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DIRECT COSTING VS. ABSORPTION COSTING: A HISTORICAL REVIEW

The purpose of accounting has been generally described as the process of providing information to owners, creditors, governmental regulatory agencies, and operating management. "In a broad sense accounting has one primary function: facilitating the administration of economic resources. This function has two closely related phases: (1) measuring and arraying economic data; (2) communicating the results of this process to interested parties."[1] Of primary concern is the fact that the users of the accounting information are involved in the decision making process. However, they have different interests and objectives. Accordingly, the same information may require varied processing and summarization to meet the needs of each class of users. Various accounting practices, based on the same accounting concepts and principles, have been developed to satisfy the multiple and changing needs of the users of accounting reports. Direct and absorption costing are two such accounting practices. Controversy continues to exist as to which of these two costing methods is better for decision making purposes and for reporting to the users of accounting information. The objective of this paper is to dwell upon the historical nature of the controversy and build a case for a method of costing that rests on economic logic and realities of the market place.

Direct Costing vs. Absorption Costing—In Historical Perspective

"One of the major problems in determining the valuation of manufactured assets is the decision regarding which costs are relevant to future periods and thus should be included in asset valuation and which should be charged against current income."[2] This is the crux of the controversy between direct costing and absorption costing.

In the early stages of accounting development the financial accountants used to determine product costs by charging all manufacturing (factory) costs—direct and indirect overheads—to the

product. The cost of inventory of finished product included portions of both variable and non-variable manufacturing costs. Under the system income of a firm can fluctuate more as a function of production than the sale of a product. This procedure is called absorption or full costing. While the assignment of direct material and direct labor costs to the product was not considered too difficult, the allocation of the overheads—indirect costs—was not as precise. "The methods generally used under absorption costing in accounting for overhead costs have been influenced by the two purposes for which the resulting product costs were wanted: (1) to supply a guide in setting long-range product price goals, and (2) to supply costs of inventory and goods sold for financial statements prepared according to accepted accounting conventions."[3]

However, the product costs determined under absorption costing did not meet the needs of the new "scientific managers." In acknowledging this weakness, "the absorption school advocated and promoted the use of supplementary managerial tools such as flexible budgets and break-even charts to provide a more realistic picture to management of the effects of changing volume upon costs and profits."[4] Industrial accountants recommended that this information be incorporated within the framework of the accounting records. By such integration cost accounting could provide reports for control and planning on a routine basis. It was to meet this need that direct costing was developed.

Direct costing, sometimes called variable costing, is based on the classification of costs as variable and fixed. Variable costs are defined as those costs that vary in relation to the changes in the volume of production. Fixed costs, for the reporting period (never in excess of a year), were constant and entirely unaffected by changes in the volume of production. In direct costing, product costs include only the direct material and direct labor costs plus the variable portion of the overhead costs. Fixed costs are excluded and charged to the income statement as a period expense. In short, under direct costing only the variable manufacturing costs alone are considered to be inventoriable and they are matched with sales when the product is sold. The non-variable manufacturing costs are never inventoried. The income of a firm depends, as it should, on sales and not on production that is stored in inventory. The income statements produced by this method, ". . . permit the accountant to avoid the accounting anomaly that is sometimes created when, because of asynchronization of production and sales, higher sales produce lower profits."[5]

Although financial accounting had its beginning early in the modern civilization and developed along with trade and industry, cost accounting has been rather late in coming.[6] Basil Yamey has traced the first cost accounting beginnings to Robert Loder's farm accounts for 1610-20.[7] Efforts were made by many industrialists in Great Britain and in the United States to install factory cost systems as early as 1805. However, such efforts were sporadic. Serious studies in cost accounting started only in the 1890's with the writings of Metcalfe, Garcke and Fells, Norton, Lewis, and later with Church, Nicholson and Clark.[8] They were truly the pioneers who introduced new cost concepts like fixed and variable costs, standard cost, cost centers, relevant costs, etc. in the literature. The development of cost accounting in this period was undoubtedly slow. In addition, cost accounting tried to adapt itself within the framework of financial accounting. Part of the delay in the establishment of cost accounting concepts may be due to the tendency of cost accountants to keep the methods they had developed within their own firms secret.

The concentrated advancement of cost accounting between 1890 and 1915 was influenced by the growth of "scientific management" and a shift of emphasis from cost ascertainment to cost control. Cost accounting was now integrated within the general accounts and standard costs were being initiated to measure performance. From 1920 through 1940, economic concepts of short-run and long-run time periods and their associated variable and fixed cost concepts were influencing the management decision making process. As Raymond Marple, the Assistant Secretary of the National Association of Cost Accountants stated in 1951,

> . . . during the early development of modern cost accounting—what I call the first stage or the inventory valuation and profit measurement state—the need for separate classification and treatment of fixed and variable cost was not appreciated or developed. It was not until we were well along the second stage—the cost control state—that the development of flexible budget techniques forced recognition of the essential difference between fixed and variable costs. But it is the third stage, which we are just entering—the cost analysis stage—which has brought home to a few cost accountants the way in which this essential difference in the two types of costs can be utilized to provide better cost information, not only for management policy determination, but for all purposes for which costs are used.[9]

Although a few firms have been found to have used direct costing as early as in 1908, the first published description of the system is found in Jonathan Harris' article of 1936.[10] Numerous articles have appeared since then. At first the disagreements were many. However, many of the disagreements have been resolved in recent years. The current controversy rests on only one issue as direct costing for management use in decision making has long been accepted. It is the question of using direct costing for external reporting that continues to raise controversy both in academic and professional accounting circles.

Disagreements That Have Been Resolved

Manufacturing costs and the income statements prepared in the direct costing format follow the management decision making thought process. Hence, the information is readily provided with data related to cost-volume-profit relationships for profit planning purposes. This concept is based on the premise that, "in practice, accounting for direct costs also touches upon the economic concept of variable costs."[11] Further development of this line of reasoning has held that since variable costs have a linear relationship to output within a range of production, they are equal to marginal costs. Cost accounting studies made for the Office of Price Administration during World War II indicated that the average cost functions tend to have a small falling section but are nevertheless linear over much of the range. "When average costs do not vary as volume of production increases, there is no distinction between average and marginal costs. . . . Management could for this production range as readily use average as marginal or incremental cost techniques."[12]

The proponents of direct costing argue that product costs that represented marginal costs would enable management to make decisions between alternative courses of action based on a comparison of the marginal income resulting from the various situations. The opponents plead that price is established on the basis of total costs and the use of variable costing in decisions regarding pricing will result in continuously operating at a loss.

Nobel in his 1952 study noted a positive correlation between the degree of competition and the understanding and use of direct costing. ". . . Where monopolistic tendencies are present, there is less use or comprehension of differential costs and greater emphasis upon total unit costs."[13] He stressed that the arguments for total cost or variable cost were valid but that the cost to be used was dependent on the time period under consideration. He summarized the situation by stating, "what is needed is a general recognition,

in practice as well as in theory, of a short-run and long-run accounting concept in much the same way that this distinction exists in economics."[14] As Joel Dean stated, "the dominant factor in pricing should be the estimated effect of price on sales volume, that is the effect on buyers' actions and attitudes, rivals' reactions, potential competition, and so on. Cost estimates play a secondary, facilitating role."[15] The opposing parties resolved their differences of opinion when they realized that different costs are needed for different purposes and that costs were only part of the information necessary in the complex pricing decisions and differential cost analyses.

Other arguments against direct costing in the early fifties involved the difficulty of distinguishing fixed costs and most specifically the breakdown of semivariable costs into the variable and fixed components. In addition, practicing accountants feel that, "the two techniques are not necessarily mutually exclusive, but there is a practical limit to the accounting which any one company can profitably support."[16] Both of these difficulties have been overcome by the introduction of computerized accounting. The computer's capability to solve complex mathematics problems made the application of statistical techniques, such as regression analysis, for separation of fixed and variable costs an easier task. In addition, computerized accounting made the maintenance of fixed and variable costs which was essential for cost control purposes, a practical and accepted procedure. The summarization of data by direct costing for internal reports to management and by absorption costing for external reports became a very minor task in the programming of the accounting system.

In 1960 when the National Association of Accountants (the successor of the National Association of Cost Accountants) made a study of the use of direct costing concepts in fifty companies, it reported that in general management felt its experience with direct costing had been favorable.[17] The study reported that accountants were divided among the following schools of thought: (1) the absorption costing school, (2) modified absorption costing school, (3) the direct costing-for-internal-use-only school, and (4) the direct costing school. The members of each school accepted the proven value of direct costing for internal reports to management. While the absorption costing school still felt this should be accomplished by special reports outside the accounting system, all others incorporated the concepts within the accounting system. In contrast, the direct costing school members favored the application of direct

costing in financial reporting both internal and external. The members of all the other schools agreed that absorption costing must be used for external reporting.[18]

Today most authorities agree that with the available data processing equipment direct costing can be integrated within the accounting system and produce useful reports for management in the areas of cost control, flexible budgeting, product mix, sales mix, profit planning, and establishment of minimum acceptable prices in the short-run. Disagreement exists only as regards the use of direct costing for external financial statements for the public and government agencies.

A Synthesis of Direct and Absorption Costing

If the proponents of direct costing could have their reports accepted by the Internal Revenue Service and the Securities and Exchange Commission they would have progressed a long way towards general acceptance of their concept. While specific examples of tax cases are available to show that direct costs have been accepted for inventory valuation, each case was decided on its own merits and is not to be considered as acceptance of the procedure. In general, the IRS and the SEC refuse to accept annual reports prepared under direct costing until the American Institute of Certified Public Accountants considers the method to be generally accepted accounting procedure. The opponents of direct costing cite Accounting Research Bulletin Number 43, Chapter 4, as the authority for their rejection of this method as an acceptable costing procedure. "As applied to inventories, cost means in principle the sum of the applicable expenditures and charges directly or indirectly incurred in bringing an article to its existing condition and location."[19] Many writers have indicated that this pronouncement was issued in 1947 before accountants were adequately acquainted with direct costing. Accountants also disagree that this situation requires that all indirect costs be applied. In the 1960 NAA study, it was noted that of the 50 participating firms 17 published financial statements using direct costing. In none of these cases had the public accountants given a qualified opinion or taken exception to the procedure.[20]

Horngren and Sorter presented a new concept when they stated, "that variable costing concepts for external financial reporting are respectable both from the view-point of the frame-work of accounting theory and analytical usefulness. But we do not swallow the notion that variable costing is appropriate in all situations."[21]

To meet the needs of varying situations, Horngren and Sorter proposed the concept of "relevant costing." "Under relevant costing, only one basic assumption is needed: Any cost is carried forward as an asset if, and only if, it has a favorable economic effect on expected cost or future revenues. In sum, the test for asset recognition under relevant costing is quite simple. If a given cost will not influence either total future revenues or total future costs, it is not an asset."[22] Under this concept, cost must be developed by both absorption and direct costing methods and examined to determine which cost is acceptable under the specific situation existing for the firm at that point of time.

Conclusion

Time is ripe for accounting to divest itself of its historical preoccupation with fiduciary and stewardship responsibilities. While these responsibilities must remain as a proper and major concern of the accountant, they must be integrated with the accountant's increasing responsibility for management decisions. Accounting is a service activity and it exists to provide data as required by users of the information. As an information system, accounting must use the latest technology available to process the business data and prepare various reports for multiple purposes.

Today it is generally accepted that direct costing provides useful information for cost control, comparisons of alternative courses of action, and planning. With the present computers, cost accounting systems can easily be designed to provide direct costing information for internal management purposes and regroup the absorption costing data for external financial reports.

It must be recognized that the information provided in financial statements prepared for external users will differ in scope and form from the information provided to satisfy the needs of management. As recommended by the Trueblood Committee, it is time to review accounting's concentration on cost and consider concepts of value.[23] Instead of viewing cost as our objective, we should remember that cost is only used initially as a means of providing information on value. Therefore, it would seem that relevant costing which emphasizes the economic attributes of future value may prove a more meaningful solution to the direct costing-absorption costing controversy.

FOOTNOTES

[1]Rufus Wixon, and Walter G. Kell, *Accountants' Handbook*, (New York, N.Y., The Ronald Press Company, 1956), p. 1.

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[2]Eldon S. Hendriksen, *Accounting Theory,* (Homewood, Ill., Richard D. Irwin, Inc., 1970), p. 270.

[3]*Direct Costing, NACA Bulletin,* April 1958, p. 1083.

[4]Jack W. Coleman, *Direct Costing and Price-Volume Decisions,* (Handout presented to cost accounting class at Air Force Institute of Technology), January, 1960, p. 1.

[5]Wyman P. Fiske and John A. Beckett, *Industrial Accountants' Handbook* (Englewood Cliffs, N.J., Prentice-Hall, Inc., 1957), p. 236.

[6]Although the earliest evidence of accounting dates back to about 3600 B.C., Luca Pacioli's *Summa de Arithmetica, Geometria, Proportioni et Proportionalita,* 1494 (Everything about Arithmetic, Geometry and Proportion) is generally acknowledged by the historians as the first written work on accounting.

[7]*Robert Loder's Farm Accounts, 1610-1620,* (ed.), G. E. Fussell (Camden 3rd series volume L111, London Royal Historical Society, 1936). See, R. H. Parker, *Management Accounting,* (New York: Augustus M. Kelley, 1969) Chs. 1, 2 for a detailed account of the early beginnings of cost accounting and a comprehensive bibliography on the subject.

[8]Henry Metcalfe, *The Cost of Manufactures,* (New York: John Wiley & Sons, 1885); Emile Garcke and John Manger Fells, *Factory Accounts, Their Principles and Practice,* (London: Crosby, Lockwood and Son, 1887); George P. Norton, *Textile Manufacturers' Bookkeeping,* (London: Simpkin, 1889); J. Slater Lewis, *The Commercial Organization of Factories,* (London: E. and F. N. Spon, 1896); Alexander H. Church, "The Proper Distribution of Establishment Charges," (a collection of 6 articles) *Engineering Magazine,* (1901); J. Lee Nicholson, *Cost Accounting-Theory and Practices,* (New York: Ronald Press Co., 1913); and J. Maurice Clark, *Studies in the Economics of Overhead Costs,* (Chicago: University of Chicago Press, 1923). See also, Michael Chatfield, *A History of Accounting Thought,* (Hinsdale, Ill.: Dryden Press, 1974), Chapter 12; for a well documented history of the development of cost accounting.

[9]Quoted by Paul L. Noble, "Differential Cost Accounting," (Dissertation submitted to the Graduate School of The Ohio State University, 1952), p. 5.

[10]Jonathan N. Harris, "What Did We Earn Last Month?" *NACA Bulletin,* January 15, 1936. See Raymond P. Marple (editor) *National Association of Accountants on Direct Costing—Selected Papers,* (New York: The Ronald Press Co., 1965), pp. 3-14, and C. Weber, *The Evolution of Direct Costing,* (Urbana, Illinois: The Center for International Education and Research in Accounting, 1966) for a well documented history of direct costing. Harris' and many other articles of much historical importance on direct costing are reproduced in Marple's work.

[11]Charles J. Stokes, *Managerial Economics,* (New York, N.Y., Random House, 1969), p. 119.

[12]*Ibid.,* p. 122. (The OPA Study was made to plan Price Controls.)

[13]Paul L. Noble, *Op. Cit.,* p. 65.

[14]*Ibid.,* p. 45.

[15]Fiske and Beckett, *Op. Cit.,* p. 610.

[16]James D. Edwards, "This New Costing Concept—Direct Costing," *The Accounting Review* (October 1958), p. 566.

[17]*Current Applications of Direct Costing,* (NAA Research Report 33, New York, 1961), p. 2.

[18]*Ibid.,* p. 9.

[19]*APB Accounting Principles, Volume Two* (New York, American Institute of Certified Public Accountants, 1971), p. 6014.

[20]*Current Applications of Direct Costing, Op. Cit.,* p. 88.

[21]Charles T. Horngren, and George H. Sorter, "Direct Costing for External Reporting," *The Accounting Review,* (January 1961), p. 92.
[22]Charles T. Horngren and George H. Sorter, "Asset Recognition and Economic Attributes—Relevant Costing Approach," *The Accounting Review,* (July 1962), p. 393.
[23]See, American Institute of Certified Public Accountants, *Objectives of Financial Statements,* (New York: American Insitute of CPA's, October 1973).

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