



SOLUTIONS MANUAL

# *Cost Accounting*

## *A Managerial Emphasis*

FOURTH EDITION

CHARLES T. HORNGREN

## USE OF ASSIGNMENT MATERIAL

The keys to the success of a course in cost accounting are the assignment and discussion of provocative problem material. The gathering and class-testing of high-quality assignment material have been regarded as a crucial phase of this book's preparation rather than as a painful afterthought.

Instructors may find it helpful to review the preface to the text in conjunction with examining the following suggested assignment material. Note that the sample outline for Sequence A of the basic course does not cover process-costing complexities in detail: this material (Chapters 18 and 19) is more easily comprehended in a second course. Complexities of process costing cannot be ranked in importance with such key subjects as budgets, standard costs, direct costing, and costs for special decisions.

Several inquiries have been received regarding the use of my Accounting for Management Control and Cost Accounting: A Managerial Emphasis: "There is duplication in our Cost course of material previously covered. What do you suggest we do?" In my view, this edition of Cost will permit a minimization of unnecessary duplication.

Some duplication is pedagogically desirable, because it reinforces important material. Indeed, compare the courses in internal accounting with those in external accounting. Instructors are not overly troubled by the fact that the course in intermediate financial accounting re-examines many of the same issues that were introduced in elementary financial accounting. If so, they should not be troubled by some overlap between the first two courses in management (cost) accounting.

If the student has had a course in management accounting, I usually begin the course in cost accounting with Chapters 6, 8, 9 and 10. This provides a review and a chance for the student to get a more solid and comfortable grasp of some crucial ideas. I usually spend one session on Chapter 6 and then also assign various problems from that chapter as Chapters 8 and 9 are covered--again to achieve reinforcement.

Then I cover Chapters 15, 16, 17, 22, and 23 in relatively great depth. The choice among Chapters 18-21 and 24-28 depends on the preferences of the individual instructor and the coverage of other courses. In any event, I think that you will agree that there is ample material in the third edition of Cost Accounting to provide a complete course in Cost that will both build upon and complement the material in Accounting for Management Control.

A special note of appreciation is extended to Christiane Jose and to P.I.P., Inc. for their skillful typing of many solutions.

### Suggested Assignment Material

(Also see note at beginning of solutions for each chapter in this manual.)

Underscoring indicates question used originally as test question. This or similar question could be used as test question if not assigned as homework.

| Chapter | Essential   | Supplementary<br>(in order of preference)   |
|---------|---|---|
| 1       |   | 16, 17, 18, 15, 14, 13, 20, 21, 22  |
| 2       | 23 and 24 (or 25 and 26)  | 31, <u>27</u> , <u>28</u> , <u>29</u> , 30  |
| 3       | 10, <u>25</u> , <u>27</u> or <u>28</u>                          | 11, 12, <u>15</u> , <u>16</u> , <u>19</u>   |
| 4       | 8, 11, <u>14</u> , <u>16</u> or <u>18</u> , 19                  | <u>20</u> or <u>23</u> , 24, 25 26(a)   |
| 5       | <u>8</u> , 15, <u>19</u>  | <u>13</u> or <u>14</u> , 16, 17   |
| 6       | 17, 19, 26, 27  | <u>22</u> , <u>23</u> , 28, 30(b)   |
| 7       | 24, 25 (and 26 if desired)                                      | 29, 30, 33  |
| 8       | 13, 16 and <u>17</u> , 22                                       | 27, 30 (comprehensive), <u>26</u> , 23  |
| 9       | 3, 5 or 6, 8, <u>10</u> , <u>18</u> or <u>21</u> or <u>22</u>   | 25 or any of the others. All except 3, 4, 8, and 25 have been used on an examination. |
| 10      | 6 or <u>7</u> , or <u>8</u> , <u>9</u> , 21, <u>25</u> , 29, 30 | <u>11</u> , 13, <u>15</u> , 18, 26, 27, 28, <u>31</u> or <u>32</u> , <u>33-35</u>     |
| 11      | 9, 13 or 14, <u>20</u>  | 10, <u>21</u> , <u>22</u> , <u>24</u> (comprehensive)                                 |
| 12      | 10 or 11, 23, 24, 29  | 13, 15, 16, 21, 26, 27 or 28  |
| 12      | 8, 11 or 12, 13   | <u>15</u> , 19, <u>22</u> , <u>23</u> , 28  |
| 13      | 10, <u>12</u> , <u>14</u> , 15                                  | 16 (inflation), <u>21</u> , <u>30</u> , <u>32</u>                                     |
| 14      | <u>15</u> , 22, 27, 28  | 29 or 30, <u>26</u> , <u>24</u>   |
| 15      | 17, 18  | 23, 24, <u>19</u> , 21 or 22  |
| 16      | 16 or <u>17</u> or 18   | 19 or <u>20</u> and 21, 14, 13  |
| 17      | 9, 10 or 11   | 13, 25, <u>15</u> or <u>16</u> , 17   |
| 18      | 6, <u>8</u> , 9 or 11, 10(c) or 12(c)                           | <u>20</u> , <u>21</u> , <u>28(c)</u> , 29(d)  |
| 19      | 11, <u>13</u>   | 18(c) (difficult), 19 through 22.<br>Cover FIFO                                       |
| 20      | <u>24</u>   | 25, 21, <u>22</u> or <u>23</u>  |
| 21      | 10, 19, 20  | <u>11</u> , 12, 13, <u>14</u>   |
| 22      | 16, <u>21</u> , 26  | <u>22</u> , 24, <u>25</u> , 27  |
| 23      | 14, 15, 17, <u>18</u> , 29 or 30                                | 19 or <u>20</u> , <u>22</u> or <u>23</u> , any of 24 through 28                       |
| 24      | 18, 19, 20, 23  | <u>34</u> , 35-38   |
| 25      | 11, 13  | 12, <u>14</u> or <u>15</u> . Also see the comments on Chapter 25 in this manual.      |

| <u>Chapter</u> | <u>Essential</u>                     | <u>Supplementary<br/>(in order of preference)</u> |
|----------------|--------------------------------------|---|
| 26             | 15, 23, 32 or <u>33</u> or <u>34</u> | 16 or 17, 20 or 21, 24 or 25, 36                  |
| 27             | 9, 10, 12, 21, 22, 23                | 24 and 25(comprehensive reviews)                  |
| 28             | 3                                    | 4   |

- (a) Problem 4-26 is a comprehensive review "practice set" type of problem.
- (b) See the comments on Chapter 6 in this manual.
- (c) Covers standard costs. Do not assign until after Chapter 9.
- (d) Covers joint costs. Do not assign until after Chapter 17.



### Alternate Suggested Assignment Schedules

| <u>Basic Course<sup>(a)</sup></u> |                 |                                 |                 | <u>Second Course<sup>(d)</sup></u> |                 |                         |                 |
|-----------------------------------|-----------------|---------------------------------|-----------------|------------------------------------|-----------------|-------------------------|-----------------|
| <u>Sequence A</u>                 |                 | <u>Sequence B<sup>(c)</sup></u> |                 | <u>Sequence A</u>                  |                 | <u>Sequence B</u>       |                 |
| <u>Chapter</u>                    | <u>Sessions</u> | <u>Chapter</u>                  | <u>Sessions</u> | <u>Chapter</u>                     | <u>Sessions</u> | <u>Chapter</u>          | <u>Sessions</u> |
| 1                                 | 1               | 1                               | 1               | 13                                 | 3               | 12                      | 4               |
| 2                                 | 2               | 2                               | 3               | 14                                 | 3               | 13                      | 4               |
| 3                                 | 2               | 3                               | 3               | 15                                 | 2               | 14                      | 3               |
| 4                                 | 4               | 4                               | 4               | 16                                 | 2               | 15                      | 3               |
| 5                                 | 2               | 18                              | 2               | 17                                 | 2               | 16                      | 3               |
| 6                                 | 3               | 19                              | 2               | 18                                 | 3               | 20                      | 1               |
| 7                                 | 4               | 20                              | 1               | 19                                 | 3               | 21                      | 3               |
| 8                                 | 4               | 5                               | 2               | 20                                 | 1               | 22                      | 4               |
| 9                                 | 5               | 6                               | 2               | 21                                 | 2               | 23                      | 3               |
| 10                                | 4               | 7                               | 4               | 22                                 | 3               | 24                      | 3               |
| 11                                | 4               | 8                               | 4               | 23                                 | 3               | 25                      | 5               |
| 12 or 15                          | 3               | 9                               | 5               | 24                                 | 3               | 26                      | 3               |
| —                                 | —               | 10                              | 4               | 25                                 | 5               | 27                      | 2               |
| —                                 | —               | 11                              | 3               | 26                                 | 3               | 28                      | 1               |
| —                                 | —               | —                               | —               | 27                                 | 2               | —                       | —               |
| —                                 | —               | —                               | —               | 28                                 | 1               | —                       | —               |
| Tests                             | 3               | Tests                           | 3               | Tests                              | 2               | Tests                   | 2               |
| Optional <sup>(b)</sup>           | 4               | Optional <sup>(b)</sup>         | 2               | Optional <sup>(b)</sup>            | 2               | Optional <sup>(b)</sup> | 1               |
| Total                             | <u>45</u>       | Total                           | <u>45</u>       | Total                              | <u>45</u>       | Total                   | <u>45</u>       |

- (a) Forty-five 50-minute sessions used for illustrative purposes; for fewer or more sessions, the relative time devoted to each topic would be unchanged.
- (b) May be used for review, for the assignment of additional chapters, or for devoting more time to particular chapters.
- (c) Designed for a course which emphasizes procedures more than in Sequence A.
- (d) A book of readings or selected articles might also be used. A list of possible readings books is presented at the end of Chapter 24 in the textbook.

## Comparison of Problems Covering Behavioral and Quantitative Emphasis

| <u>Chapter</u> | <u>Behavioral Emphasis</u>   | <u>Quantitative Emphasis</u> |
|----------------|------------------------------|------------------------------|
| 1              | 16-19                        | 20-22 <sup>(a)</sup>         |
| 2              | no distinction worth noting  |                              |
| 3              | 10 (part 4)                  | 12-15                        |
| 4              | no distinction worth noting  |                              |
| 5              | -                            | 18, 20                       |
| 6              | All                          | -                            |
| 7              | 21, 25, 29                   | 32, 33                       |
| 8              | 18 (part 3), 21 (part 4), 30 | 23, 27, 29                   |
| 9              | 25                           | 23                           |
| 10             | 15, 18                       | 27-32, 35                    |
| 11             | 9-14                         | 21, 22                       |
| 12             | part of 28                   | 26, 27                       |
| 13             | -                            | 16, 21                       |
| 14             | 28                           | 27, 30                       |
| 15             | 14-17, 21-24                 | -                            |
| 16             | 16, part 3                   | 19-21                        |
| 17             | no distinction worth noting  |                              |
| 18             | no distinction worth noting  |                              |
| 19             | no distinction worth noting  |                              |
| 20             | no distinction worth noting  |                              |
| 21             | no distinction worth noting  |                              |
| 22             | 24, 26, 27                   | 19-22, 25                    |
| 23             | 24-30                        | 16-21                        |
| 24             | -                            | 31, 32, 36-38                |
| 25             | 11, 13                       | all                          |
| 26             | -                            | all                          |
| 27             | -                            | all, especially 24, 25       |
| 28             | no distinction worth noting  |                              |

(a) Some instructors may favor using the cost-benefit approach in a world of uncertainty from the outset. If so, they should assign Chapter 24 immediately after Chapter 1 and assign some problems from Chapter 24 as earlier chapters are covered. For example, Problems 24-26, 24-27, and 24-28 could be assigned in conjunction with Chapter 3; Problem 24-34 could be assigned in conjunction with Chapter 12; and Problem 24-35 could be assigned in conjunction with Chapter 14.

### New Problems in this Edition

Veteran users of the textbook may desire to use a few of the following new problems:

| <u>Chapter</u> | <u>Problems</u>                               | <u>Chapter</u> | <u>Problems</u>                      |
|----------------|---|----------------|--------------------------------------|
| 1              | 20-22   | 15             | 14-17, 19, 21, 22                    |
| 2              | 21-26, 31                                     | 16             | 12, 13, 17, 20                       |
| 3              | 7, 8, 10-15, 21-24, 26, 28                    | 17             | 12, 13, 17, 20                       |
| 4              | 8, 9, 11-14, 16-19, 22-25                     | 18             | 14-17, 20                            |
| 5              | 10, 16-18, 20                                 | 19             | 12, 14, 15, 22                       |
| 6              | 18, 21, 23, 24, 27, 29, 30                    | 20             | -                                    |
| 7              | 18-21, 24-26, 29, 30                          | 21             | 9, 11, 21                            |
| 8              | 13, 15-19, 21, 27-29                          | 22             | 18, 21-23, 25-27                     |
| 9              | 3, 4, 7, 8, 11-14, 17-22, 24                  | 23             | 22, 24-28                            |
| 10             | 6-8, 10-12, 17-18, 21-22,<br>24-25, 27-32, 34 | 24             | 15, 26, 35-38                        |
| 11             | 9, 14, 15, 21, 22                             | 25             | 10, 11, 17, 24-27, 32                |
| 12             | 11, 13, 21, 24-28                             | 26             | 14-17, 19, 22, 23, 27, 28,<br>35, 36 |
| 13             | 10, 11, 15, 16, 20, 30-32                     | 27             | 13, 15-19, 21-26                     |
| 14             | 17-20, 24-28                                  | 28             | -                                    |

### Sample Tests -- Basic Course

The questions enumerated below were used originally as test questions under Sequence A. These or similar problems may be used.

- |                   |     |   |  |
|-------------------|-----|---|--|
| <u>TEST ONE</u>   | (a) | { | (3-15 or 3-17 or 3-19 or 3-23 or 2 cases<br>from 3-27 or 3-28)<br>and<br>(4-13 or 4-16 or 4-20 or 4-23)<br>or<br>some combination of above |
| <u>TEST TWO</u>   | (b) | { | (9-13 or 9-16 or 9-18 or 8-28 or 8-29)<br>and<br>(9-21 or 9-22 or 8-26 or 5-8)<br>or<br>some combination of above                          |
| <u>TEST THREE</u> | (c) | { | (10-23 and 12-23)<br>or<br>(10-17, 11-20, and 12-22)<br>or<br>(10-15 and 12-22)<br>or<br>some combination of above                         |

Notes: The ideal objectives, which are usually only partially attainable, are as follows:

- (a) 50 minutes. Covers through Chapter 4.
- (b) 50 minutes. Covers through Chapter 9.
- (c) 90 minutes. Covers through Chapter 12.

The Suggested Assignment Material on page iii indicates some problems that were used originally as test questions.

For additional suggestions, see the quizzes and examinations by Dudley W. Curry. Also see his Student Guide, published separately.



## PRESENTATION OF SOLUTIONS IN CLASS

Instructors have a variety of views regarding the use of classroom time for homework solutions. Most instructors put solutions on a blackboard or a viewgraph. In turn, their students frantically copy the materials in their notes. My practice is to reproduce the printed homework solutions for distribution either before, during, or after the discussion of a particular solution. The members of the class are glad to pay a modest fee to the school to cover the reproduction costs. In this way, students can spend more of their classroom time in thinking rather than writing. Furthermore, they have a complete set of notes.

Some instructors object to this procedure because it provides students with a "file" that can be passed along to subsequent classes. Students in subsequent classes will then use the "file" to avoid conscientious preparation of homework. I use to worry about such practices, but long ago I decided that there would always be some students who hurt themselves by not doing homework in an appropriate way. Why should the vast majority of students be penalized by withholding the printed solutions? The benefits of using printed solutions clearly outweigh the costs; I no longer fret about the few students who beat the system (and themselves).

Similarly, I distribute printed solutions to tests and examination along with a summary of overall class performance. I do not devote class time to discussing these solutions. The students deserve feedback, but they have sufficient motivation to scrutinize the printed solutions and check their errors on an individual basis. In this way more class time is available for new material.

If students have complaints about grades, I usually ask them to cool off for 24 hours and then submit a written analysis of how they were unjustly treated. I then take these complaints in batches, regrade the papers, and return the papers. If the student then wants to have a person-to-person discussion of the matter, he or she is welcome at my office. This procedure may seem too impersonal, but I recommend it to those teachers (like me) who have been through some painful debates that have been inefficient and frustrating for both student and teacher.

Incidentally, the end of this manual contains a compilation of check figures that some instructors may wish to release to the class at the start of the course. These are also available in quantities without charge from Prentice-Hall, Inc.

## CONDUCTING THE COURSE

From time to time I have received inquiries regarding how I teach a course in management accounting or cost accounting. In recent years, I have adopted the habit of handing out the following "Notes on Classroom Procedures" at the start of my courses:

Although the following process is frequently modified from class session to class session, it describes my general teaching style. I am placing this description in writing to avoid any misunderstandings: in the past, a few students have been misled about why I operate classes in a particular way.

In my view, the most effective and efficient use of classroom time aims at reinforcing or clarifying what the student has tried to learn on an individual basis (or sometimes a group basis) before entering the classroom. Therefore, optimal learning is achieved by (a) wholehearted preparation via studying the assigned readings and solving the assigned problems or cases; (b) discussion of the material by the students and teacher in class; and (c) the instructor's underscoring of the most important points via comments or short lectures (lecturettes). I rarely give lectures per se. My lectures are in the text or in the readings.

Obviously, problems or cases are not ends in themselves; instead they are the means of focusing on central issues, concepts, or knowledge.

Given the foregoing, the success of this course is dependent on adequate preparation for classes by both students and teacher. It also requires participation during class--always participation of the mind and occasional participation of the mouth. Throughout the quarter, a variety of helpful questions arise from a variety of students. As in all situations throughout life, some individuals naturally speak more often than others. (We all realize that there is no necessary consistency between lots of talk and lots of comprehension of the subject matter.)

I use a call list for two major reasons: (a) to get acquainted eventually with all the students in class so that at least I can link faces with names by the end of the quarter (I also use a seating chart for this reason); and (b) to provide motivation and insure widespread participation.

From time to time, you may come to class unprepared for a variety of reasons. In such instances, if you want to preclude the possibility of being called on, simply put your name on a slip of paper on the front desk before the session begins. In this way, everybody wins; I don't enjoy calling on students who are unprepared.

I routinely use check marks as I call on students. My purpose is to insure that everybody is called about the same number of times throughout the quarter. Thus, the check marks are used to keep track of the number of times you are called on. The check marks are not grades; the grading of individual comments in class is a hopeless endeavor that I have never undertaken.

Unless otherwise specified, no assignments need be handed in. However, as you know, the best preparation almost always entails writing solutions and answers. Your contribution to the class via your solutions, comments, and questions is regarded as an essential part of the course. If for any reason you are absent from a particular class, you should hand in your solutions at the subsequent class. The major reason for this requirement is to encourage an active rather than a passive role in the course.

Some of you may have unusually severe anxiety about being called on in class. If so, please see me after class during the first week of the quarter to discuss alternate arrangements. My use of a call list is not intended to be a terror tactic.

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## CHAPTER 1 Solutions

### General Comments

Many instructors tend to skip the assignment material for Chapter 1 in any book. However, I prefer to use at least one or two problems so that the student becomes aware at the outset that accounting is not confined to pencil-pushing alone. My favorite problems here include 1-16, 1-17, and 1-18. The use of 1-13 through 1-15 will depend on what other courses the students have taken. Problems 1-16 through 1-19 may also be assigned in conjunction with any of Chapters 6 through 13, particularly Chapter 6. Problem 1-18 also may be more suitable with Chapter 23. Problems 1-20 through 1-22 reinforce the cost-benefit discussion in the chapter.

1-1 The controller and his staff must understand the company organization structure in order to design and operate an accounting system which is effective in aiding managers to plan and control. Sensible organization structure is one of the keys to successful coordination and communications; it involves the blending and utilization of men and other resources to implement plans efficiently. One of the controller's major tasks is to compile quantitative data that express management plans and achievements and that focus on those phases of operations which most sorely need attention. The accounting system that records, classifies, and reports operating performance must dovetail with the organization structure in order to supply useful information. In effect, the accounting system must have a responsibility accounting orientation.

1-2 The answer may be somewhat as follows: "As I view my job, I never intend to stick my nose in your day-to-day operations. My duty is to express your plans and subsequent performance in the language of figures. By so doing, neither you nor your superior will have to depend so greatly on hunches or guesses for planning and conducting operations. My job is to provide technical assistance in the preparation of your budget, to prepare a report of your performance, and to help you interpret the figures. In this way, you will be able to concentrate on those aspects of operations that deserve most of your attention. You will clearly know what your superior expects and how your performance will be gauged. It is not my job to approve your budget or blame you for faulty performance. That's strictly a matter between you and your boss."

1-3 The chapter says the role of the controller is comparable to that of the ship's navigator. The difference between a top-notch controller and a president lies primarily in the word action. The president can take line action, but the controller should never take line action. The controller's key to effectiveness is his objectivity, his detached perspective. He is the one top executive other than the president whose duties make him more apt to think of the business as a whole. If he loses this view of controllership, he will be likely to interfere with line operations. This interference may be either subtle or obvious. Examples would include censuring of line managers, manipulating their

1-3 (Continued) budgets, and in general trying to tell them how to do their jobs.

1-4 Decision making is the purposeful choosing from among a set of alternative courses of action in light of some objective.

1-5 Planning consists of selecting objectives and the means to attain them. Controlling consists of actions taken to adhere to existing plans.

1-6 As conceived here, managerial control means action that keeps the company ship on course. Control action is taken primarily by individuals. Note that the definition of control implies that plans already existed. Thus the notion of control is necessarily interlocked with implicit or explicit managerial planning. Planning is really much more vital than control; that is, superior control is fruitless if faulty plans are being implemented. Planning and control are so intertwined that it seems artificial to draw rigid lines of separation between them.

1-7 The cost-benefit approach does not use "need" or "truth" as the method of choice. Instead the focus is on whether the decisions will be affected if Method 1 is used rather than Method 2.

1-8 Yes. The controller has line authority over the personnel in his own department but is a staff executive with respect to the other departments.

1-9 By reporting and interpreting relevant data, the controller exerts a force or influence that impels management toward logical decisions consistent with objectives.

1-10 Line and staff executives often conflict due to a lack of understanding of their own relationships to each other. Line executives complain that staff men are too distant to understand their problems, want to seize line authority, lack perspective with regard to the interests of the entire organization, and always take credit but never bear the blame. Staff executives complain that line managers are too resistant to change, do not take advantage of staff help, and do not give staff enough authority.

1-11 Cost accounting is the controller's primary means of implementing the seven-point concept of modern controllership. Cost accounting is a quantitative method that is intertwined with all seven duties to some extent, but its major focus is on the first three.

1-12 Line authority is exerted downward over subordinates. Staff authority is the authority to advise but not command others; it is exercised laterally or upward. Functional authority is the right to command action laterally and downward with regard to a specific function or specialty.

1-13 (5 min.)

- (1) Head of accounting for current planning and control, controller, president.
- (2) Assembly foreman, production superintendent, manufacturing vice president, president.

1-14 (10 min.) Because the accountant's duties are often not sharply defined, some of these answers could be challenged:

1. Score keeping. Service department.
2. Attention directing. Production department.
3. Problem solving. Production.
4. Score keeping. Sales (line) department. (Latter answer not required.)
5. Problem solving. (No particular department mentioned.)
6. Attention directing. Sales department.
7. Attention directing. Production.
8. This question is deliberately ambiguous. The give and take of the budgetary process usually envelopes all three functions but it probably emphasizes score keeping the least. Attention directing, but perhaps also problem solving. The research department is usually a service department.
9. Score keeping. Service department.
10. Score keeping. Service department.

1-15 (See next page for organization chart solution.)

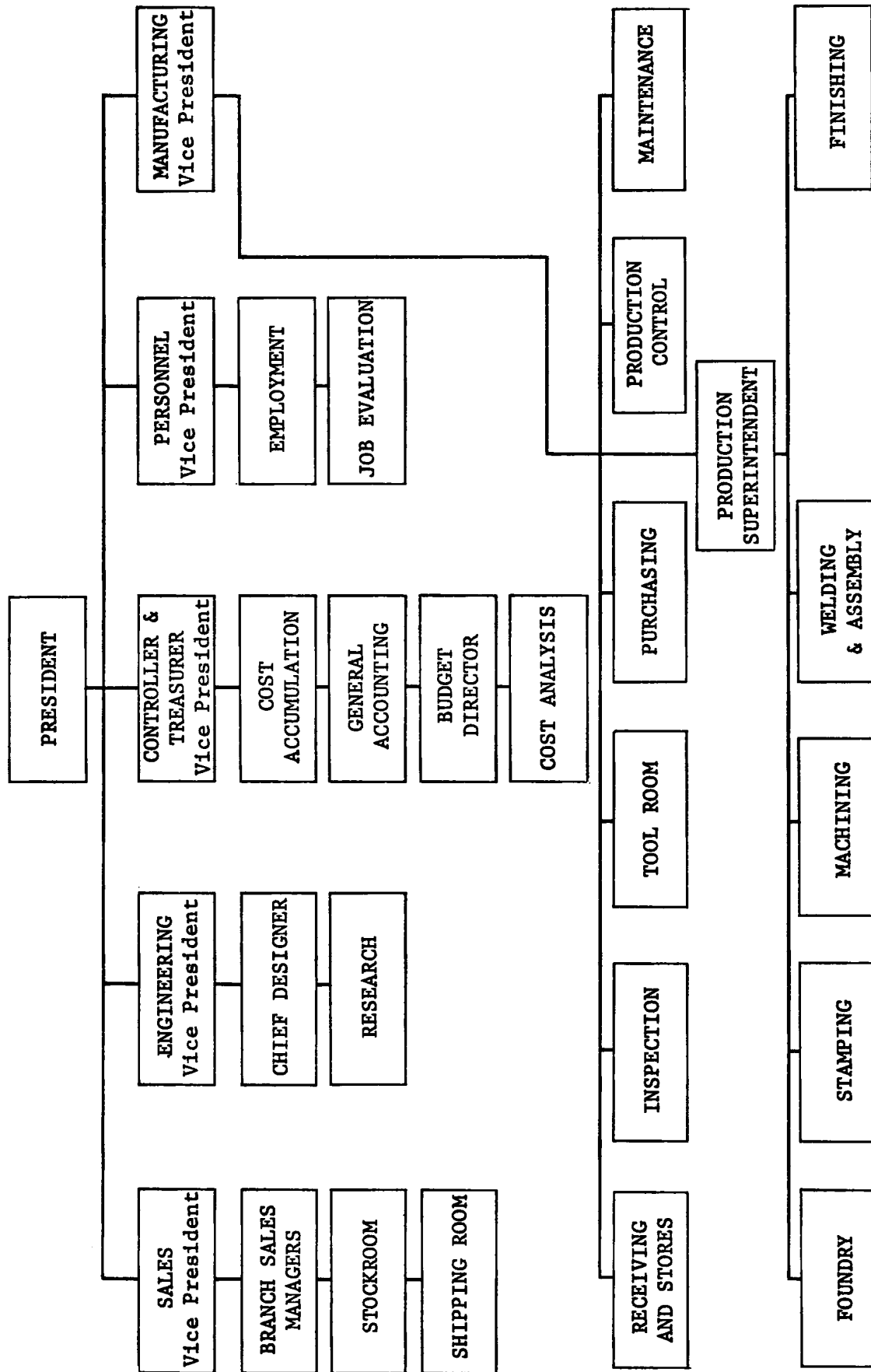
1-16 (20 min.) This problem raises plenty of thought provoking questions. Unfortunately, there are no pat answers. The generalizations about these relationships are difficult to formulate because each specific situation differs.

1. Apparently, the controller's analytical staff has not won the confidence or respect of Whisler and other line officers. Whisler regards these accountants as interlopers who are unqualified for their analytical tasks on two counts: (a) the task is Whisler's not the accountants', and (b) Whisler better understands his own problems. It is unlikely that the controller's analytical staff has maintained a day-to-day relationship with divisional officers. In addition, the analytical staff evidently has line responsibility to the controller rather than to the division manager.
2. Phillipson should point out that the analytical work is being done by his staff in order to free Whisler to concentrate on his other work, that the detached analyses of his staff should help Whisler better understand and improve his own performance.

Furthermore, Phillipson should point out that Whisler would need his own divisional accounting staff in order to prepare the necessary analysis of performance. By keeping the analytical staff directly subordinate to the company controller, more uniform analytical procedures and more objective appraisals are possible. Finally, he should promise Whisler that he would personally review



1-15 (30 min.) Variations in the following organization chart can be expected:



the existing division-controller relationships as a first step toward improving mutual understanding.

3. Phillipson might consider modification of organizational relationships along one of the following lines:
  - (a) Placing his analytical staff directly under the supervision of division managers and retaining only staff (functional) authority over their work to insure company-wide uniformity of methods and procedures.
  - (b) Maintaining present organizational relationships but physically locating as much of the accounting staff as possible at the division or plant locations.

It should be emphasized that whether the controller staff members have line responsibility to the central controller or to the division manager is not a question of fundamental importance. Each type of organizational structure is used successfully by various companies. The important point is that the analytical work must be done by accountants who consciously try to understand the line executives' everyday problems.

Above all, note that there seems to be a perpetual, irreconcilable problem of fulfilling the dual role of policeman and helpmate. That is why, where feasible, the two roles should be split. Ideally, we need two analysts or attention-directors, one representing central authority and one representing divisional management.

1-17 (20 min.) A modern controller would object greatly to Victor's proposal. In effect, Victor is proposing to take the major functions of managerial cost accounting away from the controller and to put another figure expert in charge of these chores.

Victor may be saddled presently with a controller who is incompetent or who views his job too narrowly. Therefore, setting up the new position is one alternative. Other alternatives would be (a) educate the current controller, (b) hire a new controller, and (c) do nothing.

In general, having all figure experts report to a vice president in charge of figures (perhaps he may be called a vice president of finance or treasurer and controller) is desirable. In this way, coordination is likely to be maximized; duplication of costs and effort is likely to be minimized. The implication is that the chief figure expert must have a broad-gauged top management viewpoint. He is a powerful member of management. The coming years will be especially interesting to watch. Unless the controller understands the impact of electronic computers, statistics, and mathematics on his role as figure expert, his status and power in the business world may diminish. However, it is encouraging to note that modern controllers are aware and concerned about the impending expansion of their role in progressive businesses.

The Simon et.al. study cited in the chapter stressed the need to have full-time separate jobs for scorekeeping, attention-directing, and