

WHAT MANAGERS FROM THE CLASS I FREIGHT-CARRYING RAILROAD INDUSTRY SAY STUDENTS NEED FROM THE MANAGERIAL ACCOUNTING COURSE

C. Andrew Lafond*

Abstract

Individual interviews were conducted with top-level marketing, operations, and costing managers in two Class I freight-carrying railroads. This study focuses on the following research question: Which accounting concepts and information do managers use in decision making? From a list of accounting concepts from a popular Managerial Accounting textbook, managers assessed the level of importance for each accounting concept. This study helps accounting educators design the Managerial Accounting course by providing them with the most essential accounting concepts used by managers in decision making. The study concludes that the most critically important accounting concepts for managers include: understanding cost terminology, cost behavior, cost-volume-profit relationships, customer profitability analysis, and the use of non-financial measures.

* Philadelphia University.

INTRODUCTION: PROBLEM BACKGROUND

“The globalization of business, increasing complexity of business transactions, and development of information technology” are issues that have changed business over the past decade (Martinson and Cole, 2002, ¶ 1). The result of increased technology is the abundance of information that is available to many people. The increased flow of information available to many firms coupled with the reduction of global barriers has created immense global competition.

Deregulation and other modes of transportation are factors peculiar to the freight-carrying railroad industry, which have also increased competition. The combination of these factors has increased the importance of managers using accounting information in decision making. Since managers need to use more accounting information in decision making, it is important to know which accounting concepts are used by managers in decision making. Knowledge of the most important accounting concepts used by managers in decision-making will be very helpful to accounting educators who face the difficult task of determining the most important accounting concepts to be covered in the Managerial Accounting course.

Over the past twenty years, there have been numerous calls for improvement in accounting education. The calls for change in accounting education have been directed towards pedagogy and a revision in course content to match the changing knowledge and skills needed by entry-level accountants and managers. One area that has received significant attention is the introductory financial and managerial accounting courses which are taken by all business students.

Twenty years ago, the Bedford Committee Report (1986) stated that the “basis of future accounting education is the realization that accounting is an information-development and disclosure function” (AAA, 1986, p.179). In 1992, the Accounting Education Change Commission (AECC) stated that “the primary objective of the first course in accounting is for students to learn about accounting as an information development and

communication function...” (AECC, 1992, p.349). In addition to calls for change in course content there have also been calls for change in the way accounting courses are taught.

Particular focus has been directed on the first course in accounting taken by all business students. Arthur Anderson, et al., (1989) stated that “the current textbook-based, rule intensive, lecture/problem style should not serve as the primary means of presentation” (Arthur Anderson & Co., et al, 1989, p. 11). Future business managers with an abundance of accounting information available to them due to technological advances do not need to be taught the mundane bookkeeping aspects of accounting.

Business students need to be able to read and understand financial statements as well as grasp how accounting information is used to make decisions. Changes in the tasks performed by accountants along with the fact that most students enrolled in these introductory accounting courses are not accounting majors forced a need to change introductory accounting education to more of a “user” orientation.

More recently and specific to managerial accounting, the literature has called for change to the managerial accounting course. Albrecht and Sack (Albrecht & Sack, 2000, p. 63) stated, the managerial accounting course “should capture managerial topics that focus on using information to make decisions”. Boer (2000) stated that “if we want to make our management accounting courses relevant to future managers, we should develop courses that address the strategic issues facing company managers” (Boer, 2000, p. 332).

Albrecht and Sack (2000) also stated that in course development there is a “need to renew our commitment to skill development and two of which apply to managerial accounting are: 1) Analysis of accounting information: What does accounting information tell us? 2) Using accounting information (financial and nonfinancial) to make decisions” (Albrecht & Sack, 2000, p. 63) Birnberg (2000) furthered these thoughts by stating that “students taking management accounting courses will be interested in how to use the data rather than the mechanics of measuring

costs, setting budgets, and other topics...” (Birnberg, 2000, p. 718). This research points to changes needed in managerial accounting education.

A byproduct of this call for change in accounting education and more specifically the introductory managerial accounting course is a significant body of research regarding the concepts to be taught in the introductory managerial accounting course. In a traditional semester-long course, the literature suggests some common concepts the course should cover.

Paige (1992) assessed the importance and perceived deficiency of management accounting concepts used within nonprofit organizations which provided a ranking as to the importance of managerial accounting concepts. The use of cost centers, performance reports comparing actual to planned results for each program, and the identifying of direct and indirect program costs were ranked most important while capital budgeting techniques, distinguishing among engineered, discretionary, and committed costs for control purposes, and flexible budgeting were ranked least important by the nonprofit organization managers surveyed.

Nonprofit organizations have more of a program budget focus and thus the results from Paige’s study (1992) are peculiar to nonprofit organizations. With more of a general business focus, Khan, et al (2000), Brewer (2000), and Bitner (1991) agreed that cost concepts, cost behavior, cost-volume-profit analysis, budgeting, and capital budgeting are topics that should be covered in the introductory managerial accounting course. Suggested additional topics varied slightly amongst Khan, et al (2000), Brewer (2000), and Bitner (1991).

These additional managerial accounting topics included relevant costs, performance evaluation, costing systems, cost allocation, standard costing systems, balanced scorecard, models for decision making, pricing and product mix decisions, time-value of money, and information needs of customers. There is significant difference as to the important managerial accounting concepts according to Khan, et al (2000), Brewer (2000), and Bitner (1991)

vs. Paige (1992). The primary difference is that Khan, et al (2000), Brewer (2000), and Bitner (1991) focused on managerial accounting concepts for the general business student whereas Paige's study (1992) exclusively focused on nonprofit organizations.

For accounting educators, it is important to be able to concentrate on those managerial accounting concepts, which are most prevalent in business practice. Most Managerial Accounting textbooks contain over 20 chapters. In a one-semester course, not all of these accounting concepts can be covered. "The traditional topics, ... [cost behavior and cost-volume-profit analysis], when coupled with all the recent advancements, [such as activity-based costing and the balanced scorecard], create a sizable body of knowledge that presents a challenge to management accounting educators who bear the responsibility of organizing this subject matter into a coherent whole" (Brewer, 2000, p. 211).

The literature also points to the extent to which some of these topics should be covered at the undergraduate level. Maher (2000) suggests that "the study of ABC, BSC, EVA®, and similar concepts should not be primarily about making computations" (Maher, 2000, p. 343). Instead "the primary objective in studying these concepts should be about the organizational objectives that created a need for implementing such concepts and the prospects for their success or failure in light of the organizational environment in which these concepts are implemented" (Maher, 2000, p. 343).

This research states that some managerial accounting concepts don't need full coverage in an introductory managerial accounting course. This study works to identify those accounting concepts and information used by managers in decision making and the extent to which some of these managerial accounting concepts should be covered in a one semester Managerial Accounting course.

This study builds upon previous research studies performed by Paige (1992) and Bruns and McKinnon (1993) and both confirms and extends the research of Bitner (1991), Khan, et al

(2000), and Brewer (2000). As mentioned previously, Paige's (1992) study related the importance of certain managerial accounting concepts with the perceived deficiency by managers in using each concept to make decisions.

This study provided an importance and deficiency rating for each accounting concept. Another study of several types of managers in 12 manufacturing companies in North America found that managers in many cases used their own personal information sources for reliable and timelier information (Bruns and McKinnon, 1993).

This study also found that "managers communicate and take action based on quantities and counts rather than costs and revenues" (Bruns and McKinnon, 1993, p. 107). The study also stated that the "most effective management accounting reports" (Bruns and McKinnon, 1993, p. 107) used were not for day-to-day decision making, but were used to confirm the actions that managers had taken in the past or "confirm current status of resources or capacities" (Bruns and McKinnon, 1993, p. 107). Paige (1992) and Bruns and McKinnon (1993) examined the use of accounting concepts by managers in decision making.

Paige's study took it one step further by trying to measure the perceived deficiency of managers in using each accounting concept in decision making. Bitner (1991), Khan, et al (2000), and Brewer (2000) revealed a common core of managerial accounting concepts to be covered in the managerial accounting course. The study being discussed in this article confirms most of the findings of Bitner (1991), Khan, et al (2000), and Brewer (2000) as to the common core of managerial accounting concepts to be covered and in addition extends their research by highlighting additional concepts to be covered as well as the extent to which some of these topics should be covered in an introductory managerial accounting course.

There are numerous managerial accounting concepts and types of accounting information discussed in the literature. The problem is identifying which accounting concepts and information managers most commonly use in decision making.

Managerial Accounting 10th Edition (2003), a popular text written by Ray H. Garrison and Eric W. Noreen, delineates the following concepts as chapter titles: cost terms, concepts and classifications, job-order and process costing, cost behavior, cost-volume-profit relationships, variable costing, activity-based costing, budgeting and profit planning, standard costs and the balanced scorecard, flexible budgets and overhead analysis, segment reporting and decentralization, relevant costs for decision making, capital budgeting decisions, service department costing, the statement of cash flows, and financial statement analysis. The literature also suggests that there are other managerial accounting concepts such as customer profitability analysis, benchmarking, and enterprise resource planning (ERP) that are effective tools for decision making.

Obviously, not all of these topics can be covered in depth in a one semester Managerial Accounting course, and all of these concepts are not used in the day-to-day decision making of managers. Therefore, some guidance is needed from the business community as to which managerial accounting concepts are most used in decision making.

The central question formed to the purpose of this study: Which accounting concepts and information do managers use in decision making? Answers to this question enable the accounting educator to hone in on the most important accounting concepts to be covered in the Managerial Accounting course.

In addition to this central question, several other questions inquiring as to the frequency of using accounting information, source of the accounting information used by managers, type of accounting information used by managers, and how current the accounting information is that is used in decision-making were asked. The answers to these questions provide additional detail and support the answers to the central question.

RESEARCH DESIGN AND PROCEDURES

The central research question requires a qualitative study since the answer is presumably widespread and unknown. There is

not a well-defined list of accounting information and concepts used exclusively by managers in making decisions. When the researcher “wants information to emerge from the participants in the project”, (Creswell, 2003, p. 17) a qualitative methodology is most appropriate (Creswell, 2003).

Creswell (2003) states, “qualitative research is exploratory and useful when the researcher does not know the important variables to examine” (Creswell, 2003, p. 22). A qualitative approach was appropriate for this study since it allowed the researcher through interviews to search, discover, and describe the various accounting concepts, measures, and information used by managers in making decisions.

In order to determine which accounting concepts and information are most important for managers to be successful decision makers, a study was conducted where 10 managers (marketing, operations, and costing) were given a list of managerial accounting concepts and their respective definitions from *Managerial Accounting*, a popular textbook written by Garrison and Noreen (2003).

From this list, participants were asked which concepts they believed were most important for marketing and operations managers (See Appendix A). The sample of 10 managers selected for the study was from 2 of the 4 largest Class I freight-carrying railroads. The Class I freight-carrying railroad industry was selected since it has the unique characteristics of a service and manufacturing company and employed over 157,000 people in the United States in 2004 (AAR, 2005, Class I Railroad Statistics, Class I Railroads).

Although this study solicited responses from managers in the Class I freight-carrying railroad, these findings apply to most other businesses. The Class I freight-carrying railroad industry, a service business, transports goods and products for various companies throughout North America. These railroads also have a definitive track structure similar to the assembly line within a factory of a manufacturing company.

For railroads and manufacturing companies, goods and products move through a track structure or production process until they reach their destination or are completed. Factory workers in a manufacturing company who operate machinery and convert the raw materials into finished goods resemble the railroad crew that operates the train and move goods and products to their destination. In addition to other service organizations, freight-carrying railroads have obvious similarities to manufacturing firms making the results of this study potentially useful to other service and manufacturing businesses.

There were 10 managers from two railroads interviewed and eight of these ten interviews took place at the offices of the participants while two of the interviews were conducted via telephone conversation due to scheduling and geographic constraints. There were four costing managers, four marketing managers, and two operations managers interviewed in this study. When reported verbatim, participant responses appear in italicized quotes.

Data Analysis

All interviews were tape recorded after permission was received from the interviewee. The audiotapes were transcribed and these transcriptions were combined with notes from the interview. The notes included not only important points made by the interviewee but also a description of the interview setting, nonverbal cues of the interviewee, and recommendations for the next interview conducted.

During each interview, if the interviewee did not understand an accounting concept then the researcher explained the concept to enable the interviewee to comment on its importance to the particular manager type.

After each interview, a self-review was performed to ensure the objectivity of the researcher in the interview. From the tape-recorded transcriptions and interview notes, themes and patterns emerged addressing the central question. After the audiotape transcriptions were read, it was noted that some follow-

up questions were needed in order to clarify answers from the initial interviews.

A follow-up interview was conducted over the telephone with five of the ten interviewees. Certain questions were asked to each of the five interviewees to gather additional data and clarify some data obtained in the initial interview.

Credibility

For a research study to be valuable and meaningful it must be credible. It must be believable and able to “convince the [researcher] and the readers that what has been concluded is accurate” (Rubin and Rubin, 1995, p. 85).

One way to establish credibility in this research study was to adapt triangulation whereby experiences and perceptions from several individuals including financial as well as non-financial managers were examined for consistency and coherence in order to develop themes. Another method is to provide a rich, thick description of the findings allowing the reader to share the experience (Rubin and Rubin, 1995).

The following section includes a description of the experiences and perceptions of the non-financial as well as financial managers participating in this study. Follow-up interviews with five of the ten participants established credibility since these interviews provided additional information and clarified answers to certain questions ensuring the accuracy of the findings of this study.

Finally, the study seeks to improve validity via a peer debriefing. The peer debriefing allows an independent outside reader to “review” (Creswell, 2003, p. 196) the report and “ask questions” (Creswell, 2003, p. 196) to ensure that it makes sense and is understood by other readers other than the researcher (Creswell, 2003). This report has been peer reviewed by two independent readers, a consultant to freight-carrying railroads and a

specialist in research methodology. This peer debriefing increases the credibility of this report.

Findings

Marketing and operations managers make different types of decisions in their daily activities and therefore have different needs concerning accounting concepts and information. In beginning each interview, the first question asked of the participants was: How important is it for managers to be proficient in the use of accounting information? All participants in the study responded by stating that accounting information is very important.

In response to this question, all four marketing managers and all four costing managers interviewed stated that it is very important for marketing managers to be able to use accounting information in their decision making. One marketing executive stated that *“20 years ago, a marketing manager in the railroad industry needed to be focused on relationships and didn’t need the financial knowledge.”* Another marketing executive pointed out *“The margins in the railroad industry are thinner today.”*

These two responses signal that times have changed and also indicate that a marketing manager needs to understand costs, cost drivers, and contribution margin in order to be successful in pricing, costing, and negotiating contracts, a significant part of a marketing manager’s job.

Both operations managers and all four costing managers interviewed stated that it is very important for them to be able to use accounting information to make decisions. The primary focus of the operations manager is to monitor trends and non-financial measures with the idea that *“By monitoring cost drivers inefficiencies can be reduced.”* One operations executive stated that *“Today there is competition from other transportation alternatives, and therefore the railroad industry, more so than 20 years ago, has had to tighten its belt.”*

In order to maintain profitability, cost and budgetary control are essential. According to the *Association of American Railroads Class I Railroad Statistics* (2005), operating costs made

up 86.6% of a Class I Railroad's expenses in 2004. In order to control this large operational cost, operations managers, who are the personnel responsible for the day-to-day operation of the company, need to understand not only the effect their decisions have on cost, but how to manage the business so that costs are controlled.

For marketing managers, the results of this study concluded that the most critically important concepts for marketing managers in decision making as agreed upon by the marketing and costing managers interviewed are cost terminology, cost behavior, cost-volume-profit relationships, and customer profitability analysis.

Marketing managers are the primary contact with the customer and are confronted on a daily basis with using accounting information to cost a particular piece of business and ultimately provide a price, which is both amenable to the customer and yet also profitable for the company. The initial step prior to pricing any piece of business whether it is a one-time move of goods or a long-term contract for numerous moves of goods is to determine the cost of the service.

Determining the cost of a component of business entails gathering all relevant costs and using the computerized costing model from the enterprise resource planning system to generate the estimated cost of moving the goods. This process involves not only working with the information system, but also understanding the types of costs (variable, fixed, or mixed costs) involved and how these costs behave or change based on volume. In addition, the effect that cost and volume have on profits must be evaluated. Marketing managers must be aware of which customers are unprofitable and be able to analyze cost-volume-profit relationships to improve the unprofitable or less profitable customers.

The ability to read and use a budget, financial reports (which are segmented based on product line, geographic region, etc.) and use benchmarking and key performance/non-financial measures as analytical tools to gauge a company's standing internally and within the industry are also important accounting

concepts and information for a marketing manager. These reports and measurements enable the marketing manager to analyze an industry, product, or their own company and to know how they are operating compared to plan or compared to other companies in the industry.

Finally, marketing managers need to be able to extract the proper information from the enterprise resource planning system and to be able to differentiate relevant from irrelevant information in order to be effective decision makers.

For operations managers, the most critically important accounting concepts in decision making as agreed upon by the operations and costing managers interviewed are cost terminology, cost behavior, cost-volume-profit relationships and understanding non-financial measures.

The fact that 86.6% of the total cost of a Class I freight-carrying railroad in 2004 (AAR, 2005, Class I Railroad Statistics, Class I Railroads) was incurred by the operations side of the business makes the task of cost control a daunting challenge for the operations manager. With an emphasis on cost control, it is important for the operations manager to understand the difference between a fixed cost, variable cost, and a mixed cost and the fact that in total each of these costs is affected differently by changes in volume.

The railroads have found that by monitoring and managing trends in measures such as train starts, loaded cars per train, empty cars per train, average train speed, gross ton miles per train, on-time percentage, and several other key performance measures, costs can be controlled. Measures such as these indicate how costs are driven.

The operations manager needs to understand that an idle locomotive does have a cost associated with it. Just because it is not running and not burning fuel or incurring maintenance cost, there is a fixed cost associated with that idle locomotive. An understanding of these costs helps an operations manager run the railroad efficiently.

The operations manager needs to understand cost-volume-profit relationships to achieve maximum efficiency on the railroad. He or she must manage every train start so that there are an optimal number of freight cars per locomotive, crewmembers per train, and at the same time have an excellent on-time percentage to promote efficiency and ultimately control costs.

The operations manager is measured heavily by adherence to the budget or plan. Therefore, it is fundamental that the operations manager understands the budget and how to manage it on a monthly basis. A solid understanding of cost behavior and key performance measures enables the operations manager to manage the business and adhere to the budget. The operations manager like any manager should understand the income statement and how their small part of the company affects the bottom line. With an understanding of the income statement, the operations manager is equipped to make decisions that positively impact the bottom line.

When all managers were asked about the proficiency of marketing and operations managers in using accounting information in decision making, the unanimous response was that proficiency varied by individual. The interviewees cited that some managers were better than others and some need to improve in this skill set not only to perform their current job but also for career advancement. These findings state the need for training in this area and an increased focus by accounting educators on these particular accounting concepts in the Managerial Accounting course.

CONCLUSION

In summary, it is important for marketing and operations managers in the Class I freight-carrying railroad industry to use accounting concepts and information in decision making. Marketing and operations managers use certain accounting concepts and information regularly. The most important accounting concepts for marketing managers are those that help

them cost and price a piece of business and help them determine and improve the profitability of customers.

For operations managers, the accounting concepts and non-financial measures used are focused towards cost control and adherence to the budget. According to the marketing and operations managers interviewed, the primary sources of accounting information for decision making include internal reports generated from the enterprise resource planning system within each company and information supplied by costing managers and personnel. Both manager types also stated that the accounting information used in decision making was current.

These findings primarily pertain to the Class I freight-carrying railroads however marketing and operations managers in every business need to understand the difference between a fixed, variable, and mixed cost, and the interrelationship between cost, volume, and profit in an organization. In addition, marketing managers need to know how to determine the profitability of their customers and operations managers need to understand how to use the key non-financial performance measures to help them control costs and stay within the budget.

This study highlights for accounting educators those important accounting concepts needed in decision making by marketing and operations managers in the railroad industry and for other similar businesses and industries. Accounting educators will benefit from the findings of this study, by ensuring that their Managerial Accounting course includes coverage of the most essential accounting concepts.

In designing the Managerial Accounting course, consideration of accounting concepts important for both manager types is necessary since students can potentially become either type of manager. The results of this study indicate that accounting educators should include coverage of cost terminology, cost behavior, cost-volume-profit relationships, customer profitability analysis, and an understanding of non-financial measures as used in a

balanced scorecard. Concepts such as budgeting and profit planning, segment reporting, relevant costs, benchmarking, enterprise resource planning, and a basic understanding of financial statements are also important and students should have a working understanding of these concepts. Students should get a brief overview of topics such as job-order costing and process costing, variable costing, ABC costing, service department costing, capital budgeting, and standard costs. This overview should be kept to a definitional understanding of these concepts and costing systems. Cash flow analysis and financial statement analysis should receive little or no attention in the Managerial Accounting course since the participants in the study did not consider these concepts important and these concepts are most likely covered in the introductory finance course. As expected, the results from this study differed from the Paige (1992) study since Paige studied nonprofit organizations compared to the Class I railroads which are for-profit enterprises. However, the results from this study are similar to the results of Bitner (1991), Khan, et al (2000), and Brewer (2000), with the exception that this study found a higher level of importance placed on customer profitability analysis and use of nonfinancial measures and less of an emphasis on capital budgeting by managers. By using the results from this study, accounting educators can ensure that the accounting concepts found to be most important for these two manager types are covered within the Managerial Accounting course.

In summary, business has changed and so has the skill set needed by many managers. Managers are required to be more aware of accounting concepts and use accounting information in decision making. Accounting educators need to ensure that future managers are prepared to be effective decision makers by providing them with a solid education of certain accounting

concepts. Using the findings from this study, accounting educators can prepare their students to be better managers through the use of accounting concepts and information in decision making, a win-win for everyone.

Table II

Summary: Use
of Accounting
Concepts and
Information by
Marketing
Managers

Reason for using accounting information	Accounting concepts and information used in decision-making	Proficiency of using accounting concepts and information
Costing and pricing a move of goods or product for a customer	Cost terminology, cost behavior, cost- volume-profit relationships	Level of proficiency is dependent upon the individual. More cost conscious and analytical than in the past; however there is room for improvement.
Aid in the decision- making of costing and pricing a move of goods or product for a customer and in analyzing an industry,	Customer profitability analysis, variable costing, ABC costing, budgeting, benchmarking, segment reporting, relevant costs, enterprise resource planning,	Level of proficiency is dependent upon the individual. More cost conscious and analytical than in the past; however there is room for

product, or own company.	understanding financial statements, non-financial measures including train capacity, utilization, and availability measures, train schedules, general economic indicators, industry specific information	improvement.
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Table III

Summary: Use of Accounting Concepts and Information by Operations Managers

Reason for using accounting information	Accounting concepts and information used in decision-making	Proficiency of using accounting concepts and information
Monitor the operation of the railroad to ensure cost control, improvement of inefficiencies, and adherence to the budget.	Non-financial measures, cost terminology, cost behavior, cost-volume-profit relationships, budgeting, understanding financial statements	Level of proficiency is dependent upon the individual. Training and experience lead to proficiency. There is room for improvement.

	Standard costs, service department costing, benchmarking, the balanced scorecard, enterprise resource planning	
Provide input to the capital budgeting process	Capital budgeting (Operations manager provides input and justification for capital equipment needs, however doesn't use capital budgeting techniques such as net present value or internal rate of return).	Level of proficiency is dependent upon the individual. Training and experience lead to proficiency. There is room for improvement.

Appendix A – Interview Questions and Accounting Concepts

1. How important is it for managers to be proficient in the use of accounting information?
2. Which accounting concepts and information do managers use in decision making? Examples and definitions of some accounting concepts are as follows:

Cost terminology and classification - Understanding of the difference between a product cost and a period cost and the difference between fixed cost and variable cost.

Job-order costing and process costing – Alternative ways to compute the cost of a product or service.

Cost behavior – Understanding how fixed, variable, and mixed costs behave enables managers to predict future costs under various circumstances.

Cost-volume-profit relationships – Tool used by managers in determining the interrelationship between cost, volume, and profit in an organization by focusing on interactions of prices of products, volume or level of activity, per unit variable costs, total fixed costs, and mix of products sold.

Variable costing – Focuses on cost behavior by separating fixed from variable costs.

Activity-based costing – A costing method that is designed to provide managers with cost information for strategic and other decisions that potentially affect capacity and therefore fixed costs. It is also a business tool that identifies segments, products, or processes that don't add value.

Budgeting and profit planning – Detailed plan for acquiring and using financial and other resources over a specified time period.

Standard Costs – Used to determine how much of an input is used to make a product or service and should be paid for that input.

Balanced scorecard – A tool that uses financial and non-financial performance measures to track how successfully a firm is carrying out its strategies, objectives, and overall mission.

Segment reporting – Financial reporting for an organization where financial information is presented for

each division, product line, geographic region and individual customers.

Relevant costs – Differentiating between relevant and irrelevant information in deciding whether the company should make or buy the product, what products to sell, what prices to charge, or whether to accept a special order at a reduced price.

Service department costing – Allocation of the cost of service departments such as the accounting department or human resource department to the product or service provided by the operating department.

Capital budgeting – Techniques used to determine which long-term projects should be funded, such as the net present value method, payback period, and internal rate of return.

Financial statement analysis – Through ratio analysis managers can monitor the business, evaluate liquidity, debt position, and profitability of a company and predict future performance.

Cash flow analysis – Analysis of the statement of cash flows managers can assess the financial health of a company and get answers that the balance sheet or income statement can't provide.

Customer Profitability Analysis – A measurement tool used to make decisions as to which customers or market segments are most profitable.

Benchmarking – Organizations review best practices of other organizations within their industry to improve their business processes.

Enterprise Resource Planning – Information system used to provide decentralized organizations to provide all people in an organization with access to information at the same time.

3. What are the most critical accounting concepts and information used by managers in making decisions?
4. How proficient are managers in using accounting information and concepts in decision making?
5. What are the most critical elements of accounting information used by managers in making daily, weekly, monthly, quarterly and annual decisions?
6. Besides accounting information what other types of financial and non-financial types of information are used in decision making?
7. How often is accounting information used in decision making?
8. What types of decisions are made using accounting information?
9. What is the source of the information used in decision making (accounting department or personal sources)?
10. How current is the accounting and financial information used in decision making?
11. How much time is available to make decisions using accounting information?

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