ACCOUNTING THEORY, FORMULATION, AND TESTING

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INTRODUCTION

The present accounting discipline consists of two dimensions. These are accounting practice and accounting theory. The major part of accounting practice is public accounting, which is practiced by certified public accountants, and its final product is to provide a neutral opinion about the fairness of the financial statements. Cost accounting practice, taxation, and government accounting are other areas of accounting practice.

Accounting writers consider the year 1492 a cornerstone in the history of accounting practice. In this year Luca Paciolo printed in Italian a mathematical book including a section which described the bookkeeping procedure of that day. Bookkeeping practice was transmitted from Italy to Western Europe and the New World with minor development from the era of Paciolo to the nineteenth century. Accounting writers look to the nineteenth century as an important era for accounting. This century, which followed the industrial revolution, was the era of extensive growth of business corporations both in Great Britain and the United States. The major growth of business corporations led to: (1) an increase of public investments, and (2) the necessity of the use of financial information by management to arrive at proper decisions. These events transformed bookkeeping into accounting. Professor Littleton summarized the effect of corporate growth on accounting as follows:

This development (corporate development) speeded up industrial production and greatly increased the public holdings of investment securities, and for both these reasons, corporations gave considerable impetus to the expansion of bookkeeping into accounting. The need for managerial control over productive activities gradually produced cost accounting; and the need to protect the investing public against financial misrepresentations by corporate managers gradually produced external auditing and a class of independent professional accountants.¹

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In the first half of this century the accounting practice was affected by some legislative actions. In the United States, for instance, the Securities Act of 1933 and Securities Exchange Act of 1934 and major effect on accounting practice in that country.

The liability of public accounts in another important factor affecting accounting practice. Such liability became an issue of major importance in the 1960’s.

The other dimension of the accounting discipline is accounting theory which was get the attention of some of accounting writers in 1930’s. Among those contributed remarkably to the accounting theory at that period are: Professor Norris, the author of Accounting Theory; Professor Bray, the author of Four Essays in Accounting Theory; and Professor Littleton, the author of Structure of Accounting Theory. Until the present time accounting theory is still a matter of controversy. Among the matters in controversy are the nature of accounting, the structure of accounting theory, and the relationship between theory and practice, and the measure of income.

THE NATURE OF ACCOUNTING

The nature of accounting is a controversial matter and discussion of whether accounting is an art or a science of something else is still a subject of controversy among accounting writers. In order to project light on the nature of accounting I would like to bring to the reader’s consideration some definitions of accounting. An AICPA Committee on terminology proposed in 1941 that accounting be defined as “the art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions, and events which are in part at least of a financial character, and interpreting the results thereof”. And in 1962 the functions of accounting were described in the “Basic Postulates of Accounting” as (1) to measure the resource of entities, (2) to reflect claims against them, and (3) to measure the changes in both resources and claims in a period of time and in terms of money. Other functions were mentioned by Mr. Kohler in A Dictionary for Accountants. Among these functions are its contributions to the development of modern ideas of shared management, clearer delegations of management authority, operable budgets, cost consciousness throughout an organization, the provision of cost alternatives at basic operating points, and establishing improved conduits for interorganizational information. It is observable that the foregoing definitions stated clearly the functions of accounting and what accounting does, but these definitions and the other similar definitions do not clearly define the nature of accounting. However, these definitions do describe to some extent the purpose of accounting, the activities served by accounting and the final product of accounting, which assists accounting writers to select a proper classification for accounting among the accepted classes of knowledge. Knowledge in general can be divided into five major classes as follows:

1) Letters and Arts, which include music, painting, sculpture, language and literature, and drama;
2) Biological Sciences which include botany, zoology, physiology, and genetics;
3) Physical Sciences, which include physics, chemistry, geology, and astronomy.
4) Social Sciences, which include anthropology, sociology, history, philosophy and ethics, law and government, psychology, and economics.
5) Abstract Sciences, which include logic, mathematics, and statistics.

It is clear that accounting does not relate to the first three classes. However, the reader should remember that the definition of accounting and some of its functions which measure the resource of the entities, reflect claims against the entities, and measure the changes in both resources and claims during a period of time and in terms of money. This definition indicates clearly that the subject of accounting activities is the economic activities of a business enterprise. During a period of time and using a common economic standard (the monetary unit), the accounting people record, classify, and summarize all of the economic activities of the business enterprise so that the data will be more informative and more useful for the parties interested in the economic activities of the business enterprise.

In order for accountants to achieve their goals, that is, to provide more informative and more useful financial information accountants use the arithmetic numbers and some quantitative methods as recording and summarizing tools. Accounting students use in their daily practice elementary as well as advanced quantitative analysis starting from the four operations through breakeven analysis and up to regression and correlation analysis, especially in managerial accounting and accounting research. The foregoing discussion lends the writer support to state that accounting has very strong relationships with economics and statistics. Professor Littleton supported this view when he stated:

The content of many accounts reflect wealth invested, withdrawn, distributed, borrowed, loaned, owned, and owed. These accounts are used to record enterprise financial activities affecting assets, liabilities and capital. Other accounts reflect wealth produced, exchanged, lost, gained. The liabilities and capital accounts tell something of the sources of enterprise wealth, asset accounts tell of wealth that is on the way to producing more wealth, revenue accounts tell of wealth inflowing from product outflowing, cost and expense accounts tell of wealth applied in creating the outflow of products that induces the inflow of revenue.  

As to the relationship between accounting and statistics Professor Littleton says: Accounting method is statistical in character because its central mechanism consists of accounts, and accounts are classification categories used for compressing and simplifying a mass of enterprise transactions. The chief function of statistical method is to classify, compress and simplify masses of data so that their significance may be better understood. Accounting has the same function.  

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4. Ibid., p. 8.
Also Professor Chambers stated the relationship between accounting and economics in both of his articles "Blueprint for a Theory of Accounting" and "Detail for a Blueprint". Furthermore, accounting scholars have stated that accounting has relationships with other fields of knowledge besides economics and statistics. This is observable in the following quotation from Professor Chambers article "Detail for a Blueprint" where he stated:

It's not unreasonable to expect that economics may throw some light on, or provide some basic concepts which will be useful in the study of accounting. But it is not the only subject to which accounting may be related. It may transpire that some of the conclusions of psychology, political science, and jurisprudence are also necessary and useful.\(^5\)

In spite of the fact that accounting scholars have pointed out that accounting has close relationships with the social science areas of knowledge, they still do not agree as to whether or not accounting is a true science. Professor Chambers, for instance, divides accounting into two dimensions: accounting practice and accounting scientific studies which include developmental accounting theory. Accounting practice should be provided for under restricted rules and regulations stated by accounting professional body or by any other party having the right to set up the rules. Also, accounting practice should be provided for according to the agreement with the client. In regards to the necessity of agreement with the client. In regards to the necessity of agreement with the client Professor Chambers has stated:

The scientific study of any subject is not limited by the standards and conventions necessary in its dependent field of practice. The student is free to consider many possible modes of action, many possible combinations of facts and many hypothetical propositions in his research for knowledge. He is not constrained by the necessity of making any of his theoretical models work in practice; but if his observations are realistic and his reasoning is rigorous, his theoretical models often suggest to practitioners new and more useful practices than those they have been accustomed to follow.\(^7\)

**FORMULATION OF ACCOUNTING THEORY**

To be sure that the reader will understand my terms and then my discussion, I prefer to put before the reader some definitions or elaborations of what I am going to discuss. Theory in general is defined by Karl R. Popper in the following quotation:

Theories are nets cast to catch what we call "the world" to rationalize, to explain, and to master it. We endeavour to make the mesh ever finer and finer.\(^8\)

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6. Ibid., p. 206.
7. Ibid., p. 206.
Eric Kohler defines theory as:

A set of propositions, including axioms and theorems, which together with definitions and formal or informal rules of inference, is oriented toward the explanation of a body of facts or treatment of a class of concrete or abstract operations. In well defined fields, the support of a theory derives from two considerations (a) its logical structure with respect to consistency, redundancy of propositions, as well as its deductive potential, (b) the manner in which propositions dependent on the theory may be placed in correspondence with data incorporated in facts relative to rules of measurement, testing of hypothesis or more generally accepted "rules of evidence".9

The committee on Accounting Theory Construction and verification describes a theory as set of sentences or language expressions. The language expressions can be projected in three different modes. The syntactical propositions which indicate the relations of signs to signs, but these projections do not indicates empirical content. The semantical rules indicate the relationship between a particular sign and a particular subject or event. These semantical rules give empirical meaning to the signs. Pragmatics is the study of the relation of signs to the users of the signs. Different users may interpret the same sign in different way. The Committee stated that:

A theory of empirical science may be divided into two parts: (1) a formal system which is composed of abstract symbols and a set of syntactical rules for manipulating those symbols; and (2) an interpretation of the formal system which connects certain symbols to observations via semantical rules. The propositions in the formal system are analytic in the sense that they are deduced from axioms or definitions. The propositions of the interpreted theory are intended to be empirical and they must be tested by observations. The semantical rules are connected with two different kinds of observations: (1) inputs and (2) outputs. In order for a theory to be complete the kinds of observations to be made and the measurement rules must be specified. These are the empirical inputs to the formal system. Those inputs are then manipulated according to the syntactical rules. The outputs of the formal system are connected with a semantical rules to observations. If the observations are as specified by the formal system, then that particular proposition is said to be verified.10

More concretely a theory can be formulated based on a sequence of events or actions. Observations is the first ring in the theory formulation chain. When an individual observed a phenomena, that is, the relation between two events, and then this observation led the individual to formulate a hypothesis to explain the observed phenomena, a second ring in the theory formulation chain has been added. The third ring in the chain is the devising of a proper test, and then the conducting of a proper

test. After testing a generalization can be stated. The primary consequence of a
verified test is the establishment of a principle or law. It is pertinent to emphasize that
a theory is not the creation of man, but the discovery of man, and it is the job of man
to apply a proper measurement to test his discovery or in other words to verify.

Professor Chambers stated four propositions as the basis for accounting theory.
These propositions are:

(a) certain organized activities are carried out by entities which exist by the will or
with the co-operation of contributing parties;
(b) these entities are managed rationally, that is, with a view to meeting the
demands of the contributing parties efficiently;
(c) statements in monetary terms of the transactions and relationships of the entity
are one means of facilitating rational management;
(d) the deviation of such statements is a service function. It is clear that these
propositions are another way of interpreting the accounting definition.

ACCOUNTING MEASUREMENT

It was stated earlier in the second proposition of accounting theory by Professor
Chambers that accounting entities should be managed rationally in order to meet
the demands of contributing parties efficiently. The work rationally leads one to
think of the importance of accounting measurement in the performance of
accounting activities. Most accounting scholars realize the necessity of proper
accounting measurements for more information and for more useful financial
information, which is used for future decision making. Professor Ijiri, for instance,
emphasized the importance of accounting measurement when he stated:

Measurement is the core of accounting, and without an understanding of
what is measured and how it's measured proper comprehension of accounting
is totally impossible.

And Professor Bierman went a step further in this matter when he stated that
accounting itself is a matter of measurement. The following quotation points to his
firm opinion on this subject:

Accounting is the art of measuring and communicating financial information.
This statement is not shocking or even surprising, yet the knowledge
that accounting is concerned with measurement is a first necessary step
towards a long awaited revolution in accounting.

*The Nature of Accounting Measurement*: Dictionaries define measurement in
general as the assignment of a system of ordinal or cardinal numbers to the results of
a scheme of inquiry or apparatus of observation in accord with logical or
mathematical rules. The Committee on Foundations of Accounting Measurement

1967).
adopted the definition that, "accounting measurement is an assignment of numbers to an entity past, present or future economic phenomena on the basis of observation and according to rules."15 From the foregoing definitions it is observable that measurement is a special language which represents the real world phenomena by means of numbers and relations among numbers that are predetermined within the number system. Furthermore it should be observed that numbers by themselves or the relation between numbers have the property which help to rank the events according to the assigned numbers, that the events have, but without a predetermined unit of measurement the relation between numbers is not particularly useful for future decision. From this point of view accounting uses the measurement of the assigned numbers of monetary units to represent monetary properties of objects and collections of objects. By the help of the assignment of such numbers it becomes possible to judge whether an object has more or less of a certain monetary value. In any place there is a common and conventional monetary unit, and the measurement of monetary units enables the result to be used in a wide variety of contexts at any given time.

What Accountants Measure :- To know what it is that accountants measure is a very important matter in every accounting measurement study. In the words of Mr. Peter Caws, "measurement presupposes something to be measured, and unless we know what that something is, no measurement can have any significance".16 The direct answer to what accountants measure is that they measure several items listed in the financial statement and the balance sheet, such as assets, equities, revenue, expenses, and income. But some accounting scholars, to include the Committee on Foundations of Accounting Measurement, divide accounting into two categories - operational accounting and equity accounting. Operational accounting is accounting designed to aid operating decision by management as well as investment decision by investors. It is agreed that the decisions of management and investors are mainly resource allocation decisions or economic decisions. The role of accounting measurement in this area is to help management and investors in their resource allocation decisions. As a result of that, the subject of measurement is the subject of allocation, for example depreciable assets.

The other category of accounting is equity accounting which focuses on the reconciliation of the equities of the various interested parties of the organization. Custodianship accounting, governmental accounting, health care reimbursement, and income tax accounting are examples of equity accounting. Measurement accounting in this area is used as a basis for achieving a state of affairs consistent with perceived social equity. The committee also stated that equity accounting exists also in internal accounting in order to promote a state of affairs consistent with organizational equity. The role of accounting measurement in this area is to help in


allocating bonuses among managers based on their part of the performance, in determining partners' shares, and in negotiating with labor unions.

Problems of Accounting Measurement:—Accounting measurement is a hot topic in contemporary accounting. It is a subject of discussion among accounting scholars. This means that it is still in the exploration stage. The accounting measurement concepts today still create some problems which get the attention of the interested researchers who do still more research to solve these problems. On of the present problems facing accounting measurement is that measurement is not specific, it is an approximation. Professor Larson supported this point of view when he stated:

A significant aspect of measurement, often overlooked in accounting is its approximate character. Measurement is never any more than approximation.\(^{17}\)

Professor Larson was preceded by Henzy Morgenau, who stated the problem as follows:

The trouble with the idea of measurement is its seeming clarity, its obviousness, its implicit claim to finality in any investigative discourse. Its status in philosophy of science is taken to be utterly primitive. Hence the difficulty it embodies, if any tend to escape detection and scrutiny. Yet it can't be primitive in the sense of being exempt from analysis, for if it were every measurement would require to be simply accepted as a protocol of truth, and one should never ask which of two conflicting measurements is correct. Such questions are continually being asked, and their propriety in science indicates that even measurement with its implication of simplicity and adroitness point, beyond itself to other matters of importance on which it relies for validation........

An empirically true value of measured quantity does not exist. What passes for truth among the results of measurement is maximum likelihood, a concept that attains measuring it a significant statistical sample of differing measured value is available.\(^{18}\)

Besides the approximate measurements there are some other problems facing accounting measurement. These are summarized as follows:

1. the accounting systems of adaptive entities can conform with the characteristics of a measurement system, only if they so conform is it possible to make valid comparisons and inferences from the information they produce;

2. the unit of measurement is the unit of currency of stipulated denomination, but of no fixed dimension, because a unit of fixed dimension is inconsistent with the characteristics of money as a medium of exchange in a fluid economic environment;

3. original measurements have a time dimension which is generally implicit, and such measurements are relevant at that time only;

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(4) derived measurement, that is, rules or ratios, are comparable as between entities only if the same measurement rules are generally adopted by all entities.\textsuperscript{19}

**CONCLUSION**

The present accounting discipline consists of two dimensions - accounting practice and accounting theory. Accounting practice made important progress in the past to meet the needs of interested parties for recording, classifying and summarizing financial information of business enterprises. The other dimension is accounting theory, which was introduced in the 1930's. In order for a student to understand theory formulation in the accounting area he needs to know the nature of accounting, that is, whether or not it is an art of a science or something else. The foregoing discussion shows that there is no clear cut point in this matter, because accounting has relationships with more than one field of human knowledge. Some accounting scholars consider accounting practice as an art, but not accounting theory. Other scholars, Professor Chambers for instance, classify accounting as a differences in the nature of accounting practice and accounting theory.

Accounting practice is controlled by the professional rules, as well as, the contractual relationship between the accountant and the client. But accounting theory is formed with more freedom. It is formed as a sequence of events or actions occur. Observation of a phenomena leads the observer to set up a hypothesis. The hypothesis is tested and according to the test results a generalization can be stated. After the generalization a principle or law is introduced. Measurement is an important element of formulating the accounting theory, as well as, accounting practice. It is extremely important for accountants to know that they measure, how they measure, when they measure, and why they measure. The foregoing discussion demonstrated that the answer to these questions is still a controversial matter. The concept of accounting measurement is still in the exploration stage. Because of this fact accounting measurement faces some problems such as the fact that measurements are still approximate, and consequently there is no real measurement in the accounting field. Time dimension is another problem facing accounting measurement.

BIBLIOGRAPHY


يتكون النظام المحاسبي الحالي من بعدين: المحاسبة التقليدية، والمحاسبة النظرية. وقد حفت المحاسبة النظرية نقدماً هاماً في الماضي لسد احتياجات الأطراف المعنيين بتسجيل وتصنيف وتحليل المعلومات المالية للمشروعات في ميدان الأعمال. أما بعد الآخر فهو نظرية المحاسبة التي أدخلت في الثلاثينيات. لكي يتفهم التطلاب تكوين النظرية في مجال المحاسبة، فإنه يحتاج إلى معرفة طبيعة المحاسبة، أو الأخرى ما إذا كانت لم تكن فناً أو علمًا أو شيئاً آخر. وتوضيح المناقشة في أنه ليس هناك رأي قاطع في هذه المسألة، لأن المحاسبة ذات علاقات بأكثر من مجال من مجالات الدراسة، ويتنور بعض علماء المحاسبة إلى المحاسبة التقليدية على أنها فن ولكن ليس على أنها نظرية محاسبية. أما العلماء الآخرون، كالاستاذ تشيرز، فأنهم يصفون المحاسبة على أساس الاحتكاف في طبيعة المحاسبة التقليدية علماً في نظرية المحاسبة.

وتذر الرقابة على المحاسبة التقليدية بوجه قواعد مهنية فضلاً عن العلاقة التعاقدية بين المحاسب والعميل ولكن نظرية المحاسبة تتشك بزيد من التحرز، إذ هي تشكل كتباً لوقائع وتؤدي ملاحظة الطواهر بالمرافق بوضوح افتراض. ويتغير الغرض وينبغي لنتائج الاحتكار تقرر التحديات. وبعد التعميم يتم إدخال ميداً أو فاً أو والقياس عنصر هام في تشكيل نظرية المحاسبة، فضلاً عن المحاسبة التقليدية. ومن الاهتمام بمكان بالنسبة للمحاسبين، أن يعرفوا أنهم يقيسون، وكيف أنهم يقيسون، ومن يقيسون، وماذا يقيسون. وتفصيح المناقشة سالفة الذكر عن أن الإجابة عن هذه الاستفالة لا إذالة مسألة جدية. ولا إذالة فكرة قياس المحاسبة في محلة النقص.

وسبب هذه الحقيقة أن القياس المحاسبى يواجه بعض المشكلات، مثل ذلك أن القايسم لا إذالة تقريبية، وأنه لا يوجد لذلك مقياس حقيقى في المجال المحاسبى. كما أن المقياس زمنى مشكلة أخرى تواجه القياس المحاسبى.