

ASSET MEASUREMENT AND THE NEED FOR AN INCOME THEORY

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The problem of income determination has been the main concern of accounting measurement in business enterprises. This interest in enterprises income has influenced all attempts in the accounting literature to develop a theory on which accounting measurement can be based. Edwards and Bell wrote :

the need for development of a rigorous concept of business income, one which rests on sound theoretical understandings yet is measured in practice, is indisputable. Business income is one of the key elements of information upon which the functioning of a private, free enterprise economy depends. ¹

Norton Bedford, on the other hand, points out that the solution to the accounting problem of income lies in the development of income theory able to provide answers to three questions : (1) what is income ? (2) whose income should be reported ? and (3) when should income be recognized ? ²

The literature is full of attempts to answer these questions and formulate income theories. But no generally accepted theory of income has yet been developed. Robert Sterling points out that although there is no general theory of income, the various schools of thought generally agree that "income is the difference in wealth at two points of time." ³ For him the problem of accounting measurement is one of determining the "wealth" or "well-offness" of an enterprise. Thus, Sterling seems to dismiss the need for a theory of income as a prerequisite for the measurement of an enterprise's assets.

This paper intends to discuss the possibility of assets' measurement

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without a theory of income. To do this, it is important to start with a general definition of measurement and then discuss its application in accounting.

Measurement consists of rules, which indicates an explicitly formulated procedure, for assigning numbers to objects in such a way as to represent quantities of attributes. In some instances, the rules are so obvious that detailed formulations are not required. This is the case when a yardstick is employed to measure lengths of lumber. Such examples, however, are the exception rather than the rule in most situations. The term "attributes" indicates that measurement always concerns some particular feature of objects. One does not measure objects, but one measures their attributes. This demonstrates that measurement requires a process of abstraction. An attribute concerns relations between objects on a particular dimension. The failure to abstract a particular attribute makes concepts of measurement difficult to grasp. The definition of measurement also emphasizes the use of numbers to represent quantities. Quantification concerns how much of an attribute is present in an object. It calls for the use of a measurement unit in which these quantities are expressed.

When applying this concept of measurement to the accounting measurement of an enterprise's assets, it is important to decide on the specific attributes to be measured. Attributes can be the number, the weight or the size of certain kinds of assets. These are physical attributes. However, the concern of this paper is about attributes which can be measured in terms of money. These are categorized as economic attributes. Economic attributes must be specified before they can be measured in monetary units. The relevant attribute with which accounting measurement is essentially concerned is that of value.

Professor W. Paton said :

... it is really values that are the basic data of accounting, and costs are important only because they are the most dependable measures of initial values of goods and services flowing into the enterprise through ordinary market transactions. ⁴

Value of an asset is considered in relation to its ability to provide future economic benefits. Chambers, who defines an "asset" as "any servable means in the possession of an entity," insists that the term is used only "in contemplation to some specific entity."⁵ Thus the value of an asset is to be measured on the basis of what the asset is worth in relation to that specific entity. This also was the view of early accounting writers such as Henry R. Hatfield who wrote as early as 1909 that :

the proper value of assets is that which they have to the holding concern, and not that which they might have to other persons, whether these persons are ordinary customers, or those who might bid on the assets at a liquidation sale. The value is that which they have to the company as then existing . . . ⁶

A business entity exists to continue to carry on operations, generating goods and services for society. The value of its assets should be measured with this end in view. Assets of a going concern at any point of time represent a mixture of both completed and incompleted transactions. Monetarily visualized, they include money, claims on money (such as debts owed by others and bank deposits), and goods of all kinds with service potentials for future claims on money. Values of these assets fluctuate for internal and external reasons. Measurement of the values of an enterprise's assets will require answers to such questions as : Which value is to be considered? When is an increase or decrease in value to be recognized? What procedure should be used in calculating an increase or decrease in the value of an asset? This, in fact, is the essence of an income theory. A theory of income provides the "rules" needed by accounting measurement for the process of assigning monetary values to assets. Asset measurement can not be performed without the guidance of an income theory on such matters as depreciation, inventory valuation, and all problems related to increases or decreases in the values of assets.

Sterling points out four concepts that could guide the process of asset valuation : (1) the historical cost approach (Accounting tradition); (2) Fisher's discounted value of future receipts; (3) the present market value; and (4) Boulding's constant valuation ratio.

The use of cost is one method of measuring value. Accountants have generally preferred to use this method because of its objectivity. At the date of acquisition, cost is usually the best available measure of value. However, as time passes, acquisition cost tends to lose its significance as a measurement of value. It becomes important that the measurement process should take into consideration any changes in the value of assets. The problem arising at this point is how to determine these changes. Horngren says that "the reporting process should be broadened to encompass any value changes that can be supported by objective verifiable evidence."⁷ In other words, the problem is one of distinguishing between realized and unrealized income and the solution has to come from an income theory.

The second approach (Fisher's Tradition) holds that the best measure of an asset's value is the discounted value of future cash flows that it will generate. Due to the difficulties involved in predicting future cash receipts, this approach can only produce a subjective measurement.

The third approach to asset measurement, which uses the current market value, is more objective than Fisher's approach. It is in line with G. Edward Philips' "Accretion Concept of Income." According to Philips, income is an increase in economic power is measured by market values of assets.⁸ But current market value does not provide an adequate measure for all kinds of assets. Some assets will have a very small "scrap liquidation value" whereas their value to the enterprise may be considerable.⁹

The fourth approach presented by Sterling is entitled Boulding's Constant valuation ratio. It holds that since all valuation possess a certain unavoidable arbitrary element, it is possible to avoid this dilemma by using a constant valuation ratio.¹⁰ Sterling as well as many others agree with Boulding that all methods of valuation are arbitrary. But they hold that accountants should search for a way to make rational choices between valuation methods. Lemke points out that an asset must be valued "according to whichever of the one or more bases offering definite verifiable evidence to permit objective measurement that gives

the best approximation to the present values of its future net income stream.”¹¹

It seems obvious that all attempts to guide the measurement of assets in a business enterprise have been based on some concepts of income. Since the attribute which accounting measurement is attempting to quantify is “value” it is necessary to have an income theory to guide this process. Answers to questions related to increases and decreases in the values of assets cannot be found outside the area of income theory. Sterling makes a distinction between valuation as a process “tied to the future” and measurement as a process dealing with the facts of the past or present. He does not see the necessity for an income theory to measure assets. He contends that income is a derivative of the measurement of wealth in two points of time. Therefore, it is possible to determine an enterprise’s income during a period of time by subtracting point one assets from point two assets.

The conclusion of this paper disagrees with Sterling’s contention and stresses that no useful measurement of assets can be performed without a theory of income. Even when measuring only present or past events as they affect the values of assets in a business enterprise, there is a need for a theory of income because the concept of value itself cannot be defined in the economic sense without considering the future element attached to it. The existence of this element places accounting measurement in the category of valuation. Accounting measurement, thus, is a method of valuation which tends to be more objective and more precise than other valuation methods in behavioral sciences. The emphasis here is on accounting measurement as a means of quantifying economic attributes (value). However, the general concept of measurement is a different matter. When the measurement process is concerned with other attributes than economic values (such as physical attributes of weight, number, or size) then measurement can be guided by rules outside the area of income theory.

Footnotes

1. E. Edwards and F. Bell, *The Theory and Measurement of Business Income*, (Berkeley, Calif. : The University of California Press, 1965) , p. vii.
2. Norton Bedford, "A Critical Analysis of Accounting Concepts of Income", *The Accounting Review* (October, 1951), pp. 526-527.
3. Robert Sterling, *Theory of the Measurements of Enterprise Income* (Lawrance, Kansas : The University Press of Kansas, 1970), pp. 65-82.
4. William Paton, "Accounting Procedures and Private Enterprise", *The Journal of Accountancy* (April, 1968), p. 288.
5. Raymond J. Chambers, *Accounting Evaluation and Economic Behavior* (Englewood Cliffs, New Jersey : Prentice-Hall Inc., 1966), pp. 103, 104.
6. Henry R. Hatfield, *Modern Accounting* (New York : D. Appleton-Century Company, 1909), p. 80.
7. Charles T. Horngren, "How Should We Interpret the Realization Concept?" *The Accounting Review* (April, 1965), p. 325.
8. G. Edward Philips, "The Accretion Concept of Income", *The Accounting Review* (January, 1963) pp. 14-26.
9. Kenneth W. Lemke, "Asset Valuation and Income Theory," *The Accounting Review* (January, 1966) p. 35.
10. Sterling, p. 18.
11. Lemke, *op. cit.*

Additional Sources Used

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- Robert K. Jaedicke, yuji Ijiri, and Oswald Nielsen (editors), *Research in Accounting Measurement*, (American Accounting Associations, 1966).