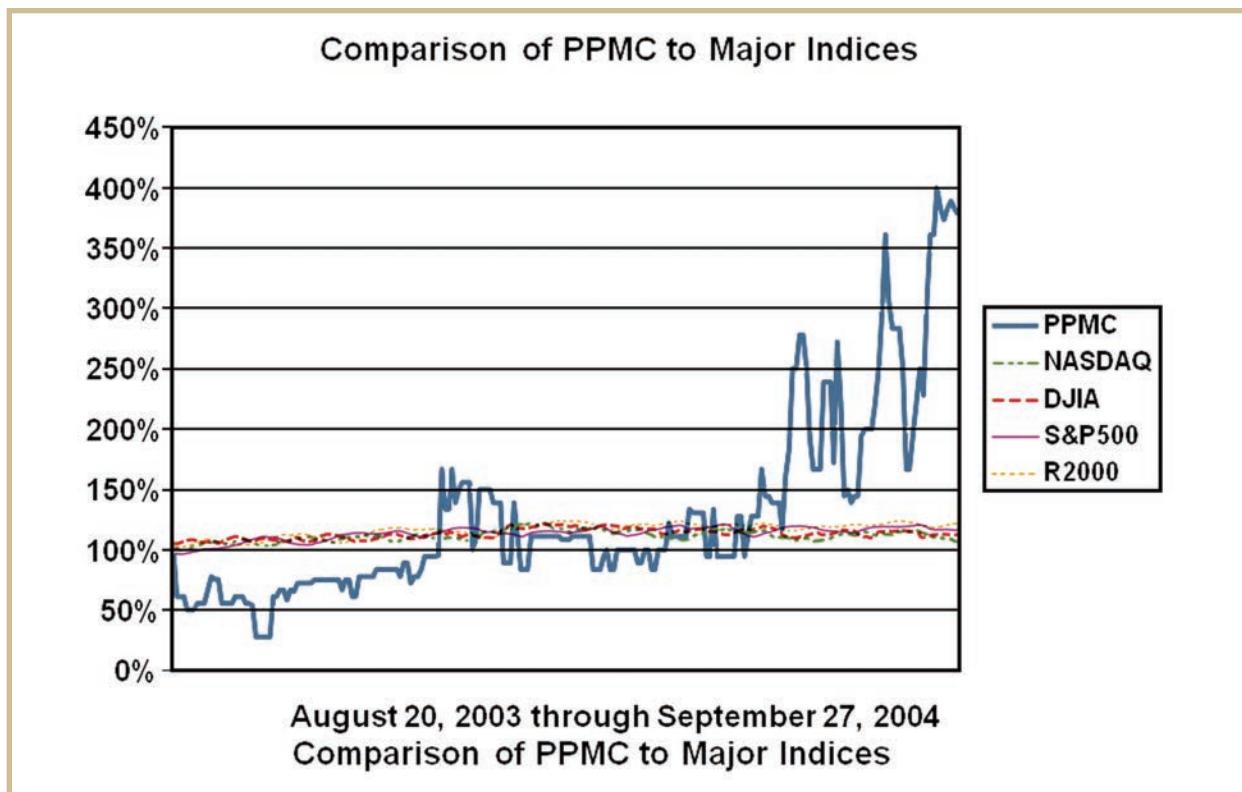


FIGURE 2—Comparison of the PPMC price per share over comparable index measures, such as the Dow Jones Industrial Average, Standard and Poor's 500, NASDAQ, and Russell 2000 indices, for the same time period

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PROJECT REQUIREMENTS

Substance versus Form and Critical Thinking

Step 1

In the infamous Enron bankruptcy case, the form of the financial statements prepared by the Enron Corporation and WorldCom was very professional; however, the substance was lacking, leading to audit and market failures and the eventual bankruptcy of both of these *big-cap*, or large-capitalization firms. PPMC represents a reverse case, in which the form of the data contained in the PPMC news release and corporate Web site was very poor.

To begin, read the PPMC report, focusing on problems with the form of the report. There are many, including font changes that have been corrected for printing here. Prepare a typed, clearly communicated summary of all errors or weaknesses you find in the form of this report. There's no magic number of errors that you must identify and different students will produce variations in their responses to this part of the assignment. Simply identify as many problems as you find, including spelling, punctuation, and usage errors. Although the PPMC report isn't well-written, don't attempt to correct or rewrite the report.

Here are a few examples of the kinds of errors you may find and how you'll present them.

Summary of Errors in the Form of the PPMC Report

1. There are two sentence fragments, plus a spelling error, in the introductory paragraph, as follows:

Safe harbor statement under the private securities litigation act of 1995.

Changes in assumptions or changes in other factors effecting such statements.
2. The second sentence in the introductory paragraph refers to a “project” statement of net income (“This project statement of net income contains . . .”). It appears that the author of this report intended to refer to a “projected” statement of net income, although that’s not a conventional accounting term.
3. The third sentence in the introductory paragraph refers to “Corporate house,” in which the first word of what appears to be a firm’s name is capitalized and the second isn’t.
4. The last sentence in the introductory paragraph uses “risk” in the singular form when it requires the plural: “You should independently investigate and fully understand all risk before making investment decisions.”

Next, reread the PPMC report, focusing on problems with the *substance* of the report. Identify the obvious errors or problems first by focusing on the addition or math errors. Prepare a typed, clearly communicated summary of all errors or weaknesses you find in the substance of this PPMC report.

A few examples follow:

Summary of Errors in the Substance of the PPMC Report

1. The report refers to a “Projected Statement of Net Income” having been prepared in “accordance with generally accepted accounting principles.” I have never heard of this financial statement or any such GAAP requirement.
2. Note 6 of the report contains an apparent math error in the table. Specifically, there appears to be a transposition error for the 3rd quarter in the “15% commissions” column. The \$5,382,000 amount should be \$5,832,000.

Sometimes an issue may appear to represent both form and substance problems. In these cases, identify the problems with the form of the PPMC report first. After completing this requirement, build on these results by identifying substance problems with the PPMC report. This methodological approach will save you time and make it easier for you to organize your thoughts as you progress through these requirements.

Step 2

Below is a recommend framework for the analysis and computation of the PPMC break-even point in terms of carts and stores ([Table 1](#)). The PPMC Note column refers to the notes in the PPMC source document. In fact, the PPMC notes appear to be organized by cost behavior. This is similar to the approach you used in your Managerial Accounting course. You should follow this approach or framework as you compute the PPMC break-even point in terms of carts and stores. Begin with revenues, follow with variable costs (VCs), develop the contribution margin (CM; in aggregate), followed by fixed costs (FCs), and, finally, compute PPMC’s net operating income (NOI) and break-even point in terms of both carts and stores.

There's some potential for variation in answers, but your conclusion should approximate a break-even point between 3,000 and 4,000 stores for the first year of operations.

Table 1

PPMC	Note	First year												Annual
		J	F	M	A	M	J	J	A	S	O	N	D	
Stores														
Multiply by 200 carts														
Total Carts														
Multiply by revenue per cart														
Total revenues	1													
Variable costs (VC)														
Amortization (2 year S/L)	2													

Step 3

Now study **Table 2**, which presents a recommended framework for the analysis and computation of the amount of market share required to achieve break-even in stores for PPMC. The composition of the stores in the example will change over time. Using your own research skills and abilities, determine the number of grocery stores in the United States. For example, you could go to Yahoo!Finance to identify a stock for a publicly traded grocery retailer (e.g., KR for Kroger), then use the Yahoo!Finance feature that allows you to view stocks for competing firms in the same industry. Once you've done that, go to the Web site for each firm, where the vast majority list the number of retail outlets.

Table 2

Stock Ticker	No. of Stores	Firm Name
KR		Kroger
ABS		Albertson's
		Safeway
		Ahold
		SUPERVALU
		Winn-Dixie Stores
		Publix Super Markets
		Great Atlantic & Pacific
		Smart & Final
		Ingles Markets
		Blue Square-Israel
		Pathmark
		Ruddick
		Whole Foods Market
		Weis Markets
		Marsh Supermarkets
		Nash Finch
		Fresh Brands
		Wild Oats Markets
		Spartan Stores
		Eagle Food Centers
		Gristede's Foods
		Village Super Market
		Foodarama Supermarkets
		Arden Group
Total		

Writing Guidelines

Refer to the “Submitting Your Work” section at the end of this book for details on submission requirements for the PPMC Case assignment.

Case 2: Motomart

INTRODUCTION

The Motomart case is designed to supplement your managerial/cost accounting textbook coverage of cost behavior and variable costing using real-world cost data and an auto-industry-accepted cost driver. Unlike textbook problems, this data is real. It won't necessarily produce a clear solution when you attempt to analyze cost behavior and apply scatter-plot, high-low, and regression methods to separate mixed costs into their fixed and variable components. This case also illustrates that financial accounting decisions and methods can have an influence on cost accounting and managerial applications and decisions.

OBJECTIVES

When you complete this case, you'll be able to

- Explain the importance of accrual accounting and proper application of the matching principle for the computation of contribution margins and break-even points
- Apply knowledge of generally accepted accounting principles (GAAP) to a specific real-world example
- Integrate statistical analyses and scatter plots, line graphs, and regression to determine the reliability of financial information prepared for external use
- Use analytical review procedures to examine a firm's financial statements
- Apply critical-thinking skills to real-world business circumstances

CASE BACKGROUND

This case is based on real financial data provided by a retail automobile dealership (Motomart) seeking to relocate closer to an existing retail dealership. You'll examine the mixed cost data from Motomart and apply both high-low and regression to attempt to separate mixed costs into their fixed and variable components for break-even and contribution margin computations. You'll find that the data is flawed because Motomart was a single observation in a larger database. Don't attempt to correct the data (e.g., remove *outliers* or *influential outliers*). You'll be producing a scatterplot and apply high-low and regression methods to the extent practicable and writing a summary report of the findings.

Motomart operates a retail automobile dealership. The manufacturer of Motomart products, like all automobile manufacturers, produces forecasts. It has long been an industry practice to use variable costing-based/break-even analyses as the foundation for these forecasts, to examine their cost behavior as it relates to the *new retail vehicles sold (NRVS)* cost driver. In preparing this financial information, a common financial statement format and accounting procedures manual is provided to each retail auto dealership. The dealership is required to produce monthly financial statements using the guidelines provided by this common accounting procedures manual, and then furnish these financial statements to the manufacturer. General Motors, Ford, Nissan, and all other automobile manufacturers employ similar procedures manuals.

The use of a common format facilitates the development of composite financial statements that can be used to estimate costs and produce financial forecasts for future or proposed retail dealership sites (Cataldo and Kruck 1998). Zimmerman (2003) suggests that as many as 77 percent of manufacturers divide costs into variable and fixed components, and that managers arrive at these estimates by classifying individual accounts as being primarily fixed or primarily variable (67).

For this case, you'll examine mixed costs as defined by the manufacturer. Using the scatterplot, high-low, and regression methods, separate these mixed costs into their fixed and

variable components. The data is problematic, and a clear solution won't exist. Don't attempt to correct the data by removing outliers, but make observations based on any patterns you observe. The case will expose you to actual data and require you to summarize your findings, including any conclusions you're able to reach and why the financial data makes it impossible to separate the mixed costs into their fixed and variable components.

Motomart: A Litigation Support Engagement

The Motomart case evolved from a litigation support engagement. The lead author of this case was hired to analyze the data and provide expert testimony. His report and testimony was made available to the public (for a fee to cover reproduction costs). A broad description of the relevant points for the Motomart case follows.

Motomart wanted to move their retail automobile dealership, blaming their location for declining profits and increasing losses. They provided financial projections, using variable costing, to show that after relocation both Motomart and the existing dealership would be profitable. They created these financial projections using a database provided by the manufacturer, which included all North American retail automobile dealerships. Motomart was one of the observations or retail automobile dealerships included in the database used to create these financial projections. You'll be examining portions of Motomart's historical financial data.

The relocation site was quite close to the existing dealership (which we'll refer to as Existing Dealer), and Existing Dealer felt that, if the relocation was permitted, one or both of the dealerships would fail to break even and eventually go bankrupt, leading to poor service, or what the industry refers to as "orphaned" owners of these automobiles.

Antitrust laws provided Existing Dealer with the means to block the relocation requested by Motomart, but only if it could prove that the relocation wasn't in the best interest of the consuming public. Generally, the only way to prove this

is to prove that there's simply not enough business for both retail automobile dealerships to break even (or generate a reasonable return on investment, given the risks associated with the industry). Again, the manufacturer, in support of the proposed Motomart relocation, supplied financial projections showing that both retail automobile dealerships would be profitable after the relocation.

The expert witness hired to investigate the merits of the relocation was given the Motomart data, but not the entire database that included the Motomart data. The Motomart data was in such poor form that it wasn't possible to produce a financial forecast. An alternative forecast, not included in this case, was produced. This alternative forecast did *not* support the relocation of Motomart to a site closer to Existing Dealer. The alternative forecast showed that the market simply couldn't support two retail automobile dealerships. The implication was that, as the weaker of the two dealerships, Motomart was losing business to Existing Dealer. In conclusion, the relocation request by Motomart was denied.

Income and Expense Data

The following tables give you information such as income statements, semi-fixed expenses, and salaries for Motomart. Look for unusual entries or discrepancies in their records and, where you can, note the cause of the problems.

Table 3 summarizes financial and cost driver information produced by Motomart, where new retail vehicles sold (NRVS) is the cost driver. The account classification method has resulted in three cost behavior classifications: variable, semi-fixed, and fixed costs. Semi-fixed is the automobile industry-specific term used for mixed costs. We'll assume that Motomart's classifications of variable costs (VCs) and fixed costs (FCs) are correct, and focus our analysis on Motomart's semi-fixed or mixed costs.

Table 3
SELECTED HISTORICAL INCOME STATEMENT AND RELATED MEASURES

	1984	1985	1986	1987	1988
Net Variable Revenues*	2,885,969	3,828,255	4,086,667	3,940,799	4,298,748
Semi-Fixed (S-F) Expenses:					
Salaries	613,006	968,789	1,211,464	1,289,758	1,360,489
Vacation	600	26,705	19,468	19,059	18,268
Advertising & Training	210,226	288,347	281,219	309,608	371,314
Supplies/Tools/Laundry	31,473	46,141	75,468	65,935	81,252
Freight	5,719	5,987	6,528	5,731	4,663
Vehicle	22,913	23,718	23,664	20,370	19,483
Demonstrators	10,465	4,969	-1,513	4,192	707
Floor-Planning	278,531	301,113	276,201	156,129	305,044
Total S-F Expenses	1,172,933	1,665,769	1,892,499	1,870,782	2,161,220
Fixed Expenses:					
Total Fixed Expenses	1,449,208	2,050,172	2,290,867	2,164,362	2,653,620
Operating Profit/(Loss)**	263,828	112,314	-96,699	-94,345	-516,092
New Retail Vehicles Sold	1,798	1,977	1,674	1,450	1,897
<i>Notes:</i>					
* Revenues less variable costs equal Net Variable Revenues (or Contribution Margin, in aggregate).					
** Net Variable Revenue less Total S-F Expenses less Total Fixed Expenses equals Operating Profit/(Loss).					

Table 4 provides five years of monthly data (N=60) for NRVS and the related semi-fixed or mixed cost measures. Semi-fixed costs were significant. Recall that they ranged from nearly \$1.2 million for calendar and fiscal year (FY) 1984 to almost \$2.2 million for FY 1988 (see Table 3).

Recall the cost function applying to the high-low and regression methods, which are provided in a variety of forms, depending on the texts you used in your previous math, economics, or accounting courses. Figure 3 is a brief outline of the high-low and regression methods.

Table 4
SEMI-FIXED (MIXED) EXPENSES FOR THE 60-MONTH PERIOD
(FY 1984 THROUGH 1988)

Mo	NRVS	Salary	Vacation	Adv/Trng	SplyTls/Lndry	Freight	Vehicles	Demo's	Floor-Plan	Total
1	197	\$ 52,951	\$ -	\$ 22,561	\$ 1,118	\$ 382	\$ 2,052	\$ 1,881	\$ (78,173)	\$ 2,772
2	133	\$ 47,054	\$ -	\$ 19,040	\$ 3,573	\$ 409	\$ 1,405	\$ 695	\$ 28,456	\$ 100,632
3	132	\$ 55,372	\$ -	\$ 14,373	\$ 1,388	\$ 742	\$ 1,380	\$ 469	\$ 34,423	\$ 108,147
4	141	\$ 46,114	\$ -	\$ 15,022	\$ 2,894	\$ 675	\$ 2,057	\$ 125	\$ 5,697	\$ 72,584
5	182	\$ 48,309	\$ -	\$ 19,966	\$ 1,896	\$ 572	\$ 1,603	\$ 131	\$ 34,599	\$ 107,076
6	156	\$ 49,643	\$ -	\$ 12,019	\$ 1,188	\$ 407	\$ 2,524	\$ 1,229	\$ 53,737	\$ 120,747
7	196	\$ 55,784	\$ 300	\$ 13,217	\$ 3,912	\$ 643	\$ 2,348	\$ 1,206	\$ 5,507	\$ 82,917
8	178	\$ 47,957	\$ -	\$ 17,303	\$ 2,012	\$ 605	\$ 1,208	\$ 436	\$ 32,436	\$ 101,957
9	159	\$ 53,743	\$ -	\$ 16,535	\$ 2,717	\$ 209	\$ 2,400	\$ 1,476	\$ 28,950	\$ 106,030
10	141	\$ 53,109	\$ -	\$ 23,821	\$ 1,102	\$ 184	\$ 2,076	\$ 1,168	\$ 20,876	\$ 102,336
11	152	\$ 45,491	\$ 300	\$ 14,146	\$ 2,630	\$ 331	\$ 1,677	\$ 635	\$ 45,278	\$ 110,488
12	31	\$ 57,479	\$ -	\$ 22,223	\$ 7,043	\$ 560	\$ 2,183	\$ 1,014	\$ 66,745	\$ 157,247
13	280	\$ 49,049	\$ -	\$ 19,992	\$ 1,999	\$ 582	\$ 1,927	\$ (477)	\$ (30,104)	\$ 42,968
14	136	\$ 46,698	\$ 300	\$ 20,251	\$ 1,192	\$ 603	\$ 1,156	\$ 1,839	\$ 50,583	\$ 122,622
15	174	\$ 59,790	\$ 200	\$ 20,082	\$ 1,336	\$ 492	\$ 1,898	\$ 1,260	\$ 18,803	\$ 103,861
16	171	\$ 80,773	\$ 600	\$ 26,716	\$ 3,873	\$ 559	\$ 1,808	\$ 510	\$ 23,080	\$ 137,919
17	167	\$ 71,130	\$ 9,212	\$ 25,223	\$ 5,560	\$ 356	\$ 1,816	\$ 2,350	\$ 18,774	\$ 134,421
18	161	\$ 82,490	\$ 6,007	\$ 21,106	\$ 1,737	\$ 439	\$ 1,384	\$ (288)	\$ 23,802	\$ 136,677
19	173	\$ 98,172	\$ 500	\$ 17,799	\$ 1,847	\$ 1,628	\$ 1,962	\$ 1,591	\$ 33,848	\$ 157,347
20	161	\$ 90,685	\$ 2,690	\$ 28,038	\$ 4,415	\$ (12)	\$ 2,446	\$ (3,308)	\$ 13,480	\$ 138,434
21	167	\$ 97,771	\$ 600	\$ 37,284	\$ 2,827	\$ 480	\$ 2,296	\$ 1,709	\$ 22,965	\$ 165,932
22	153	\$ 87,129	\$ 1,740	\$ 24,236	\$ 5,836	\$ 79	\$ 3,175	\$ 798	\$ 18,898	\$ 141,891
23	201	\$ 95,910	\$ 2,074	\$ 27,244	\$ 3,387	\$ 188	\$ 1,287	\$ (2,025)	\$ 38,699	\$ 166,764
24	33	\$ 109,192	\$ 2,782	\$ 20,376	\$ 12,132	\$ 593	\$ 2,563	\$ 1,010	\$ 68,285	\$ 216,933
25	227	\$ 89,041	\$ 1,880	\$ 26,719	\$ 4,383	\$ 769	\$ 2,205	\$ 2,493	\$ (44,140)	\$ 83,350
26	150	\$ 92,165	\$ 3,602	\$ 14,727	\$ 10,231	\$ 593	\$ 2,289	\$ (2,051)	\$ 36,311	\$ 157,867
27	142	\$ 88,981	\$ 744	\$ 27,880	\$ 7,734	\$ 414	\$ 1,891	\$ 386	\$ 19,865	\$ 147,895
28	104	\$ 95,898	\$ 960	\$ 21,872	\$ (684)	\$ 425	\$ 2,288	\$ 178	\$ 19,013	\$ 139,950
29	121	\$ 96,245	\$ -	\$ 18,705	\$ 8,329	\$ 483	\$ 2,223	\$ (262)	\$ 16,228	\$ 141,951
30	99	\$ 106,364	\$ -	\$ 23,835	\$ 2,540	\$ 417	\$ 1,683	\$ (1,356)	\$ 37,637	\$ 171,120
31	150	\$ 90,564	\$ 1,950	\$ 25,605	\$ 5,862	\$ 222	\$ 1,586	\$ 486	\$ (1,121)	\$ 125,154
32	144	\$ 98,418	\$ 1,540	\$ 17,763	\$ 6,998	\$ 49	\$ 1,751	\$ (1,924)	\$ 34,757	\$ 159,352
33	154	\$ 110,436	\$ 2,693	\$ 32,379	\$ 8,131	\$ 818	\$ 2,082	\$ 1,547	\$ 26,419	\$ 184,505
34	130	\$ 102,042	\$ 1,060	\$ 19,324	\$ 6,026	\$ 1,015	\$ 1,714	\$ 132	\$ 21,134	\$ 152,447
35	202	\$ 124,413	\$ 3,519	\$ 22,412	\$ 9,120	\$ 1,255	\$ 2,173	\$ (2,337)	\$ 18,578	\$ 179,133
36	51	\$ 116,897	\$ 1,520	\$ 29,998	\$ 6,798	\$ 68	\$ 1,779	\$ 1,195	\$ 91,520	\$ 249,775
37	148	\$ 97,083	\$ 1,080	\$ 9,112	\$ 6,627	\$ 565	\$ 1,324	\$ 1,164	\$ (73,753)	\$ 43,202
38	153	\$ 104,727	\$ 3,230	\$ 38,616	\$ 5,892	\$ 369	\$ 1,523	\$ (1,839)	\$ 30,443	\$ 182,961
39	83	\$ 95,622	\$ 953	\$ 22,690	\$ 3,450	\$ (182)	\$ 2,087	\$ 454	\$ 17,725	\$ 142,799
40	101	\$ 96,438	\$ 1,244	\$ 14,703	\$ 5,259	\$ 709	\$ 2,095	\$ 868	\$ 26,402	\$ 147,718
41	140	\$ 114,995	\$ -	\$ 28,764	\$ 2,294	\$ 1,006	\$ 1,304	\$ (1,990)	\$ (3,789)	\$ 142,584
42	132	\$ 105,337	\$ 160	\$ 27,253	\$ 8,155	\$ 521	\$ 1,667	\$ 1,869	\$ 15,090	\$ 160,052
43	112	\$ 98,989	\$ 2,480	\$ 24,419	\$ 1,621	\$ 514	\$ 1,040	\$ 329	\$ (945)	\$ 128,447
44	127	\$ 124,352	\$ 1,800	\$ 26,011	\$ 902	\$ 917	\$ 2,880	\$ (1,897)	\$ 30,405	\$ 185,370
45	139	\$ 115,875	\$ 1,417	\$ 24,492	\$ 5,158	\$ (77)	\$ 1,281	\$ 2,959	\$ 14,781	\$ 165,886
46	156	\$ 113,035	\$ 1,820	\$ 31,158	\$ 2,901	\$ 450	\$ 2,259	\$ 417	\$ 15,613	\$ 167,653
47	126	\$ 119,106	\$ 3,338	\$ 32,213	\$ 14,426	\$ 120	\$ 1,394	\$ (2,659)	\$ 40,968	\$ 208,906
48	33	\$ 104,199	\$ 1,537	\$ 30,177	\$ 9,250	\$ 819	\$ 1,516	\$ 4,517	\$ 43,189	\$ 195,204
49	209	\$ 98,938	\$ 1,866	\$ 26,737	\$ 1,694	\$ 853	\$ 1,657	\$ 601	\$ (20,127)	\$ 112,219
50	124	\$ 108,606	\$ 3,676	\$ 31,084	\$ 9,040	\$ 498	\$ 2,266	\$ (284)	\$ 18,236	\$ 173,122
51	131	\$ 106,396	\$ 1,197	\$ 33,278	\$ 2,099	\$ 605	\$ 1,952	\$ 668	\$ 15,176	\$ 161,371
52	144	\$ 106,778	\$ 241	\$ 32,657	\$ 9,328	\$ 483	\$ 1,852	\$ 1,409	\$ 25,245	\$ 177,993
53	93	\$ 124,805	\$ 500	\$ 29,794	\$ 4,268	\$ 788	\$ 1,704	\$ (1,771)	\$ 6,493	\$ 166,581
54	199	\$ 110,153	\$ 1,910	\$ 38,431	\$ 5,407	\$ 529	\$ 1,882	\$ 453	\$ 21,851	\$ 180,616
55	170	\$ 117,276	\$ 800	\$ 27,640	\$ 9,305	\$ (180)	\$ 977	\$ 1,310	\$ 7	\$ 157,135
56	186	\$ 112,055	\$ 980	\$ 28,657	\$ 1,803	\$ (242)	\$ 846	\$ (2,844)	\$ 17,192	\$ 158,447
57	200	\$ 114,765	\$ 1,695	\$ 36,425	\$ 8,839	\$ 859	\$ 2,856	\$ 1,532	\$ 14,864	\$ 181,835
58	146	\$ 128,007	\$ 1,560	\$ 27,720	\$ 10,944	\$ (492)	\$ 1,864	\$ 1,400	\$ 10,121	\$ 181,124
59	222	\$ 116,811	\$ 2,249	\$ 27,941	\$ 5,775	\$ 245	\$ 1,141	\$ (3,513)	\$ 7,946	\$ 158,595
60	73	\$ 115,899	\$ 1,594	\$ 30,950	\$ 12,750	\$ 717	\$ 486	\$ 1,746	\$ 188,040	\$ 352,182

The $\$H$ & $\#H$ and the $\$L$ & $\#L$ measures must “match” or be from the same month or accounting period for the high-low method to work properly.

or	$\frac{\$H}{\#H}$	<i>less</i>	$\frac{\$L}{\#L}$	<i>equals</i>	VC		
	$\frac{\$H}{\#H}$	<i>+</i>	$\frac{\$L}{\#L}$	<i>=</i>	VC		
or	TC	<i>less</i>	FC	<i>equals</i>	VC		
	TC	<i>-</i>	FC	<i>=</i>	VC		
or	MC	<i>equals</i>	TC	<i>equals</i>	FC	<i>plus</i>	VC
	MC	<i>=</i>	TC	<i>=</i>	FC	<i>+</i>	VC
or	MC or TC	<i>equals</i>	Y-AXIS INTERCEPT	<i>plus</i>	SLOPE		
	MC or TC	<i>=</i>	Y-AXIS INTERCEPT	<i>+</i>	SLOPE		
or	MC or TC	<i>equals</i>	a	<i>plus</i>	bX		
	MC or TC	<i>=</i>	a	<i>+</i>	bX		

FIGURE 3—For the high-low method to work, the $\$H$ and $\#H$ and the $\$L$ and $\#L$ measures must be from the same accounting period.

Preparing Graphs

The single cost driver and nonfinancial measure in Table 4 is new retail vehicles sold (NRVS or X in the above cost function). There are eight financial measures (salary; vacation; advertising and training; supplies, tools, and laundry; freight; vehicles; demonstrators; and floor-planning [also known in the automobile retail industry as interest expense relating to new car inventory]), as well as a total (aggregate measure) provided for all eight financial measures (or the Y in the above cost function).

Using NRVS, the only available cost-driver, use Excel to prepare nine separate scatter plots and cost function-based trend lines and nine separate line graphs for each of the financial measures provided in [Table 4](#). See [Figure 4](#) and [Figure 5](#) for examples of completed graphs for salaries.

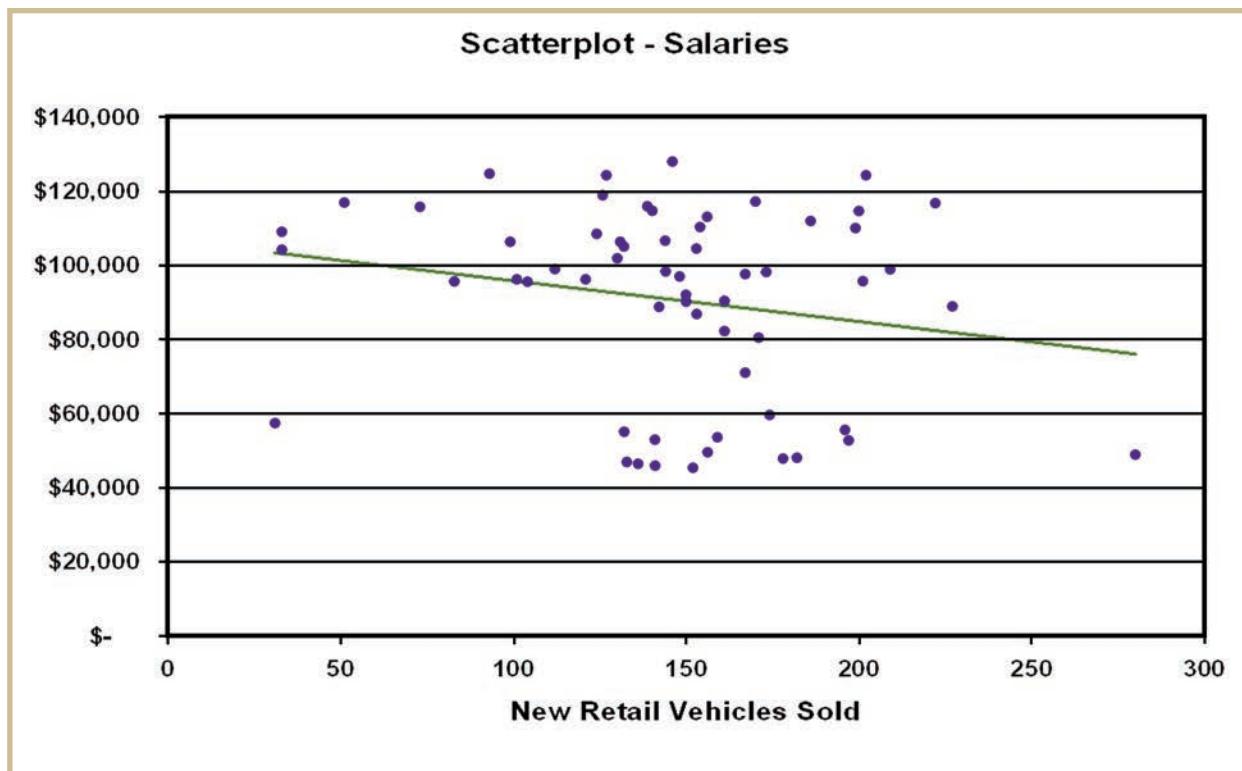


FIGURE 4—A Scatterplot Graph for Motomart Salaries

Now examine, on a preliminary basis, the pattern or trend (or lack thereof) for each of the “X” (NRVS) and “Y” (financial measure) data pairs and consider the following questions:

- You’re observing these data pairs for a 60-month period (i.e., five years); are any annual or other seasonal patterns or trends immediately apparent?
- Do the slopes of the trend lines (i.e., variable costs) make sense?

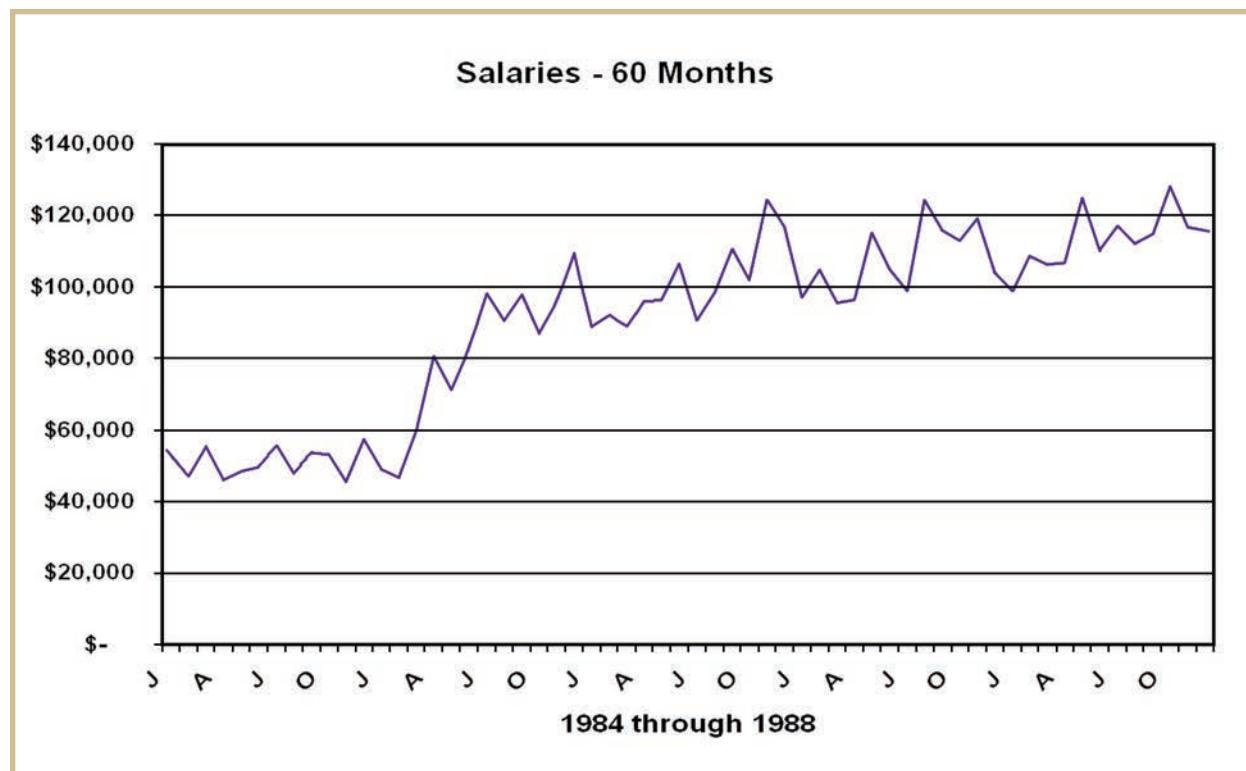


FIGURE 5—A Line Graph for Motomart Salaries

In the case of salaries (see [Figures 4](#) and [5](#)), there's no apparent trend or pattern. It's odd that salaries decrease as NRVS increases—in fact, this doesn't make any sense. However, it's consistent with the high-low results, which also didn't make sense. But remember, since this data came from Motomart, the firm attempting to relocate, it's real and from an actual litigation support engagement (not a textbook problem), so it won't necessarily work out perfectly.

The cost equation in [Table 5](#) shows fixed costs (FC) at \$106,866.00 and variable costs to be used to “reduce” total costs (TC) by \$110.10 per NRVS. Compare the salary figures and coefficients (in bold type) to [Figure 4](#). Notice that if you extended the trend line in [Figure 4](#), it would hit the y-axis intercept at \$106,866.00 (the fixed cost). Also notice that the R-squared (R-sq) measure in [Table 5](#) equals 4.1 percent.

Table 5**SALARY = \$106,866.00 – \$110.10 NRVS**

Predictor	Coefficient	Std Deviation	t-statistic	p-value
Constant	106,866.00	10,793.00	9.90	0.000
NRVS	110.10	70.17	-1.57	0.122

s = 25300 **R-sq = 4.1%****Analysis of Variance**

SOURCE	DF	SS	MS	F-statistic	p-value
Regression	1	261,795	261,795	0.10	0.754
Error	58	152,801,120	2,634,502		
Total	59	153,062,912			

Your math and statistics courses probably reviewed the use of the t-statistic, overall F-statistic, and related p-values, as well as some of the other measures presented here. Our application is a very simple one, so we'll focus on only the R-squared measure. The other measures are provided in this example only for completeness.

Because the high-low technique didn't work, it makes sense that the regression technique wouldn't work well, either. Therefore, the results for high-low and regression are consistent. The advantage of the regression technique is that it mathematically quantifies the level of the problem or difficulty with the data. In this case, one of simple regression, the R-squared measure tells the story. Still focusing on the salaries example in [Figure 5](#), the R-squared measure tells us that only 4.1 percent of the total or mixed or semi-fixed cost is explained by NRVS. This means that that cost equation developed from this historical data isn't helpful in predicting future costs, as nearly 96 percent of the cost behavior, through use of this equation, remains unexplained.

REQUIREMENTS

Operating Profits and Semi-Fixed Expenses

Step 1

First, using [Tables 3–5](#), note the pattern of operating profits (or losses) over the five-year period. Then focus only on the semi-fixed expenses contained in [Table 3](#). Do any amounts appear to be odd? Next, briefly comment on the five-year pattern or trend for operating profit/loss measures. You should be able to respond to this step in a few well-written sentences.

Step 2

Focus *only* on the detailed semi-fixed expense contained in [Table 4](#). Are there any unusual or odd patterns you might note in this detailed financial data? There are eight expense items. About five of the eight should immediately catch your attention. You should be able to respond to this requirement in a few well-written sentences. Briefly comment on *only* the most obvious or apparent measures or patterns, by expense item.

Step 3

Identify the high and low measures in each column, just as you would in preparation for application of the high-low method or technique. For example, in [Table 4](#) the high measure for the cost driver (NRVS) is 280 NRVS in month 13 and the low measure is 31 NRVS in month 12. Repeat this process for each of the eight separate semi-fixed expense columns and also for the total expense column. (You could transfer the figures to Excel to use the maximum and minimum functions to assist you in identifying the high and low measures [N=60] for each of the ten columns.)

After the high and low measures have been identified in each column, try to match each expense column's high and low measure, separately, to the highs and lows identified in the NRVS column. They won't match. *Don't* try to correct the data, but comment on the potential for application of the high-low technique. What happens when the high and low activity level doesn't match the high and low expense measure? Does this prevent you from correctly applying the high-low technique?

Don't overanalyze this data, because there's a problem with it and you don't have sufficient information to correct it. Merely summarize your observations and unsuccessful attempts to match the high and low NRVS months (identified above), separately, with each of the high and low expense measure months. You should be able to do this in a very few well-written sentences.

Finally, summarize your findings with respect to the application of the high-low method to separate mixed costs into their fixed and variable components or the development of a cost equation.

Step 4

Use [Table 6](#) to compute the cost equations and R-squared measures for each of the remaining eight expenses and total expenses. Notice that there's a computed total requirement in the table. This just means that you must total these two columns and compare the computed totals to the Excel-generated measures in the row below. In effect, you're being asked to comment on whether the separate cost formulas are "additive."

Table 6

Column	Expense	FC	VC	R-sq
1	Salaries	\$106,866	-\$110	4.10%
2	Vacation			
3	Advertising and training			
4	Supplies/tools/laundry			
5	Freight			
6	Vehicles			
7	Demonstrators			
8	Floor planning			
	Computed total			
9	Total			

Complete the cost equations for the table. Use the R-squared as the single measure of “goodness of fit.” Don’t attempt to improve your results with the elimination of “outliers” or “influential outliers.” As you complete Table 6, answer the following questions:

1. What problems did you encounter?
2. Are the R-squared measures high or low?
3. Are the slopes negative or positive?
4. Are your conclusions consistent with those from the high-low effort?

Step 5

Summarize your findings on a single page (250 words or less, double-spaced). Can the Motomart data be used to prepare a reliable financial forecast? Why or why not? If Motomart is included in the very large database used to prepare the financial forecast that supports the relocation of Motomart closer to Existing Dealer, what concerns might present themselves with respect to the remainder of the database used for this forecast? Would you rely on this forecast?

It's common for businesses to keep poor financial records most of the year, because many are trying to reduce the cost of financial record keeping (e.g., the salary of a CPA is higher than that of a bookkeeper). Then, at the year's end, these businesses employ a CPA or accounting firm to make adjusting journal entries to correct data for the twelfth months of the year, only to reverse the adjusting journal entries immediately after the annual financials are prepared.

Examine your graphics to identify any seasonal (12-month) patterns. Do any exist? Is there evidence to suggest that the process described above was being employed by Motomart?

Writing Guidelines

Refer to the "Submitting Your Work" section at the end of this book for details on submission requirements for the Motomart Case assignment.

SUBMITTING YOUR WORK

Writing Guidelines

1. Type your submission, double-spaced, in a standard print font, size 12. Use a standard document format with 1-inch margins. (*Do not* use any fancy or cursive fonts.)
2. Include the following information at the top of your paper:
 - a. Name and complete mailing address
 - b. Student number
 - c. Course title and number (Senior Capstone: Business, BUS 450)
 - d. Project number (see Format instructions)
 - e. Project title (Professional Development Activity, Case 1, etc.)
3. Read the assignments carefully and complete each one in the order given.
4. Be specific. Limit your submission to the questions asked and issues mentioned.
5. If you include quotes or ideas from textbooks or other sources, provide a reference page in either APA or MLA style. On this page, list books, Web sites, journals, or any other references used in preparing the paper.
6. Proofread your work carefully. Check for correct spelling, grammar, punctuation, and capitalization.

Grading Criteria

Your assignments will be evaluated according to the following criteria:

Content	80 percent
Written communication	10 percent
Format	10 percent

Here's a brief explanation of each of these points.

Content

The student

- Fulfils each assignment completely, answering all questions and fully addressing the topics and issues presented
- Writes answers in complete sentences and well-developed paragraphs
- Supports his or her judgment by citing specific information from coursework, textbooks, or other appropriate references, using correct APA or MLA guidelines for citations and references
- Stays focused on the assigned issues
- Writes in his or her own words and uses quotation marks to indicate direct quotations

Written Communication

The student

- Addresses each section in complete paragraphs that include an introduction, a complete answer or explanation for each issue, and a conclusion.
- Uses correct grammar, spelling, punctuation, and sentence structure
- Provides clear organization (for example, uses words like first, however, on the other hand, and so on, consequently, since, next, and when)
- Makes sure the paper contains no typographical errors

Format

The paper is double-spaced and typed in font size 12.

It includes the student's

- Name and complete mailing address
- Student number
- Course title and number (Senior Capstone: Business, BUS 450)
- Correct research project number for each submission:

Professional Development Seminar **50089400**

Case 1: Purchase Point Media Corporation **50089500**

Case 2: Motomart **50089600**

SUBMITTING YOUR ASSIGNMENT

You can submit your research assignment online, following this procedure:

1. On your computer, save a revised and corrected version of your project.
2. Go to <http://www.pennfoster.edu> and log in.
3. Go to Student Portal.
4. Click on **Take Exam** next to the lesson you're working on.
5. Enter your e-mail address in the box provided.
(Note: This information is required for online submission.)
6. Attach your file or files as follows:
 - a. Click on the **Browse** box.
 - b. Locate the file you wish to attach.
 - c. **Double-click** on the file.
 - d. Click on **Upload File**.
- e. If you have more than one file to attach, repeat steps a-d.
7. Click on **Submit Files**.