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AN EVALUATION OF THE PAST AND POTENTIAL ROLE OF ACCOUNTING IN NATIONAL ECONOMIC ANALYSIS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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The Ohio State University
1964

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PART I
CHAPTER I

SCOPE OF THE PROBLEM

The vital role which accounting might play in national economic analysis provides a challenging opportunity to broaden the horizons of the accounting profession.

Theoretically there is a common bond between the two disciplines because both are dealing with the same fundamental activities of men engaged in earning a living. Accounting measures and interprets these transactions from the viewpoint of individual business firms, while national economic analysis measures and interprets them from the viewpoint of society as a whole. Although the explanations may vary because the subject matter is approached from different angles, the underlying facts still remain the same.

Practically, there is mutual dependence, even though it is not always fully acknowledged. The national economic statisticians must rely on accounting figures to a great extent, for most of the data they use comes from business records. On the other hand, individual firms are
greatly influenced by the general economic climate in which they operate. If accountants as a group were aware of the importance attached to aggregate analysis by those planning our Federal fiscal and monetary policies, they would realize their business clients can be affected directly and indirectly by decisions based on that analysis. Thus there are practical as well as theoretical reasons for being interested in its development.

The thesis is herewith advanced that recognition of this fundamental interrelationship of the disciplines, accompanied by a better correlation of activities, would provide more accurate data and more perceptive analysis on both an individual and aggregate level. This is certainly not a new concept, for there have been attempts to effect better integration of accounting and economic analysis by a few members of both professions. Nevertheless, continued effort must be exerted by those interested in expanding the accounting function in this direction, for the idea of active participation by accountants in aggregate analysis is probably not generally accepted at the present time.

The biting criticism of Sir Josiah Stamp has been quoted on several occasions by accountants who wished to

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1Sir Josiah Stamp was a prominent English businessman and economist who was very much interested in national income statistics and in promoting better integration of economic and accounting data.
jolt their fellow practitioners out of what they considered to be a narrow business rut, and to direct their attention toward wider horizons and broader social responsibilities. In 1921 Lord Stamp said, "I make this serious indictment of accountants. Scientific accountancy has now been developing for some fifty years but I cannot trace that it has made a single substantial contribution to economic science over its own field of analysis of the results of industry, although it has practically a monopoly grip of the required data."¹

F. Sewell Bray, the eminent English accountant who has been an ardent advocate of cooperation between economists and accountants, was one of those who referred to this quotation but who commented in 1947, "It is probable that accountants have in the past tended to take too narrow a view of their functions, but there are clear signs that this is changing and it may well be that in the future the accountancy profession will have much to do with the developing technique of economic changes."²

Later activities by accountants would certainly have caused Lord Stamp's indictment to be less severe had

²Ibid., p. 38.
he commented on them, but it cannot yet be said that Bray's hopeful prediction has come true.

The official definition of "accounting" adopted in 1941 by the American Institute of (Certified Public) Accountants was purposely phrased in such a way that the scope of accounting would not be limited to any specific area, indicating an awareness of the possibility of expanding functions. The definition is as follows:

Accounting is 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.¹

With this choice of language the term "accounting" can be used in connection with nonprofit institutions as well as profit-seeking enterprises; it may be used to describe work done for a region or nation as well as for individual business firms. The record-keeping might refer to single-entry as well as double-entry bookkeeping, to cash as well as accrual methods.

However, the term is most frequently used in connection with business enterprises. For example, in Webster's New Collegiate Dictionary the definition of accounting includes the following phrase, "... the body

of principles underlying the keeping and explanation of business accounts."

This "body of principles" has reached its most effective state in accounting for the corporate form of business enterprise, where accrual methods and double-entry record-keeping are the general rule. Since most of the work of the professional accountants is in the corporate area now, published writings tend to revolve around practical suggestions for and theories about this phase of their activities. Though recognizing that the term "accounting" may be used in a very broad sense, it is the activity of accountants and accounting in a profit-seeking business enterprise framework that is to be appraised throughout this dissertation in relationship to national economic analysis.

"National economic analysis" will be used here as meaning that part of the field of applied economics which measures, on a national level, the aggregate behavior of men engaged in earning a living. Factual data are collected, measured in quantitative terms which are frequently expressed in terms of money, and are then available to be related to theories or explanations of economic behavior.

It is true that collection of such factual data can be purely statistical in nature. However, a new element
was added in the early 1940s when aggregate analysis was
cast in an accounting framework, and the use was made of
double-entry bookkeeping as another analytical tool. The
presentation of the whole body of national statistics in a
consistently interrelated accounting framework has
recently (1958) been designated as "national economic
accounting" by the National Accounts Review Committee of
the National Bureau of Economic Research. Other design-
nations have been used such as "social accounting,"1
"economic accounting,"2 "national income accounting,"3 and
"macro-accounting,"4 and the terms have been used almost
interchangeably in the literature on the subject.

1"Social accounting" was first used officially in
economic circles by J. R. Hicks in The Social Framework:
An Introduction to Economics (Oxford: Clarendon Press,
1942). Prior to this the term was used, with essentially
the same meaning, in an article by Elmer Hartzell entitled
"The Background of Accounting," in the June 1934 issue of
the Accounting Review (Vol. IX, No. 2).

2"Economic accounting" was used by John P. Powelson

3"National income accounting" was the term used by
Richard and Nancy D. Ruggles in their book National Income

4"Macro-accounting" was used by S. C. Yu in an
article entitled "Macro-accounting and Some of Its Basic
Problems" which appeared in the April 1957 issue of the
Accounting Review (Vol. XXXII, No. 2).
In the United States the best known result of this technique is the report called the "National Income and Product Account," prepared by the Department of Commerce. It is intended to represent on an annual basis the total national output of goods and services at current market prices, and the related aggregate earnings of labor and property. The product side of this account, called the "Gross National Product," and frequently referred to as "GNP," has been considered a valuable yardstick for the measurement of over-all economic growth. Less well-known analyses include the study of money-flows, the inter-industry input-output tables, the various sector accounts, the savings and investment account, the balance of payments account, the regional income and product accounts, and a national balance sheet. Some of these, such as the study of money-flows, have been put on a regular annual reporting basis. Others, such as the national balance sheet, are still in a highly experimental stage.

The National Income and Product Account will be the particular phase of national economic analysis that will be given the greatest emphasis throughout this dissertation. Not only has it become the best known, but apparently it is also exerting more influence on general governmental policy making than any of the other forms of analysis.

Since some of the tools of business accounting have already been put to use in national economic analysis, this
might appear to be an area where accountants and economists can meet and work together on common ground. It soon becomes apparent, however, that there are numerous instances where the same data are reported or used differently. For example, the accountants' interpretations of earnings are used in reporting business profits for individual firms. Although greatly dependent on these reports for primary data, the economic analysts have not accepted the figures as given for use in national economic statistics, but have modified them in a number of ways before summarizing and reporting aggregate business profits. This particular difference is not entirely due to reporting on a national instead of an individual enterprise level, but may also be attributed to certain basic dissimilarities in concept as to what is properly called net income by the business firms. Other variations could be cited which indicate lack of correlation of effort and a certain lack of mutual understanding. How did this situation arise? In the future, would better integration of concepts and activities be mutually beneficial to both accountants and economic analysts, or is there too wide a gap between the two to make this possible even if desirable?

In order to understand the present relationships, it may be helpful to investigate the background and development of the two disciplines so as to gain a better
over-all perspective of the factors leading up to the current status. This in turn may help to throw light on potential developments in the future. This approach was suggested long ago by Aristotle when he said, "He who thus considers things in their first growth and origin, whether a state or anything else, will obtain the clearest view of them."

As developed in America, both accounting and economics evolved from English backgrounds, although modern accounting is considered to have originated earlier in the counting houses of medieval Italy. Bookkeeping processes were developed for the sole purpose of helping individual businessmen in their pursuit of profit. Since then, over the centuries, a long-range trend can be traced which reveals a gradual broadening of accounting activities, for slowly but surely business accounting has responded to changing economic conditions. More recently accountants have shown an ever-increasing desire for theoretical soundness in their work, and have indicated an increasing awareness of their social responsibilities as well.

For many years accounting and economics apparently had very little in common. Economics had its roots in

philosophy, and national economic analysis gradually emerged as one phase of economics. Nevertheless, when one traces the development of economics as a separate science, or examines the early efforts of men in the field of national income statistics, it is possible to detect relationships which implicitly reveal a common bond, unrecognized at the time. The strongest acknowledged link with accounting has been provided by the modern emphasis on quantitative measurements in economic analysis.

Thus the long-range trends reveal that there has been a steady movement from widely diverse origins to a point where there seems to be a fairly substantial common meeting ground, which is still subject, however, to the conceptual differences carried over from the varied backgrounds.

When the double-entry technique was first adopted in this country in the 1940s as a framework within which to analyze the national income and product, the accounting profession was extended an invitation to take part in the movement by several interested economists. There was a flurry of interest in the subject following this, which resulted in published expressions of opinion by accountants concerning the work being done by the National Income Division of the Department of Commerce.

Pursuing the lines of inquiry suggested by these articles, the present structure of the national economic
accounts has been examined carefully. This is followed by an evaluation of their basic concepts, techniques, and reports. Although all the long-range trends have shown a steady movement toward a common meeting ground, a realistic appraisal of the current situation reveals an apparent impasse, with no immediate solution in sight.

But what should be the role of accounting in the program? The current lack of progress toward greater cooperation should certainly not be allowed to persist. It is recommended that the accounting profession take steps to provide:

1. Explicit recognition that participation in national economic analysis represents a legitimate function of accounting.

2. Positive action to overcome the present differences. On the individual business level this would mean recognition of changes in purchasing power in the accounting statements. On the national level this would involve more direct use of business reports and fewer imputations.

3. Research programs, as a necessary prerequisite to eventual offers of concrete assistance and constructive suggestions.

One of the most valuable contributions that accountants could make would be assistance in fact-gathering techniques, so that the national reports could be based on more accurate, comprehensive, and timely data. Other contributions might follow, and this offers a challenging opportunity to widen the horizons of accounting.
PART II

ORIGINS AND EARLY DEVELOPMENTS
CHAPTER II

ORIGIN OF DOUBLE-ENTRY BOOKKEEPING

The practical need to keep business records is as old as civilization itself, as evidenced by examples found in archeological diggings, but modern accounting is considered to have evolved from the double-entry bookkeeping which emerged in Italy during the Middle Ages.

The Graeco-Roman world preceding this had thriving trading activities based on money exchange prices, but the record-keeping remained rudimentary. G. E. M. de Ste. Croix examined original business documents of this age, as well as the legal and literary sources of information, and stated definitely that there were no evidences of double-entry bookkeeping; rather, that the Greeks and Romans thought, and kept their books, mainly in terms of receipts and expenditures; that these figures were not separated into columns, and were not even placed precisely in single columns. He said, "The fundamental reason for this was, of course, that the Greek and Roman economy failed to develop to the point
at which an advanced system of bookkeeping would have become generally necessary."

Over a thousand years after the fall of the Roman empire Italian merchants began to expand their trading activities very rapidly. It has been said that "double entry developed in Italy in response to the needs of nascent capitalism. Italian business organization became so complex that merchants and bankers could not get along without an efficient system of bookkeeping." Just when the method was perfected may never be established exactly, but scholarly research has disclosed that it was in use well over 100 years before the first published treatise on the subject in 1494.

Among those who have examined original documents of the medieval period was Raymond de Roover, who said, "Double entry did not grow out of any pre-established theory, but was gradually developed step by step by a process of trial and error. As improvements were made they spread from one counting house to another until they gained general

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acceptance. He attributed this progress largely to three factors—partnership, credit, and agency, with partnership being most important because it led to the recognition of the firm as an entity distinct from the owners. Thus, "it became necessary to keep track of changes in the owners' equity, either through new investments or withdrawals, and to devise a system permitting the determination of profit or loss, which was then distributed to the partners in accordance with the provisions of the articles of association."  

This development has been placed roughly sometime between 1200 A.D. and 1340 A.D. Partnership records at the beginning of this period revealed no evidence of the double-entry approach, but by the latter half of the thirteenth century merchants were using equity and expense accounts, and very little was needed to perfect the system. However, the earliest records that have been found which have met all the criteria necessary to classify them as double entry were


2Ibid., p. 116.

3Ibid., p. 115.
those kept by the stewards, or "massari," of the Commune of Genoa for the year 1340. The system must have been complete before that, for they were obviously the continuation of former records.\(^1\)

In commenting on its development, B. S. Yamey said that the double-entry system had three main advantages over all prior methods of record keeping. First, the records were more comprehensive and orderly; second, the duality of entries provided a convenient check on the accuracy or completeness of the accounts; third, the accounts were integrated in a consistent manner which made it possible to develop from the system the statements of profit and loss, and of assets, liabilities, and ownership claims. Professor Yamey thought that it was the first two qualities which recommended its use to the early practitioners, and he discounted the attaching of any unusual significance to the profit and loss aspect.\(^2\)

Others do not agree with this interpretation, including de Roover\(^3\) and A. C. Littleton. To Professor


\(^3\)See above, p. 16, Note 2.
Littleton the income determining factor was the very essence of the double-entry system. He said, "In the city republics of medieval Italy, traders employed their capital productively in commerce, that is, they chose among risks for gain. . . . They could not avoid wishing to learn what the gain or loss amounted to, for that knowledge was the basis for judging the wisdom of having risked capital in a certain manner. In such a case, it seems inevitable that the real substance of the record keeping that must finally emerge would have to be a proprietor's calculations of the gains (revenue credits) resulting from ventured capital (revenue debits)."¹

This viewpoint seems to have some backing in the earliest reported words ever to be written about double-entry bookkeeping. Even before the famous treatise of Pacioli appeared in 1494, Benedetto Cotrugli of Naples wrote an essay in manuscript form in 1458 called, "On Commerce and the Perfect Merchant." This included the following excerpts from a section entitled, "On the Method of Keeping Records in the Manner of Merchants":

And [a good merchant] not only must be skilled in writing but must also keep his records methodically. . . . Mercantile records are the means to remember all that a man does, and from whom he must have, and to whom he must give, and the cost of wares, and the profits and the losses and every other

transaction on which the merchant is at all de-
pendent, and it should be noted that knowing how
to keep good and orderly records teaches one how
to draw contracts, how to do business, and how to
obtain a profit. And undoubtedly a merchant must
not rely upon memory, for such reliance has caused
many persons to err.

And therefore I warn and encourage any merchant to
take pleasure in knowing how to keep his books well
and methodically. And whoever does not know [how
to do this] let him get instruction, or else let
him keep an adequate and expert young bookkeeper.
Otherwise your commerce will be a chaos, a confusion
of Babel, of which you must beware if you cherish
your honor and your substance.¹

Cotrugi may have been a little overenthusiastic
when he claimed that knowing how to keep good and orderly
records would teach one how to draw contracts or how to
obtain a profit, but his words do illustrate the point that
the determination of profit was an important function of
record-keeping, and that information obtained from the
books could help in the management of the business. Also
they reveal that, while merchants must have kept their own
records to a great extent, specialized services in book-
keeping were developing, and that there must have been
"expert young bookkeepers" available for such employment.

There is no evidence that medieval merchants were
concerned with economic theories. The task of expounding

¹Robert S. Lopez and Irving W. Raymond, Medieval
Trade in the Mediterranean World, Vol. LII, Records of
Civilization: Sources and Studies, ed. Austin P. Evans
doctrines was left to the churchmen of the Middle Ages, the most famous one being St. Thomas Aquinas, who lived in the thirteenth century. Some of his thoughts along these lines reflected views that had been held by the early Greek philosopher, Aristotle. For example, both condemned usury, or the loaning of money at interest. Aristotle had regarded retail trade, or the art of producing wealth by exchange, as unnatural. Aquinas was living in an age when trading was well established, so he did not disapprove of it as such, but emphasized the fact that it was acceptable only if a merchant charged a "just price" for his wares. The authority of the Church was invoked to establish many rules covering temporal affairs of the people. Included among these were bans on the use of Arabic numerals and on usury.¹

It was unrealistic to think that anyone would take the risks involved in loaning money without some compensation, and loans were needed by businessmen. Although medieval records of this time did not show interest as such, de Roover found that devices were obviously used to circumvent the ban. Since each city-state had its own currency, sometimes interest charges were buried in the rates of exchange. Another device was to buy goods on credit at a

¹The preceding portion of this paragraph was adapted from John Fred Bell, A History of Economic Thought (New York: Ronald Press, 1953), Chapter 5 on "The Middle Ages and the Schoolmen."
high price, then to resell the goods for cash at a lower price, with the resulting loss really representing the price paid for the use of the money, for the full amount of the purchase had to be paid later. This practice was revealed by an examination of the Genoese books of 1340, for they showed losses of this nature on pepper, raw silk, sugar, and wax.\(^1\) Eventually, practical necessity overcame the objections of the Church and such bans were removed. However, these examples serve to illustrate the point that philosophical contemplations about economic activity were sometimes at odds with actual business practice, and at one period in the middle ages the church attempted to enforce its views on economic matters by official edicts.

When the Franciscan monk, Luca Pacioli, published his *Summa de Arithmetica, Geometrica, Proportioni et Proportionalitate* in Venice in 1494 he used Arabic numerals and wrote in the native language, instead of employing Roman numerals and Latin exclusively, for he intended his book to be useful to as many people as possible. Neither he nor Cotrugli claimed authorship of the technique, but merely indicated that this was the way the merchants kept their records.

It has been said that the early writers did not supplement explanation of methodology with theory, but

\(^1\)DeRoover, *Studies in the History of Accounting*, p. 132.
Pacioli established a clear-cut purpose for the merchant, namely, an honest profit, which could be achieved more effectively with a good bookkeeping system. There was no longer any evidence of church disapproval, and bookkeeping and accounting had received recognition as being of great importance. The following passage is a translation from the title page of his treatise:

It is proper to suppose that every operator has a purpose in view toward the realization of which he bends every effort. The purpose of every merchant is to make an honest and legitimate profit for his living.¹

He also indicated that if one wished to conduct his business properly it was necessary to have sufficient cash or credit, to be a good bookkeeper and capable accountant, and to have a proper bookkeeping system. He recommended the method used in Venice as superior, and his treatise went on to give "all the necessary rules for them to keep in proper order all their books and accounts."²

Raymond de Roover commented that the practice of the counting house was far ahead of the rather simple system described in the early treatises. He gave a reproduction of the balance sheet as of January 31, 1399 of the Barcelona branch of the famous firm owned by Francesco Datini, and of


²Ibid.
the profit and loss statement of the preceding eighteen months. These clearly showed among the expenses charges for bad debts, for depreciation of office furniture, and for taxes and other accruals, with a corresponding reserve for accrued taxes and contingencies among the liabilities on the balance sheet. In another branch of the Datini enterprises, de Roover said there were evidences of job accounting with allocation of burden and indirect labor cost. The records of the Medici bank in Florence also revealed that accrual methods were known and used. Although such refinements were not in universal use, the mere fact of their existence indicated that the balance sheet was not just a means to prove the ledger, but that statements were also used as effective instruments of management and control. To de Roover it was no mere coincidence that the Italians were the leading businessmen of Europe during the Middle Ages and were also the only ones to use the double-entry system for their record-keeping.

Through trial and error, and without any theoretical foundations, the system had developed in response to practical needs. Double-entry bookkeeping had no part in


\[2\] Ibid., p. 146.
advancing any doctrines about economic activities, but was used as an effective tool by owners of individual business enterprises in their pursuit of profit. As such, it aided the general economic growth of the times.
CHAPTER III

ORIGIN OF NATIONAL INCOME ESTIMATES

For the next significant development pertinent to this study the scene shifts to England in the late seventeenth century, for Sir William Petty (1623-1687) has been credited with being the first man to have a concept of national income and to follow through with an attempt to measure it.¹

Many changes had occurred in the 200 years since Pacioli's treatise had been published. Following the discovery of America, new trade routes had been opened, and Spain, France, Belgium, the Netherlands, and England had prospered. Italy had lost out relatively as the other countries had forged ahead, with first the Dutch and then the English emerging as great powers. With expanding trade, the superior "Italian way" of record-keeping had been recognized and was gradually superseding local methods. The spread of its use had been facilitated by publication of texts in various languages, and in most cases these had been direct translations or adaptations of Pacioli's work.

Before the advent of double entry, medieval England had developed a rather advanced form of stewardship accounting for its great manors, or feudal estates, but this, too, was giving way to the Italian method.

Feudalism had disintegrated under the impact of changing conditions, and national states had emerged as political units. Italy had not united under a single ruler, retaining its city-state allegiances, but other countries had developed very strong national ties.

Typical of the economic views that had developed during this period was the term "political economy," meaning economic planning supervised by the state. This general outlook was called mercantilism, and it had taken different forms in different countries. In all cases, however, the goal was to strengthen the power of the state, and this was accomplished by various complex regulations. Usually emphasis was placed on securing a favorable balance of trade, and increasing the stock of gold.1

In some cases special favors had been granted by the Crown, such as the charter issued by Queen Elizabeth to the East India Company in 1600 A.D., which gave it the monopoly on trade to the Far East. This company represented a special kind of partnership, being financed by joint stock subscriptions, and at the end of each venture the entire assets

1Adapted from Bell, History of Economic Thought, Chapter 6, English Mercantilism, and Chapter 7, French and German Mercantilism (New York: Ronald Press Co., 1953).
were divided among the investors. During the middle of the seventeenth century a rather significant change had occurred. On the basis of valuation of the stock, any shareholder might have his place taken by another who wished to join the company. Thus a very modern feature had appeared, transferable shares in a continuing operation, and business organization was that much closer to the corporate form. Also about this same time, the company established the policy that future distributions would consist of profits earned rather than of liquidations as in the past. Thus, the record-keeping process had to provide information which would distinguish clearly between capital and income.¹

Men had begun to write about their views on economic matters, and usually these essays had taken the form of specific suggestions about practical issues. For example, some had written to criticize the East India Company for shipping gold out of the country. Others, like Thomas Mun (1571-1641), a prominent merchant and an official of this company, had defended its policies, or had suggested methods to improve the general trade of the country.² Also there were a few thoughtful men, like John Locke, the philosopher

¹Littleton, Essays on Accountancy, p. 77.

²Adapted from Bell, History of Economic Thought, Chapter 6, English Mercantilism.
(1632-1704), who had started to express opinions on property, trade, money, values, and other economic concepts, but no integrated system for explaining men's behavior in these areas had developed.¹

This, then, was the stage that had been set for Sir Petty, at the peak of the mercantilist era in England. He was just as ardent a nationalist as his contemporaries, but his attentions were not limited to special problems of commerce, although he did advocate free trade, which was contrary to the prevailing opinion of his time. He was very much interested in science, and was convinced that quantitative measurements in terms of such things as numbers, weights, or money units were precise because they dealt with observable and verifiable facts. He believed that if the national income of the country were known it would be helpful in planning an effective tax program, so set about to measure it along "scientific" lines. For this reason he has often been called the father of statistics, although that term did not come into use until later.²

Studenski gave Petty credit for developing a sound concept of national income as a flow of goods and services. In his Political Arithmetik, written about 1676 A.D. but

¹Adapted from Bell, History of Economic Thought, Chapter 6, English Mercantilism.

²Ibid.
published posthumously, Petty defined "Income of the People" as "the Sum of the Annual Value of the Labour of the People, and of the Annual Proceed of the Stock or Wealth of the Nation," thus anticipating the modern distinction between labor income and property income. He did not view wealth as a stock of gold but as a stock of consumable goods, and the means of their further production. From the beginning, the concept of national income took the form of the monetary value of the nation's annual production and consumption.¹

Petty made two estimates, one in 1667 and one in 1676, but his actual measuring techniques left much to be desired, and to a modern accountant his results might seem to represent little more than glorified guesses. He first made a basic assumption that annual income was the equivalent of annual expense, ignoring savings and additions to "stock." Then he estimated an average expense for each person per year, covering food, clothing, housing, and other necessities. He multiplied this amount by the estimated number of people to reach an estimated annual expense of forty million pounds.²

No census of population was available to him, but there were public records of births and deaths. He


estimated that the annual ratio of deaths to the entire population was one to thirty living people in London, and one to fifty living people outside London, in normal years. Therefore he multiplied the recorded deaths by thirty and fifty, respectively, to estimate the total population of London and of the rest of England. His information about the number of houses was derived from public figures on the chimney tax, and he proved his population figures by multiplying the number of houses by the average number of people living in them.\(^1\)

When he directed his attention to the national income, he estimated that fifteen million pounds must have come from property, which he computed by estimates of annual income from each category of property listed in the available records, and attributed the difference of twenty-five million pounds to labor income. On the basis of these estimates he advocated an income tax of 10 percent as the most equitable means of raising adequate funds for the government.\(^2\)

Gregory King (1648-1712) followed up Petty's work, and Studenski characterized him as being meticulously


careful with figures and extremely cautious in his conclusions. The estimate he published in 1695 was about the same in total amount as Petty's, but his figures were more carefully documented. Also, he added the concept of the yearly increase in the nation's wealth as being part of the total, an element ignored by Petty.1

King's figures were popularized by Sir Charles Davenant (1656-1714) and he made a strong plea for better statistics. Some of the reasons he advanced for their usefulness are the same as those suggested today, namely, that they would help in formulating an effective tax policy, in planning mobilization of manpower and economic resources during war, and in formulating a foreign trade policy.2

In France, Pierre de Boisguillebert (1646-1714) was doing similar work. His concept and methods were much the same, but he was handicapped by the fact that records of basic data were inferior and less accurate than they were in England. He used the figures available to him to make devastating criticisms of the French government in its taxation and foreign trade policies, and as a result he was exiled. Another Frenchman, Marshall Vaubon (1633-1707), also

1Studenski, Income of Nations, p. 35.

2Ibid., p. 37.
prepared estimates to back up his pleas for more equitable taxation, based on ability to pay.\textsuperscript{1}

Thus we see that the concept of national income as another way of expressing national expenditures was established in the late seventeenth century, and that several attempts had been made to measure them in monetary terms in England and in France. Most of the data was derived from public documents, and there was not much indication that data from individual business records were available to them. In neither country was any attempt made to relate the information to any over-all explanation of economic behavior, but the figures were used to justify opinions that were expressed on taxing policies and on the related general welfare of the people.

There is not much on the surface here that would indicate any connection between these national income statistics and business accounting. Nevertheless it is possible to detect ideas that implicitly forged conceptual links between them. For example, Petty introduced quantitative measurements on an aggregative level for he felt that they could explain economic activity in terms that were precise since they dealt with verifiable facts, and this was a concept that had long been accepted on the level of

\textsuperscript{1}Studenski, Income of Nations, p. 54.
individual business accounting. Also Petty recognized the duality that existed in economic activity when he treated the measurement of national expenditures as another way of quantifying the same general flow of goods and services that were represented by national income. On an individual level, businessmen had also been aware of the concept of duality in economic activity. Thus some basic ideas were developing at the national level which indicated a relationship to concepts in general use on the individual business level, although apparently there was no recognition of any similarity at the time.
CHAPTER IV

ORIGIN OF ECONOMIC THEORY AS
A SEPARATE SCIENCE

The eighteenth-century development significant to this study was the fact that economic analysis became recognized as a separate science in its own right. First the Physiocrats in France, and then Adam Smith in England, proposed well-integrated systems of thought to explain economic behavior, so no longer were such ideas to be confined to the rules of churchmen or to the reflections of moral philosophers.

On the other hand, there were no major advances in business accounting or in national income measurement during this period. Double-entry bookkeeping was being used, of course, but the only writings about it in England were those found in textbooks, and most of these were made up of rather uninspiring sets of rules to learn.1 As to measurements of national income, there was a lull after the first efforts mentioned above. Except for a few sporadic attempts, no work was done in this area until the latter half of the eighteenth century, and then once again

1Littleton, Essays on Accountancy, p. 562.
statistical surveys were undertaken in order to justify proposed taxation policies.\textsuperscript{1} Although these fields were not showing significant progress, there were noteworthy developments in economic analysis.

In France, the Physiocrats had developed a theory about man's economic behavior. They assumed that there was a "natural order" which prevailed in the social as well as in the physical realm, which men could discover if they would observe and exercise their reason. This was in line with the scientific spirit of the times and became popular in intellectual circles.\textsuperscript{2}

The best known Physiocrat, Francois Quesnay (1694-1774), developed the Tableau Economique, which represented national income in dynamic terms as a flow of measurable funds and products from one sector of the economy to another, and stressed the interdependence of all classes of people. Even though the Tableau overemphasized the role of agriculture, Studenski felt that it was a great contribution to the concept of national income. He commented that its money-product flow analysis represented an approach that is at the very heart of the sector accounts of modern national income.

\textsuperscript{1}Studenski, Income of Nations, p. 43.

economic analysis, and that Wassily Leontief's input-output tables are a direct adaptation of this idea.\(^1\) The Physiocrats had a clear concept of national income, but made no attempt to try to actually measure it.

Record-keeping and reports of individual business enterprises had no place in their generalized analysis. Although industry was considered necessary to create goods which men needed, and trade represented the mechanics by which the circulation of goods was effected, both were regarded as essentially sterile, because they could not produce any surplus. The lack of understanding of the role of business was a definite weakness of this economic theory, and it gave way to the Classical school that developed in England.

Adam Smith's economic views were hailed with acclaim following the publication of his \textit{Wealth of Nations} in 1776. The words of this mild-mannered Scottish professor of moral philosophy were destined to dominate economic thought for 100 years, and to help shape national policies. His book represented the first complete and systematic work that was market-oriented, and definitely established economic science as a separate field in its own right. He claimed that the enlightened self interest of each man operated for the common

\(^1\)Studenski, \textit{Income of Nations}, p. 61.
good, and that the market place was self-regulating if there was free competition, which included a laissez-faire policy on the part of the government. He was writing against the vested interests of his day, for the state had set up many rules and regulations regarding trade, and had granted special privileges or monopolies to certain groups. It is not much wonder that his views struck a responsive chord among many businessmen, for not only was he advocating the discard of irksome controls, but was elevating the seeking of personal gain to the dignified role of improving the general welfare of all.¹

As well as being a scholar, Smith was also a keen observer of the world around him, and some of his opinions may have mirrored business practices. Is it not reasonable to assume that the "realization" principle was used in actual record-keeping, and had some influence on his statement, "The goods of the merchant yield him no revenue or profit till he sells them for money, and the money yields him as little till it is again exchanged for goods"?²

The second half of this statement illustrated another basic tenet, that it was not money itself but the


²Adam Smith, Wealth of Nations, p. 262.
things money could command that were important. "The labourer is rich or poor, is well or ill rewarded, in proportion to the real and not the nominal price of his labour."¹ This concept has pervaded economic thought ever since Adam Smith's day, and it is one of the present day criticisms of accounting by economists that this fact is not recognized in the record-keeping process.

Is it not possible that Smith's observations on gross revenue and net revenue, on fixed capital and circulating capital, were reflections of accounting practice of his day? He defined net revenue as gross revenue, less costs of circulating capital, less costs of maintaining fixed capital, and superficially that is not too different from a general description of today's "net income."

Smith's definition of a man's circulating capital included the statement that "it affords a revenue only by circulating or changing masters," and that it included such items as money, stock of provisions, unfinished goods, and finished goods waiting sale.² Here again is an indication that the "realization" principle was followed, and his list of circulating capital items sets forth most of those included among modern day current assets. His "fixed capital" included such items as buildings, machinery, land

¹Adam Smith, Wealth of Nations, p. 33.
²Ibid., p. 266.
improvements, but did not include land. These items are certainly comparable to the fixed assets of modern accounting practice. Whether Smith made his observations about fixed and circulating capital because of the way things were being done, or whether businessmen adopted these concepts because of his observations, the fact remains that the balance sheets of English enterprises carefully segregated these items at a very early date, and that the distinctions are still considered valid.

Smith had a definite concept of national income, for he talked of the annual revenues resulting from the employment of labor (wages), the proceeds from the use of stock (profit, also interest on money), and the use of land and its products (rent). Long ago he voiced the same dissatisfaction that is expressed by present day economists when he said, "When three different sorts of revenue belong to different persons they are readily distinguished; but when they belong to the same person they are sometimes confounded with each other, at least in common language."\(^1\) Although national income might be considered very similar in many respects to income of individuals, he pointed out that there were certain items that had to be treated differently when the country as a whole was considered.\(^2\)

\(^1\)Adam Smith, *Wealth of Nations*, p. 53.

\(^2\)Ibid., p. 273.
His attention was focused on national wealth more than on national income, however, and in this connection he emphasized the importance of growth, as illustrated by this comment, "It is not the actual greatness of national wealth but its continual increase which occasions a rise in the wages of labour."¹

Studenski did not share the enthusiasm of the eighteenth and nineteenth century businessmen and economists, however, and stated that in his opinion Smith retarded logical development of economic analysis and of national income theory and practice. His criticism was based on the fact that Smith's basic doctrine was geared to wealth as a stock of goods, that he had no real concept of income as a flow of goods, and that services as such were not considered. Therefore, due to Smith's influence all of the national income estimates that were made in the last quarter of the eighteenth century and the first part of the nineteenth century were restricted to material goods, and omitted services that were not related to products.² Although later estimates in England and France returned to the comprehensive viewpoint of Petty and Boisguillebert, the materialistic approach dominated Russian interpretations,

¹Adam Smith, Wealth of Nations, p. 69.
²Studenski, Income of Nations, p. 15.
and to this day that country measures national income and product in terms of material production.

Although Studenski deplored the effect of Adam Smith's doctrines on national income measurement, the fact that his theory was built around the market place forged a conceptual link between business accounting and economic thought, for they were both now dealing with the same basic subject matter. Accountants had for many years used the prices generated by market exchanges as the basis for their record-keeping, and now these same prices were being used to help explain economic behavior. This conceptual link was not obvious at the time, for business accountants were dealing with concrete, specific situations, while economists were talking in abstract, general terms, but nevertheless both were now operating in the same area—the market place.

Accountants had never felt the need to theorize about their activities, and accepted without particular comment their practical function to help businessmen to earn a profit. Now, however, a philosophical justification was provided businessmen in their pursuit of gain, and this approval might be extended to the accountants who provided information to further that objective. Thus not only did economic thought bring accounting into the same arena, but provided justification, indirectly, for this activity as well.
CHAPTER V

NINETEENTH-CENTURY DEVELOPMENTS

Developments in economic analysis in England

The nineteenth century witnessed significant developments in economic analysis. Some of these may be considered to be a direct outgrowth of the Industrial Revolution, which had its inception in Adam Smith's day.

Productivity had increased because of new inventions such as the spinning jenny and the steam engine, but many common people were suffering from dislocations resulting from the changed working conditions. At the same time that men were accepting Adam Smith's market-oriented doctrines, which depended on free competition for effective results, elements were being introduced into society which by their very nature impeded competition. Large outlays of capital for the new machinery resulted in fixed costs that prevented free response to changing demand, and which sometimes tended to set up the monopolistic conditions that he had decried. Curiously enough this point did not receive much attention in the development of the classical economic doctrine. True, Thomas Malthus (1766-1834) raised his
voice in protest in his later writings, stating that the economic theories were not working because there was lack of effective demand for goods.\(^1\) His words went largely unheeded, because the logical arguments of David Ricardo (1772-1823) had clarified and added to Smith's ideas, and "Say's Law," a concept contributed by Jean Baptiste Say (1767-1832), had stated that general overproduction was impossible because supply created its own demand.\(^2\)

Humanitarian feelings, aroused because of the plight of the working classes, gradually caused changes in the general attitude of the public. Later classical theory was modified to allow for intervention by the state in areas involving health and welfare, but the principle of laissez faire in business matters was generally accepted, and most of the mercantilistic controls were off the books by 1850.

**Expansion of accounting function in England**

In a way this made the developments that were occurring in accounting rather surprising because they represented the invoking of certain controls over individual firms again. To understand this turn of events one must go


\(^2\)Gide and Rist, History of Economic Doctrines, p. 115.
back to previous business experiences. The financial success of some of the early joint stock companies, such as the East India Company, had prompted a rash of speculative ventures, and many joint stock promotions had developed early in the eighteenth century. This was the "Bubble" period and fraudulent actions of many promoters had caused so many investors to lose heavily that people had become very disillusioned with them. Parliament banned the formation of new companies for about 100 years.\(^1\) Then the Industrial Revolution brought with it new needs for capital, and pressure began to build up early in the nineteenth century to permit the formal registration of joint stock companies. At first the movement did not make much headway in Parliament, for the unpleasant experiences with such enterprises were too well remembered. However, the advantages of sharing risk and the need to assemble large resources for industrial activity were fostering the formation of unregulated companies. To help control the situation Parliament invoked the principle of stewardship and accountability that had served the country well back in the feudal days.

Many of the self-contained manorial estates of the Middle Ages had been run quite efficiently. A steward, or

\(^1\)Littleton, *Essays on Accountancy*, p. 126.
manager, was charged with certain assets and when he accounted for them properly his responsibility was discharged. Periodically, his records were checked or "audited." This term had evolved from hearings established for government officials when they made stewardship reports on their tax collections, and settled up with the Royal Exchequer. Thus the principle of accountability to the Lord of the Manor, or to the Crown, was one familiar to Englishmen, and had been considered satisfactory in the past. As Littleton pointed out, "The financial responsibilities resting upon the directors of joint stock business enterprises were not basically different from those delegated to the officers in a feudal lord's household," except that "a profit motive was attached to the operations."1 When the similarity was recognized it suggested a method for putting company promotion and operation under some check.

In 1844 and 1845 the first laws were passed which permitted general incorporation by registration of unlimited liability joint stock companies. One main purpose was to establish some degree of public control over the formation of these companies. This was accomplished by requiring them to register and reveal relevant facts about proposed activities. The registrar had the power to deny registration

to unfit projects. A second purpose was to have some check on the directors' discharge of their managerial responsibilities. This was accomplished by requiring the directors to keep records, subject to check by auditors who represented the shareholders, and to require them to send the balance sheet and the auditors' report to the public registrar and to the shareholders before their general meeting each half year.¹

Limited liability was introduced for the first time in 1855. Compulsory auditing requirements were relaxed, and the reports to the public registrar were omitted, probably as a result of the now deep-seated English prejudice against too much interference in matters of private enterprise. However this Act did provide a recommended set of model articles for such organizations. The Companies Act of 1862 supplanted all others, and remained the law for almost fifty years. Although it did not strengthen appreciably the mandatory aspects of auditing or reporting, it retained the recommended model articles. These included such items as the requirement that records be kept upon the principle of double entry, that no dividends should be paid except from profits arising from the business of the company, that the directors might set aside reserves for contingencies out of profits before declaring dividends, that an annual Income

¹Littleton, Essays on Accountancy, p. 96.
and Expenditure account be presented, which would include explanations of distributions of expenditures over several years, and that the preparation of a Balance Sheet follow a suggested standard form. This form provided for a classified analysis of assets and liabilities in substantial detail, quite similar to modern presentation.¹

Thus for the first time civil law stepped into the accounting picture. Although its full significance was not realized at first, this ushered in a new era in which the function of accounting was extended to include semipublic service in addition to services to individual business enterprises. Double-entry bookkeeping was specifically recommended and the principle of auditing was recognized. Limited liability implicitly carried with it an obligation to maintain legal capital, so that the owners' investment would not be impaired by distribution of dividends. It also implied an obligation to maintain economic productivity, which was generally interpreted at that time to be the ability to maintain a satisfactory level of dividend distributions, and which could be implemented by setting aside some of the profits to take care of unforeseen contingencies or to equalize dividends.

To A. C. Littleton this was a benchmark in accounting history, for he wrote, "This adaptation, directly in behalf of a public interest, was a great and lasting contribution; a technology which had evolved in business usage had been given a new function. Perhaps it is not too much to say that this was a contribution to modern society second only to that made by the original formulation much earlier of Italian capital-income accounting methodology."\(^1\)

At that time, however, it did not seem unusually startling, and no revolutionary changes were evident. It is true that the Companies Act of 1862 was called the "accountants' friend,"\(^2\) for needs for their services were greatly increased after its enactment. Though auditing was not compulsory until much later (1900), and even then it was not required that the auditors be professional accountants, it was soon recognized that such services were needed, and that they could be performed best by specialists in the field. Fortunately, most of those called on for technical help proved to be men of ability and integrity, and this fostered public confidence in the new officially recognized profession.

\(^1\)Littleton, Essays on Accountancy, p. 171.

Establishment of accounting as a profession

The first society to be chartered was in Edinburgh in 1854. This was followed by other groups in Scotland, and England's first society was incorporated in 1870. Accounting as a specialized field had been recognized as such for many years, but the men who were best known in the early years were the schoolteachers like Hugh Oldcastle, James Peele, John Mellis, or Richard Dafforne, who had published texts, or men employed by some large company, like I. Carpenter of the East India Company who prepared a bookkeeping manual. In the late seventeenth and early eighteenth century there were only a few accountants who were known to have made their services available for general use, but by the middle of the nineteenth century their numbers had grown to a point where they felt the need to band together, as noted above. Their original purpose in so doing was to "maintain the efficiency as well as the respectability of the professional body."1 This they did by setting up high standards for admission to membership, including some educational requirements, several years of apprenticeship, and an examination. Their early organizational activities included publication of periodicals, establishment of accounting libraries in their headquarters, and taking an active interest in legislation that affected Company Law reforms and bankruptcy.

There is not much evidence that they were interested in developing any accounting theory, but they did have a sense of public responsibility. At the services in 1904 commemorating the fiftieth anniversary of the first chartered society, Lord Ardwell said, "I regard them [accountants] as seekers after truth, not indeed in the high and somewhat vague paths of philosophy, but in the ordinary paths of business life. . . . There are really great public and national interests in their hands, because as auditors of public companies, as advisers of great captains of industry, they have an immense power to use for good if they so choose."1 Another speaker, Charles S. Dickson, included in his speech the comment, "They [accountants] have created indeed a learned profession and a literature of their own. There is still something to be done. For example, there is the definition of terms as to what is the precise line to be drawn between capital and income, what assets are included and excluded, and above all what is fixed and floating capital."2 These remarks help to illustrate the point that accountants were active, responsible participants in daily business affairs, but that no clearcut theories had evolved

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1 Proceedings of Fiftieth Anniversary of Incorporation, History of Accounting and Accountants, pp. 141-42.

2 Ibid., p. 415.
by the end of the century which could be used as general
guidelines in controversial areas.

This lack was perhaps most evident in the case of
depreciation. While this was not a new concept,\footnote{Littleton, Essays on Accountancy, p. 83. In a discussion of nineteenth-century depreciation theory, Littleton made the comment that depreciation was an old idea even then, and quoted from the 1588 text of John Mellis to show that it was recognized at that time. Mellis credited an "Implement of householde" account for the amount judged to be "consumed and worn," and debited "profit and loss" account for the same amount, "lost by decay of householde stuff."} manufacturing plants and steam railroads had brought up more
troublesome and complex problems involving maintenance,
renewal, and improvement. In addition to lack of experience
in such practical matters as the life of the assets in-
volved, there was no general agreement as to what was really
meant by depreciation. In some cases it was construed as a
fall in the market price of the asset, but in other cases it
meant no more than current repairs and maintenance. Some
were concerned with replacement of parts only, but a few
realized that the equipment as a whole was gradually going
to decay, and no amount of repairs or replacement could
forestall its eventual lack of usefulness. Perhaps the
most usual approach of the railroads was to charge expendi-
tures for replacement and maintenance against revenues, but
sometimes a company charged replacement expenditures to
capital accounts if it wished to increase the reported
profit available for dividend distribution.\(^1\) Bookkeeping techniques were flexible enough to take care of any situation, but a consistent, logical approach to the problem was needed. Accountants were taking part in such discussions,\(^2\) and several had advanced views on the subject that might be considered comparable to current amortization practice, but the issue was not a settled one.

Accountants were faced with many such daily decisions and had to take action. Just as several centuries earlier bookkeeping techniques had evolved by trial and error until useful ones had found general acceptance, certain conventions and rules evolved in the nineteenth century which finally found general acceptance. For example, auditing pointed up the need for objective, verifiable evidence to back up the recorded transactions, and this was supplied by documents, or observable events that took place, when there was an exchange in the market place. Thus assets were brought onto the books at cost as of the date of acquisition, and revenue was recognized only when sales were made. While there is no reason to believe this


\(^2\)Littleton, *Essays on Accountancy*, p. 85. Littleton reported that Edwin Guthrie, in lecturing to the Manchester Student Society in 1883, had specifically classed machine and building as consumable over a period of years.
was different from Italian practice, the emphasis was placed on evidence acceptable to an outsider. There were many bankruptcy cases in this period, and accountants were widely used to help wind up their affairs. Contact with ill-advised optimism and its resulting disaster undoubtedly had the effect of impressing on accountants the virtues of cautiousness, conservatism, and full disclosure of all relevant facts. Although the need to establish more specific criteria for classification of data was not met completely, certain conventions and rules gained wide acceptance, and these were based on concepts of objectivity and conservatism.

Thus the nineteenth century had added a new semi-public function to accounting, broadening its horizons greatly thereby, but there was little evidence of concern with economic theory as such. Of course there was general acceptance of the doctrines of the classical school that emphasized individualism, that regarded the market place as self-regulating, and that accepted a laissez-faire role for government in business affairs, unless general health and welfare were affected, but the abstract logic of the economist seemed far removed from daily problems. What decision about depreciation could be made, for example, from Ricardo's generalized concern with the laws that regulated the distribution of the produce of the earth among land, labor, and capital? When economic analysis shifted to the
marginal utility explanations of demand by Jevons, businessmen and their accountants found little to help them in determining the difference between capital and income. Even Alfred Marshall's equilibrium concept, which synthesized the arguments regarding supply and demand and revitalized classical theory, dealt with ideas that were essentially abstract and general, and were not considered helpful in dealing with specific situations in real life business. Accounting and economic analysis were developing side by side, but with apparently very little in common.

Developments in national income measurements

In spite of the general emphasis on abstract economic theory, applied economics in the form of national measurement was also receiving a little attention. Studenski credited Alfred Marshall with helping to clarify its concept, although he did not produce any estimates personally. In his *Economics of Industry* in 1879 he championed the comprehensive production and services concept, which influenced all modern economists (except Marxists) to adopt that approach. In his *Principles of Economics* he had quite a bit to say about the "national dividend," about how the "distributive shares" in it were determined, and how the proportions might be changed. As
a practical suggestion, he warned against "double-counting" when making estimates.¹

The actual work in the field continued to be that of individual scholars who became interested in the subject. In the early part of the nineteenth century, the figures were usually compiled to prove some point, as was true in the earlier estimates. One new development occurred in 1822 when James Lowe prepared the first estimates to be expressed in constant prices. He was also an advocate of "compensatory" inflationary deficit financing of governmental expenditures during periods of deflation, thus anticipating Keynes by 100 years.

Studenski reported that the estimates in the latter half of the nineteenth century were made more objectively, and were also based on more reliable data, for an income tax had been re-introduced in England in 1842 and the statistics were available to the compilers of national income figures. Robert Dudley Baxter (1827-1875) published an estimate in 1868, and pointed out some of the problems confronting the estimator. He frankly said, "Minute accuracy is unattainable and we are obliged to work by general averages. The great object is to render these averages trustworthy and simple. . . . Nor ought important facts to rest upon mere

¹Studenski, Income of Nations, p. 16.
assertion; the authorities for the facts, and the reasons for the calculations ought in every case to be given, so that the reader may refer and verify for himself."¹ Sir Robert Giffen (1837-1910) continued systematic estimates based on the income tax returns, but the work of Professor A. L. Bowley was perhaps the most outstanding. He began a series of studies in 1895 and continued them well into the twentieth century, but made a plea for the government to take over the responsibility so that the work would not be so dependent upon individual initiative.²

At the close of the nineteenth century, England was the acknowledged leader in the national income field, but interest in it had spread, and a total of eight countries had made some kind of estimates before 1900.

English concepts transferred to America

Attention has been focused on England because that country was the main source (although not the only one, of course) of ideas relating to economic analysis and accounting that were transferred to America. However, in a new environment they developed in a slightly different way.

¹ Studenski, Income of Nations, p. 115.
² Ibid.
English economic theory was respected in this country, but there was a more optimistic attitude in the early years. For example, Henry Carey (1793-1879) denied the universal application of the Malthusian law of population and diminishing returns, for in a new, underpopulated country it did not seem relevant.¹

It was not until the latter part of the nineteenth century that economic thought achieved any great stature in America, and it took the form of a kind of reaction against the abstract speculative classical economics of the day. For example, when the American Economic Society was founded in 1885 it had an informal creed which included a statement that the State was regarded as an agency whose positive assistance was one of the indispensable conditions of human progress. This evoked considerable criticism and was abolished only three years later, but it had served an initial purpose of making the society a rallying ground for those idealists who considered themselves the progressives of the times. The wheel had turned, for Adam Smith had written against the vested interests of his day, and now those who embraced his doctrines were considered the stronghold of vested interests in another period. However, it cannot be said that any American of this period made any lasting contribution to economic theory.

¹Bell, History of Economic Thought, Ch. 15.
The United States was one of the countries that attempted national income estimates in the nineteenth century. Studenski credited George Tucker (1775-1861), a professor of moral philosophy at the University of Virginia and considered to be an outstanding economist, with doing the first work on it here. His estimates were prepared from a thorough study of six decennial censuses that had been held between 1790 and 1840. His aim was to discover the size and structure of the country's national income, and the changes that had taken place over the fifty years, but his figures were restricted to net value of material production. He explained his methods in detail, but commented that lack of information compounded by fluctuating prices made accurate estimates very difficult. His first report was prepared in 1843, and he brought it up to date twice after that, in 1850 and 1855.1

The only other effort to produce figures in the United States in this period was the one made by Dr. Charles B. Spahr (1860-1904) in 1890. He took the comprehensive viewpoint that services were to be measured as well as material goods. He used many other sources besides the censuses in compiling his figures, such as statistics prepared by the Department of Agriculture, the Bureau of Labor

Statistics, the Interstate Commerce Commission, and others. He was concerned about the inequalities he found in the distribution of personal income among various classes of society, and felt that taxation policies tended to bear down more heavily on poor people. He recommended amending the constitution to permit Congress to levy proportional, or even progressive, taxes on income and property. Here again national income estimates were used to back up opinions on taxation and welfare.¹

English accounting had also been transplanted to America and in this area, too, development took a slightly different turn in the new environment.

From the first, American textbook writers made an effort to develop teaching around the logic behind the record-keeping process. This aspect had been neglected in England where more emphasis was placed on memorization of rules, sometimes enlivened by doggerel verse or personification of accounts. As early as 1841 a New York accountant and teacher, Thomas Jones, published a text, Principles and Practices of Bookkeeping, in which he stressed statements as a goal, and pointed to the fact that the profit and loss report was integrated with the balance sheet.² Another

¹Studenski, Income of Nations, pp. 132-34.
²Littleton, Essays on Accountancy, p. 56.
accountant, E. G. Folsom, followed this in 1873, and again in 1881, with a text called *The Logic of Accounts*, in which he attempted to show the student that bookkeeping procedures reflected rational purpose and helped to implement reasonable objectives.¹

The books of these men represented a rudimentary beginning toward a written expression of accounting theory, since they emphasized the objectives and logic of the record-keeping process rather than mechanics alone. This approach was an important factor in gaining acceptance of accounting as subject matter appropriate for college level classes, a movement that did not start until the turn of the century. Formal higher education always received more emphasis as being desirable in the preparation for the accounting profession in America than it did in England, where the apprenticeship system was deeply entrenched.

Accountants were organized professionally in the United States in the nineteenth century, with the very first association being formed in 1882. The first legal recognition of accounting came in the State of New York in 1896, for at this time the Legislature passed a bill controlling the educational requirements and the examinations necessary for a man to receive the title "Certified Public Accountant."

America had not only benefited from ideas transplanted from across the sea, but was already showing signs of enriching them with independent developments. It cannot yet be claimed, however, that there was any sign of especial interest in economic analysis by the accounting profession, for accounting was regarded primarily as a practical business activity. In America, as well as in England, economic analysis, national income measurement, and accounting were all developing more or less independently.
PART III

TWENTIETH-CENTURY DEVELOPMENTS
CHAPTER VI

ECONOMICS: THEORETICAL AND APPLIED

Developments in economic theory

In the United States in the early twentieth century the neoclassical economics of Alfred Marshall was greatly respected, as was the marginal utility school of thought promoted by the Austrians, but these were tempered by increasing emphasis on the role of institutions.

The writings of Thorstein Veblen (1857-1929), typified by The Theory of the Leisure Class, 1899, and The Theory of Business Enterprise, 1904, gave impetus to this movement, which represented a view diametrically opposed to that of classical economics. This particular phase was essentially American in character, although it had roots in the German Historical school. It was primarily a movement in academic thought that believed that group behavior, not price, should be the central theme of economics; that human nature was constantly changing so economic generalizations should be related to time and place; that customs, habits, and law were important factors that influenced human behavior; and that maladjustments were not departures from normal equilibrium, but were normal phenomena under existing conditions.
Its proponents believed that since present social institutions created maladjustments there should be social control over the institutions.

John R. Commons (1862-1945) expressed the view that collective control of individual transactions was the contribution of institutional economics to a rounded-out theory of political economy. He recognized that scarcity exists which creates conflicts of interest. Collective action must then take its proper place in deciding conflicts and maintaining order because of mutual dependence.¹ "Due process of law" represented a special form of collective action which he investigated with great interest, and he advanced the idea that capitalism derived its strength from legal interpretations handed down by the courts.² Another important institutional development was represented by the growth of collective bargaining, which he felt could not be overlooked in economic theory.

The views of John Maurice Clark (1884-1963) have been characterized as a "synthesis of neoclassical economics and institutionalism."³ In his book on The Economics of

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Overhead Costs, 1923, he pointed out that rigidities existed in many production costs. The idle capacity that frequently existed caused businessmen to behave in ways that did not conform to the traditional model of competition. (Incidentally, the analysis of cost behavior according to its fixed and variable elements was a concept adopted by accountants, and has been an important tool in the development of cost accounting.) Clark used the idea to explain his theory that the modern industrial order did not conform to the classical competitive rules, and that rigid overhead costs might lead to diametrically opposing results, either cut-throat competition or monopoly.¹ In his book, The Social Control of Business, 1926, he stated that government should exercise the function of maintaining competition and/or controlling monopolistic tendencies,² an idea that was actually implemented later in the 1930s. Clark's conclusion was that a form of "workable competition"³ was possible, but that it did not follow the rules of classical economics.

In the early 1930s two other economists forcibly attacked the classical concepts of competition. Edward H.

²Ibid., p. 459.
³Ibid., p. 463.
Chamberlin called for a reorientation of the theory of value, and discussed prices generated by monopolies of different but competing products.¹ Mrs. Joan Robinson, of England, also stated that the "whole theory of value should be treated in terms of monopoly analysis."² Both writers stressed that effective competition as assumed in classical theory could not exist when there were widespread monopolistic conditions in real life situations. Their arguments helped to throw light on theoretical defects in the efficiency of the market place.

The practical defects of the "self-regulating" market had become painfully evident to everyone with the advent of the great depression. Scholars, as well as the man-on-the-street, were shaken by this unnerving experience, for the country did not recover as expected from the effects of the stock market crash of October 1929.

When Franklin D. Roosevelt was swept into power as president, one of the younger Institutionalists, Rexford G. Tugwell, became one of his chief economic advisers. Included in the program to cure the economic ills of the country were the "pump-priming" federal expenditures,


"social security" plans represented by old age benefits and unemployment compensation, and the regulation of business activities typified by the establishment of the Securities and Exchange Commission in 1933 and the Robinson-Patman Act in 1936. The economists did not have a complete internally consistent theory to guide them, but the social controls they recommended represented ideas many of the Institutionalists had been advocating for some time.

The times were ripe for a change in theoretical outlook, so the views of John Maynard Keynes that appeared in 1936 in his *General Theory of Employment, Interest, and Money* were received enthusiastically. He not only attacked the classical doctrine of the self-regulating market place, but offered a logically consistent body of theory in its place. He did not discard neoclassical analysis entirely, stating that under certain conditions it represented a special case of his more general theory, so equilibrium analysis is still used in today's micro-economic theory. However, his main attention was directed toward analysis of aggregate behavior, and he was a firm believer that information should be secured about what was actually occurring in the world. His views had a profound influence on the kind of statistics that were to be assembled by governments after this, for he emphasized the dynamic role of expenditures in
the economy, as well as the importance of the distribution of income among the factors of production.

Although not primarily a statistician, he was influential in persuading the British government to sponsor an official analysis of national income and expenditure, and in convincing them that knowledge about these figures could be used to help formulate government policies more effectively. His impact on American economic thought was just as great as on that of his native England, if not more so. Keynes had given a new orientation to economic theory, and in so doing he had affected modern thinking about national income analysis, and about the role of government in a nation's economy. Theory and applied economics were no longer proceeding side by side without much contact, but were now definitely interrelated. Theory was giving purpose and meaning to the collection of statistics, and the methodology of economic analysis was turning toward the quantitative approach. National income theory and analysis had come to occupy a central position in modern economics, and textbooks were rewritten or written to include it.

**Developments in national income measurements**

Returning to the preparation of national income estimates themselves, the twentieth century showed impressive progress both in the quality and quantity of work done. Prior to 1900 only eight countries had made any attempt to
make estimates, and in only one, Australia, was it sponsored by the government. Before the first world war scholars in five more countries began such work, bringing the total number to thirteen. In the next twenty years this figure was doubled, and by the time Studenski's book was written in 1958 there were over ninety countries regularly preparing these estimates.

In 1925 the movement began for governments to take over the work formerly done by private research, with Canada and Russia starting this trend, followed in the next few years by Germany (1929), the Netherlands (1931), New Zealand (1931), and then by the United States in 1932. Now, the figures are prepared everywhere by official government agencies.

In the United States some fairly significant work had been done by private scholars and private agencies before being taken over by the Federal government. W. I. King published figures in 1915 which represented an extension of the same kind of work done twenty-five years before by Charles Spahr, but he came to entirely different conclusions. He found no fault with the existing social system in this country, and he went on record against most of the currently demanded social reforms.¹

¹ Studenski, Income of Nations, p. 143.
The sixteenth amendment to the Constitution in 1913 made it possible for Congress to assess the income tax, and official tabulations called Statistics of Income were started in 1916. These did not represent any over-all presentation of national income, but did provide considerable basic data.

During the first world war it became apparent that the government did not have the information available to mobilize its economic resources effectively. As a result several research groups were started, financed by private philanthropic funds.

Perhaps the most outstanding work was done by the National Bureau of Economic Research. This was founded in 1920, with Wesley Clair Mitchell (1874-1948) as its first director, and much credit must be given him for his pioneer work in statistical measurements of economic data. He firmly believed that economics should represent a body of verifiable knowledge and must rest upon careful study of human behavior, not merely hypotheses deduced from a few simple premises or isolated observations. His rejection of classical economic methods and premises may be attributed in part to Veblen's influence over him when he was a student at the University of Chicago. Under Mitchell's direction the National Bureau of Economic Research devoted considerable attention to studies of business cycles and of national income statistics.
Simon Kuznets did a great deal of research in the national income field, and assisted in a consulting capacity in the setting up of the program for the Department of Commerce when Congress first authorized it in 1932. However, he worked independently of the government and published his data under the auspices of the National Bureau of Economic Research as a member of its research staff. One of his most ambitious projects was the two volume work, *National Income and Its Composition, 1919-1938*, published in 1941. His figures were not directly comparable to those prepared by the Department of Commerce, for he established different criteria for classifications and adjustments, but he was recognized as an authority in the field and his opinions were respected even though not always followed. He was careful to define his terms, and meticulously identified the sources of his data. They came from literally hundreds of different places, with considerable interpolation, extrapolation, or adjustment before being entered into his series. The following passage represents a typical explanation:

**Individuals imputed rent (net)**

The number of owner-occupied dwellings is the difference between the total and the number rented. The 1930 Census of Population, Vol. VI, median value of owner-occupied dwellings is adjusted to (arithmetic) average value. Average imputed rent is obtained by applying to the average value the ratio of rent to value as derived from David L. Wickens' materials for the "Financial Survey of Urban Housing." The basic average imputed rent is
for 1929, and is extrapolated for other years by the indexes used to estimate average rent paid. Gross imputed rent is the product of the number of owner-occupied dwellings and the average imputed rent.

Net imputed rent is estimated by applying to gross imputed rent the ratio of net to gross before mortgage interest, and subtracting from the result the estimated mortgage interest on owner-occupied dwellings. This ratio is derived from data reported for office buildings in "Office Building Experience Exchange Report." It is assumed that the relation of insurance, taxes, and depreciation, and of heating, plumbing, alterations, repairs, and decoration to gross rent paid in office buildings is representative of that for private dwellings. ¹

Kuznets devoted a chapter to an evaluation of the reliability of his estimates, but to an accountant accustomed to more direct accumulation of basic data, his figures do not inspire much confidence as to their precise accuracy. On the other hand, the business figures supplied by accountants did not impress him as being accurate either, particularly in the case of inventory valuations and depreciation expense. He stated that depreciation should be based on current price and that "this conclusion is so obvious as to seem axiomatic, yet it is not the practice followed by business enterprise." ² Since many business accounting figures were not satisfactory to him, he made

²Ibid., p. 42.
them more to his liking by a series of adjustments to provide for both changes in the general price level and in current replacement prices.

The National Income Division in the Office of Business Economics, under the jurisdiction of the Department of Commerce, has compiled the official estimates of the United States since its inception, and the first report was published in 1934. Milton Gilbert, a former chief, George Jaszi, the present chief, Charles F. Schwartz, and Edward F. Denison were primarily responsible for setting the standards and guiding the policies of this work. They were the ones who became interested in the social accounting approach, and who effected the changeover to it in 1947.

Introduction of the social accounting approach

Studenski credited James Meade and Richard Stone of England with conceiving the idea of the social accounting approach to national income analysis, although Scandinavian and Dutch economists claimed to have thought of it about the same time.1 Keynes had been influential in having the British government secure the services of these two men in 1940 to work on an analysis of national income and expenditure. They, in turn, had been impressed with the work done

in 1937 by their fellow countryman, Colin Clark. In his book, *National Income and Outlay*, he had brought together a much more comprehensive set of figures than had ever been attempted before. Not only did he show total income and its components, but also gave figures for consumption, savings, capital formation, public authority income and outlay, and transactions with the rest of the world. As they worked with these relationships for their own report, Meade and Stone began to realize that "conceptually the basic material for such study is the set of ideal entries in a highly complex accounting system in which every accounting entity is represented."\(^1\)

Their results were reported in the White Paper of April 1941, and included the establishment of social accounts in four main sectors of the economy (households, business, government, rest of the world) and an expression of the transactions among them within a double-entry framework. Thus we see for the first time the recognition of accounting methodology in economic analysis. B. F. Yamey commented that two qualities of double-entry record-keeping, "the comprehensiveness of the records and the presence of an arithmetical or consistency check," are the ones which "seem

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to be most relevant in commending the system for use in national income accounting."¹ There was no use made of a third characteristic of double entry, the integration of the results of operation with a statement of financial position.

Stone undertook the task of "selling" professional opinion on the usefulness of the social accounting approach. In 1944 representatives of British, American, and Canadian agencies met in Washington to exchange ideas and discuss the possibility of standardization. In 1946 the British Treasury White Paper officially accepted the social accounting approach. After preparing the background for the changeover for several years, The Department of Commerce published the 1947 National Income and Product Account cast in the double-entry framework. The system was also adopted by the United Nations.

Stone's memorandum entitled Definition and Measurement of the National Income and Related Totals was discussed by the Sub-Committee on National Income Statistics of the League of Nations Committee of Statistical Experts at their meeting in Princeton, New Jersey, in 1945, and subsequently appeared as an appendix to its report Measurement of National Income and the Construction of Social Accounts

(1947). This report and the memorandum appended to it were later used as a general framework for the investigations of the Statistical Office of the United Nations embodied in the report National Income Statistics 1938-1947 (published 1948) prepared under the direction of J. B. D. Derksen. With the United Nations providing standard-type social accounting reports and offering assistance in the techniques of assembling the figures, many more countries joined the movement.

Another powerful force stimulating official collection of national income data was the fact that the Organization for European Economic Cooperation asked the participating countries to analyze their social accounts so that plans for economic development could be based on the knowledge so obtained. Most of the countries outside the United States followed pretty closely the plan recommended by the United Nations.

In the United States so much work had been done previously that the Department of Commerce wanted to integrate its former data with the new approach. Therefore it did not adopt outright the classifications recommended in the United Nations report, although the general method and approach were the same. For this reason the United States reports are not directly comparable with those following the United Nations plan, but can be reconciled with them.
The 1940s represented an important era for national income statistics. The interrelationship of economic theory with such work was widely recognized, which gave more purpose and meaning to it, and its conceptual framework was strengthened by casting the figures within a comprehensive and consistently interrelated system of double-entry accounts. In addition, sponsorship by the United Nations gave the movement world-wide prestige.
CHAPTER VII

ACCOUNTING: GENERAL DEVELOPMENTS

An integration of applied and theoretical economics was effected in the first half of the twentieth century, but did this movement have any connection with business accounting? Tracing the developments in accounting may be helpful in discerning possible patterns of interrelationships.

In the United States, particularly, accounting made great progress in the twentieth century, and expanded along many different lines. Although these trends may be enumerated separately, one must realize that they were not independent movements, for events in one area caused corresponding changes in another. The major developments may be considered to be:

1. Improvement in record-keeping systems and techniques.
2. Increased emphasis on administrative functions of accounting, or managerial accounting.
5. Growth in use of accounting in effecting social control.
6. Development of accounting theory (to be discussed in Chapter VIII).
Developments in these areas are not equally significant to the main subject of this study, namely, the role of business accounting in national economic analysis. However, each of them will be mentioned, placing particular emphasis on the portion that is applicable.

Record-keeping systems

In discussing the role of accounting in our society, there has been a tendency in recent years to play down the record-keeping function, probably as a reaction to former overemphasis on this. Yet it should not be neglected or overlooked. Control over, interpretation of, and plans for future business activity would be impossible without accurate, prompt reports summarizing past transactions, which in turn depend on accurate record-keeping.

It has been noted that when the Italian merchants of medieval days had to have a better system, in order to carry on their more complex business activities, double-entry bookkeeping evolved in response to their needs. While the general idea of double entry remained intact, the slow, laborious process of making entries in the day book, journal, and ledger by hand could not possibly cope with the accelerated flow of business activity which was occurring in the enterprises that were expanding so rapidly in the new country.
The day book had already been dropped as superfluous, probably during the nineteenth century, for it was not needed as it was in the days of Pacioli. At that time so many different moneys were in circulation that it was necessary to reduce transactions to a common denominator before their chronological record could be transferred to the journal.1

Then the use of the general journal itself was streamlined to save time, with special journals serving as summaries of particular kinds of transactions and as direct posting media. In 1907 Charles Ezra Sprague wrote, "The day book is now practically abolished, and the journal nearly so."2 Also, it was no longer considered necessary to have records kept in bound books.

This paved the way for still greater speeding up through mechanization, and the use of bookkeeping machines made possible much more rapid processing of data. These evolved in various ways according to the ingenuity of the firms offering them for sale. Included among the innovations was the punched card, which came to be recognized as an acceptable form for records. Within the last decade

1Brown, History of Accounting and Accountants, pp. 111-12.

electronics has come to the foreground for use in very large companies, and offers even faster data processing. Record-keeping still operates within the conceptual framework of double-entry bookkeeping, but in many instances the records look vastly different.

Large corporations could not have advanced as they did without rapid, accurate processing of data, for meaningful summaries of thousands of transactions had to be available promptly as a background for necessary decisions. As record-keeping needs changed, accounting techniques developed in response to them.

It might be emphasized again at this point that applied economics also owes a great debt to the mechanics of record-keeping. Most of the basic information, or raw data, about economic activity expressed in quantitative terms comes primarily from business reports taken from the records. Even in situations where direct surveys are conducted to solicit information, the replies are probably based on figures found in business records.

Also, as has been noted before, the double-entry technique offers a comprehensive, orderly processing of data, and a check on accuracy, which have been factors in recommending it for use in assembling data for national income analysis.

A potential source of future improvement might be more effective use of the new rapid data processing
techniques. If comprehensive national income and product figures could be secured directly from business reports, confidence in their reliability would be much greater. If these figures could be summarized on a more timely basis, their usefulness would be increased immeasurably. No accountants have ever researched these matters, but it is possible they might have a great deal to offer in helping to improve the fact-gathering techniques for economic analysis.

Administrative accounting

During the twentieth century there has been a marked increase in administrative, or managerial, accounting, and this has been very largely an American contribution. Although there were some evidences of factory cost accounting before this, it was not until the early twentieth century in America that significant developments in this field were evident. It was concerned with the scientific calculations of cost, and illustrated the flexibility of the double-entry system. The use of accounts was expanded to provide for internal conversion of costs from one form to another, with information available on a unit basis as well as in totals. The development of standard costs as a yardstick by which to measure efficiency aided in the control over production costs. Later this technique was further
expanded to help in analyzing distribution costs, although it was not quite as effective in this area.

Budgeting and cash forecasts were devices which aided in making financial plans, and which helped to place accountants on the management teams of many large companies. In recent years the use of direct costing has been promoted as a form of analysis more useful for managerial decisions than the generally accepted conventional full costing approach. Adapted from Clark's economic theory, this method recognized the separation of fixed costs, which are not controllable in the short run, from variable costs, which may be partially controllable.

In the mid-fifties another movement gained momentum, namely, "responsibility accounting," which classified costs functionally on the basis of the individual who was responsible for incurring them.

All of these aids to management represented the using of accounting data in ways which could help to control costs, or to plan more efficient use of assets. In so far as they accomplished this they helped to maximize profits. They represented practical responses to business needs, but did not require the development of accounting theory to be implemented, and made no direct contribution to economic analysis.

Indeed, an economist examining the activity of individual business firms might well have wondered if there
was any relationship at all between what the businessman actually did, and what economic theory claimed he did to maximize profits. The theoretical "optimum" point might be where marginal costs equaled marginal revenues, but marginal information was not available from accounting records. The economist might have the feeling that the available data were inadequate for analysis, but the accountant might tend to think this kind of information was impractical, or too costly to assemble, because it has to be based to such an extent on future expectations, and on so many unknowable variables. However, this phase of economic analysis is not the particular subject of the present inquiry.

Public accounting as a profession

Another major development was the growth of the public accounting profession, both in numbers and in stature. In 1900 there were only a few hundred certified public accountants, and only three states, New York, Pennsylvania, and Maryland, had legally recognized accounting by restricting the use of the term "certified" to those who met the specified requirements. Economic developments were creating demands for qualified accountants, and other states rapidly granted recognition. At this time in the United States there were no statutory requirements that audits be made, but many companies were voluntarily using the services of independent accountants.
George O. May attributed some of this to the industrial mergers that took place in the period between 1896 and 1903. When two different companies decided to join forces an impartial viewpoint was needed to establish the validity of asset and liability claims. Indeed, May stated that the rise of depreciation accounting was a development that grew out of these mergers. When consolidation was considered it was necessary to place the accounts of the various companies on a uniform basis. "This almost universally entailed the elimination of charges to expense of capital items (made in a manner that was irregular and varied with fluctuations in prosperity) and the substitution of charges for exhaustion of property on a systematic and consistent basis. . . . The depreciation accounting which had been adopted in order to place accounts of companies on a uniform basis as a part of the plan of the merger was carried over naturally into the accounting of the resulting new corporations. . . . A great impetus was thus given to depreciation accounting in the industrial field."¹ May claimed that straight-line depreciation was quite common by 1906, and almost universal among industrial corporations by the end of the first world war. Thus the use of independent

accountants had substantial influence on business practice. In functioning as interpreters and arbiters among parties of opposing interests they also helped to effect more consistent treatment of objectively verifiable accounting data.

Professional opinion could be consistent only if there were ways to exchange ideas. A number of organizations had been formed in the late nineteenth century, but the first strictly professional group was the American Association of Public Accountants, chartered by the State of New York in 1887. It later absorbed the Federation of Societies of Public Accountants of America in 1905, and in November of that year the Journal of Accountancy was established to act as a spokesman for the profession and to provide a medium through which the right words to advance its hopes and ideals could be spoken "regularly, wisely, and consistently."1 It has been published continuously as a monthly ever since. Robert H. Montgomery and A. Lowes Dickinson were frequent contributors to the Journal in its formative years and did much to encourage ethical standards and high professional attainment.

The form of American audits began to differ from those made in England, and editorial comment was made on this fact in the Journal of Accountancy of March 1907.2

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Montgomery's text, *Auditing Theory and Practice* (1912) also portrayed the changing viewpoint, for it indicated that for American purposes the detection of fraud and error must take second place to the ascertainment of actual financial condition and earnings of an enterprise.¹ The detailed re-checking of record-keeping gave way to an analytical audit, partly because it was considered too expensive to make such a complete review, and partly because an objective appraisal of the financial position was more useful to American business.

In addition to the merger movement mentioned above, borrowing and lending habits provided another need for services of independent auditors. A peculiarly American use of single-name commercial notes for short term loans had become standard practice, and banks began to require certified balance sheets as a basis for extending credit. Littleton said that a few were used for this purpose by 1903, but that by 1913 the practice was fairly common.²

Thus in audits made for mergers and for credit purposes the emphasis was placed on analysis of financial position, and this resulted in "balance sheet audits" by independent accountants, usually certified accountants.

The passing of the amendment to the Constitution in 1913 which permitted Congress to assess general income taxes was another factor that added to the demand for public accountants. It also began a shift in emphasis toward the income statement for it became very important to determine precisely what was meant by income. Many businesses began to seek professional aid even though they had not used it before.

In 1916 the American Association of Public Accountants was officially changed over to the American Institute of Accountants. In addition to unifying the profession and advancing the science of accountancy, it set objectives of improving accounting education and providing for examination of candidates for membership. An outgrowth of this last stated purpose was the work of its Board of Examiners, under whose supervision all states eventually conducted uniform examinations.1

The prestige of the Institute was enhanced when the Federal Trade Commission asked it to draw up a "memorandum on balance sheet audits" in 1917. The Commission endorsed the work and had it published in the Federal Reserve

Bulletin as an authoritative guide for audits for business and banking.\(^1\)

The events of the 1920s gave another impetus toward emphasis on the income statement. A period of rapidly falling prices in the winter of 1920-21 caused bankers to become alarmed and many of them refused to renew or grant new loans. Littleton said, "The price crisis proved to be relatively short-lived, but the effect of the bad impression that lenders actions had made on borrowers left the latter more than willing to use other methods of finance whenever they could do so."\(^2\) Since business conditions were fundamentally sound, it soon was not difficult to have stock issues absorbed by eager investors. This type of financial activity tended to shift interest from liquidity to earning power, from the balance sheet to the income statement.

The boom period of investment and speculation that occurred at this time was accompanied by poor financial and reporting practices by some companies, and these became matters of concern to responsible accountants. George O. May stated that the president of the American Institute of Accountants approached the New York Stock Exchange officials

\(^1\)Committee on Auditing Procedure, Generally Accepted Auditing Standards: Their Significance and Scope (New York: American Institute of Accountants, 1954), p. 7.

\(^2\)Littleton, Essays on Accountancy, p. 522.
in 1926 with the suggestion that they take cooperative action through discussions. Although the idea was received favorably no action was taken at that time. However the Exchange did appoint a committee of its own to look into conditions and make suggestions for improvements. Then came the stock market crash of 1929 which intensified the concern over poor practices. In 1930 a special committee of the Institute was appointed to work with the Stock Exchange Committee and a joint report was presented in 1932.

In retrospect, this has been pointed out as the period when professional accountants in America began to realize and accept their responsibilities to the general public as well as to their own clients.

The temper of the times demanded control over dealings in corporate securities, for the long continued depression was blamed, in part at least, on unrestrained greed for profits at the expense of the general public. When the Securities and Exchange Commission was established in 1933 it was given the authority to prescribe accounting regulations. This was a matter of grave concern to many professional accountants, but their fears were somewhat allayed when the Commission adopted the policy of cooperating with them. The suggestions of the American

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Institute of Accountants and the New York Stock Exchange were incorporated into the rules promulgated by the Commission, and in general since then it has consulted with the Institute before establishing additional rules.

Actually, the work to be done by accountants was greatly increased by the Commission. Among its rules was one that required financial statements to be submitted by corporations whose stock issues were to be distributed in more than one state, and also required that these statements be reviewed by a qualified independent certified public accountant. Since the Commission had the legal authority to enforce the rules it laid down about accounting practices and reports, this had the indirect effect of widening the sphere of influence of responsible accounting leaders. Their own reliance on the weight of professional opinion to ensure good accounting practices had not been effective in curbing the activities of some of the less scrupulous practitioners, but now the latter could be required to conform, at least to the extent they represented national corporations.

The American Institute of Accountants had recommended that audit certificates should specifically state whether or not generally accepted accounting principles had been followed consistently. Some of its members raised the point that so many differences of opinion existed in some
areas that it would not be possible to define accurately which views were "generally accepted." It was decided to take steps to correct this, but it was soon realized that to do so was a formidable task. However, at the annual meeting in 1934 the entire membership voted to adopt six specific rules, including one stating that unrealized profit should not be credited to the income account of the corporation either directly or indirectly.

The Institute considered itself the official spokesman for the accounting profession, which was illustrated when it published a revision of its auditing pamphlets in 1936 under the title Examination of Financial Statements by Independent Public Accountants. It was said of this effort that the Institute "freely availed itself of the views of persons outside the ranks of the profession whose opinions would be helpful, but the authority behind, and responsibility for, the publication of the bulletin rested wholly with the American Institute of Accountants as the authoritative representative of a profession that had by that time become well established in the business community."¹

There was still no official pronouncement which set forth basic assumptions or standards for corporation practices on a fundamental level. The Institute did not

endorse the effort to do this which was made by the American Accounting Association in 1936. It did, however, sponsor the 1938 publication of A Statement of Accounting Principles by Sanders, Hatfield, and Moore, which was intended to present such an over-all treatment. Howard Greer characterized this effort as little more than an "uncritical recitation of present practices."¹

Finally a Committee on Accounting Procedures was established in 1938, and a research staff was provided for its use. No attempt was made to provide any comprehensive accounting theory, but the committee stated that its objective was "to narrow areas of difference and inconsistency in accounting practice, and to further the development and recognition of generally accepted accounting principles, through the issuances of opinions and recommendations that would serve as criteria for determining the suitability of accounting practices reflected in financial statements and representations of commercial and industrial companies."²

In the first bulletin issues in 1939 it specifically recognized the responsibility of accounting to society as


follows, "The test of the corporate system and of the special phase of it represented by corporate accounting ultimately lies in the results which are produced. These results must be judged from the standpoint of society as a whole—not merely from that of any one group of interested persons."¹ (Emphasis mine.) Each time a troublesome question arose from time to time, the Committee issued an opinion. Although these statements were not considered to be authoritative rules, they received voluntary acceptance to such an extent that they built up piecemeal a kind of common law as to standards and procedures.

The period of inflation that started in the 1940s brought new problems in reporting and interpreting accounting statements, and a number of accountants began to question the continuing validity of some of their conventions. In 1947 the Institute appointed a committee composed of equal numbers of accountants and non-accountants to examine concepts of business income. A number of the non-accountants were economists whose names were prominent because of their work on national income analysis. Oswald W. Knauth, a director of the National Bureau of Economic Research, assisted George O. May in writing the first draft

of the report. Arthur F. Burns, Solomon Fabricant, Theodore Yntema, and Raymond Goldsmith, who were also associated with the National Bureau of Economic Research, and George Jaszi, of the Department of Commerce, were official members of the committee. Four others participated to some extent in the work, Morris Copeland, Milton Gilbert, Simon Kuznets, and Richard Ruggles. A report (admittedly a compromise) was published in 1952 under the title Changing Concepts of Business Income. It represented an attempt to come to grips with basic assumptions and principles from the points of view of law, economics, and accounting. This will be discussed in more detail under the section on the development of accounting theory.

In 1957 the American Institute of Accountants and the American Society of Certified Public Accountants merged. The revised name, the American Institute of Certified Public Accountants, has been used since then.

Many leading practitioners had been feeling for some time that the Institute's policy of issuing statements on specific matters was inadequate, and that there should be a comprehensive, authoritative enumeration of accounting principles which was consistent with logically developed accounting theory. Believing that the Institute should take the leadership in providing statements of this nature,
an Accounting Principles Board was established in 1959 and was given the authority to make or to approve public pronouncements on accounting principles. It was to rely for information on a full-time research staff, whose director it would appoint. The director was given authority to publish results of research as a vehicle for exposure of matters for consideration and experiment prior to the issuance of official pronouncements by the Accounting Principles Board.

Under the leadership of Maurice Moonitz, research director, several research bulletins have been published to date. The first one, dealing with basic postulates, was written by him and published in 1961. The third one, covering a tentative set of broad accounting principles for business enterprises, was written by Robert T. Sprouse and Moonitz, and was published in 1962. These are more appropriately discussed in detail in the section on the development of accounting theory.

The monthly Journal of Accountancy continued to be the official medium for dissemination of news and communication of professional ideas, even though the name of the sponsoring organization went through several changes. During the last twenty years an increasing number of statements have appeared indicating that accounting leaders believed they had social responsibilities. The inaugural
address of every incoming president of the Institute in recent years has included some reference to this aspect of accounting.

More specific references to general economic policies are also beginning to occur. For example, an editorial entitled "Accounting in the Free World" appeared in the September 1962 issue of the Journal of Accountancy, which included the following passage:

Accountants' figures are essential. But far more important than any given set of figures is what better accounting can mean to the free interchange of economic information among free people. Accountants have a priceless reputation for objectivity and independence. They are equipped by training, by tradition, and by character to furnish much of the information which is necessary for sound decisions on economic policy. Perhaps an even greater sense of urgency is needed—perhaps a greater awareness of the ultimate purpose of information which is to aid an individual, a corporation, or a nation to make the best possible decision, or the best possible plan.¹ (Emphasis mine.)

At the seventy-fifth anniversary banquet of the Institute, Maurice Stans called on CPAs to take an active role in public policy, and stated that "the free flow of reliable financial information is the most effective safeguard against abuse or incompetence."²


Robert E. Witschey included the following comments in his inaugural address before the members of the American Institute of Certified Public Accountants:

Current economic and social trends indicate an environment in the years ahead in which CPAs can play a role far more important than their present one. ... The accelerating growth of the economy as a whole will bring new complexities, and quite likely, increasing government supervision and regulation. It is important that such regulation be wisely conceived. But it is even more important to remember that inherent in the power to regulate is the power to destroy individual initiative, the only motivating force of free enterprise. Responsible officials in government will seek to minimize this hazard. Their efforts to do so will generate a need for increasing volumes of financial and other economic information. CPAs should be sufficiently informed to provide the data which are needed. ... We should pay more attention to these problems and learn enough about them so that we can contribute to their solutions.¹ (Emphasis mine.)

How much influence such statements have on the views and actions of the rank and file members of the accounting profession may be questioned, but it is nevertheless significant that the leaders are including such ideas in their speeches and writings.

Accounting education

The improvement of accounting education was a necessary corollary to the growth in prestige and stature of

accounting in the United States. Prior to 1900 bookkeeping had been taught in secondary schools, by private business schools, or by correspondence courses. Some collegiate business schools had been established, but New York University was the first one to offer a specialized professional course in accounting. This was due to the personal interest of Charles Ezra Sprague, a banker, who volunteered his services as a teacher for evening classes in the winter of 1900-1901. He was among the first to use the balance sheet approach to teaching, illustrated by the use of equations.

During the next decade about a dozen other colleges added accounting to their curricula, and their teachers soon contributed better texts. Sprague's *Philosophy of Accounts* (1907) was considered to be a pioneer work in attempting to provide a sound theoretical framework for practice. Other outstanding educators were William Morse Cole of Harvard, whose *Fundamentals of Accounting* appeared in 1908, and Henry Rand Hatfield of the University of California, whose text, *Modern Accounting*, was published in 1909.

After 1910 college offerings of accounting spread rapidly throughout the country. The rise of accounting on the university level definitely added to the number of accountants who had breadth of general understanding as well as efficient techniques. Higher education, rather than mere
reliance on apprenticeship systems, was consistently encouraged by professional accountants. The only drawback to this was that it tended to encourage college courses aimed toward an ability to pass C. P. A. exams, instead of developing over-all talents. However, it was a fortunate circumstance for the prestige of the profession that accounting education was being secured by so many students on a much higher level than that represented by statutory requirements for the certificate.

Members of the new teaching profession soon felt the need to have a way to compare ideas. They met for the first time in 1916 in Columbus, Ohio, to form the American Association of University Instructors in Accounting. For the next ten years the proceedings of the annual meetings were published, and this provided opportunity for a written expression of the aims and ideas of the group. When paid memberships reached 500 it was felt the organization could support a periodical magazine.

The first issue of the quarterly Accounting Review appeared in March 1926 with William A. Paton of the University of Michigan as editor. It included a report on the tenth annual meeting of the A. A. U. I. A. held the previous December 1925, in which the need for research was emphasized—research which would help to establish clearer relationships between accounting and allied fields of law,
economics, finance, and business organization. Thus from the first the association and its publication represented a point of view that was broad in scope. This spirit led to the expansion of the educational process, and graduate work in accounting was introduced in the 1920s.

In 1928 Eric Kohler became editor of the Accounting Review and occupied that post for the next fifteen years. Under his guidance it continued the high standards established by Professor Paton. The early issues had many technical articles, of course, and devoted a great deal of attention to discussions of better teaching materials and methods, but they also included many thought-provoking discussions on accounting theory and the relationship of accounting to other disciplines of study. For example, the economists John B. Canning of Stanford, and Frank Fetter of Princeton, contributed articles to the Review in which they analyzed the similarities and differences between accounting theory and economic theory.¹ Also the Book Review section covered reports on many important books published in economics, finance, and business organization as well as

accounting literature. This policy continued, and the Accounting Review became a respected medium through which new ideas could be advanced and controversial issues could be debated.

Kohler had a deep conviction concerning the importance of accounting. In 1931 he said, "Accounting is not merely the proprietor's calculation of his profit. It is more. It is also one of the most effective instruments yet attained for accomplishing smoothly many of the social purposes of a money economy."\(^1\)

In 1935 the association felt it would be better to lift the restrictions made by its title, and to encourage anyone interested in accounting education to join. Therefore, at the annual meeting in December of that year, the name was officially changed to the American Accounting Association, and the members unanimously voted to adopt the following statement of purposes:

1. To encourage and sponsor research in accounting, and to publish or aid in the publication of the results of research.

2. To develop accounting principles and standards, and to seek their endorsement or adoption by business enterprises, public and private accountants, and governmental bodies.

3. To promote studies of accounting as an agency of control of business enterprise and economic affairs in general. (Emphasis mine.)

4. To improve the methods of instruction and to demonstrate the social benefits of a more widespread knowledge of accounting.¹

Eric Kohler served as president in 1936 and the Executive Committee of the American Accounting Association immediately set to work to develop a tentative set of accounting principles, for no authoritative statement of this kind was yet in existence. When it was published in the Accounting Review in June 1936 it was not claimed that it represented the postulates of all accounting theory and procedure, but was to be "regarded as an experimental formulation of principles having application to perhaps the most significant part of the accountant's field of endeavor."² It was hoped that a more comprehensive statement might develop out of it after there had been time for full discussion.

At the annual meeting held September 6-7, 1951, the Association officially reaffirmed these objectives, originally formulated in 1935.

The Executive Committee also stated its belief in the social importance of accounting as follows:

Accounting, originally designed for the purpose of providing internal control of business affairs by private owners, now finds itself faced with the responsibility of compiling and expressing the results of business in a way which will meet the needs of investors, governmental units, and the public at large, as well as those of the immediate management. The mechanism of private accounting must be adapted to serve these broad social and economic purposes. . . . It is impossible to escape the social implications of large scale business enterprise. Its affairs are matters of public, as well as private concern.¹ (Emphasis mine.)

Thus it was evident that the educators of the nation, as well as the professional public accountants, were going on record to express the view that accounting had responsibilities related to the entire economy as well as to individual enterprises.

Following through on its program to assist in research, the Association published An Introduction to Corporate Financial Standards by William A. Paton and A. C. Littleton, as its Monograph No. 3 in 1940. This work was more comprehensive than the 1936 Tentative Principles, and attempted to build a coherent structure for accounting on a

philosophical foundation rather than merely rationalize existing practice. Although never officially endorsed as the views of the Association, it was distributed to all its members. The American Institute of Accountants also distributed the monograph to all of its members, so it received wide recognition, and undoubtedly had a great deal of influence.

The Executive Committee of the Association made revisions of its statement on principles in 1941 and 1948, which elaborated on some portions but did not make any basic changes. A standing Committee on Concepts and Standards Underlying Corporate Financial Statements was formed and issued supplementary statements on special problems from 1951 through 1955, and a general revision in 1957. These were published by the Association but the responsibility for the opinions was that of the standing committee, and not the Executive Committee.

In the 1950s the Association sponsored research on price level changes, and published the monographs written by Ralph C. Jones and Perry Mason.1

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To the extent these statements and studies are applicable to the development of accounting theory, they will be covered in that section.

At the annual meeting in September 1948, the Association devoted an entire session to the subject of social accounting, the first time a major accounting organization had done so. Four economists, W. W. Cooper, Irwin Friend, Everett Hagen, and Morris A. Copeland, explained the accounting approach to national income analysis that had been started in the United States in 1947, and an invitation was issued to the accounting profession to take some active part in the program. In response to this, a National Income Committee was established to investigate this area. Eric Kohler was the first chairman to start an effective study program, which began as a period of self education. During the next ten years various members of the committee contributed articles to the Accounting Review expressing their criticisms or suggestions, and these will be discussed in Chapter IX.

The committee was dissolved in 1958 when, under the leadership of its last chairman, John P. Powelson, it published *A Survey of Economic Accounting*, which might be used by accounting teachers to acquaint their students with this field of study. Although a round table discussion concerning the teaching of social accounting was held at the 1958
annual meeting, and various members of the National Income Committee urged that it be included somewhere in the accounting curriculum, it would not appear that this suggestion was received with any significant amount of interest.

In the six years that have elapsed since 1958 there have been relatively few articles that have been devoted to social accounting as such. However, there have been discussions on economic concepts of income and their relationship to accounting, some of which have mentioned national income analysis as a part of economic analysis. There have been several reports from the Education Committees of the Association, and a number of discussions on education. All of these have emphasized the desirability of having college students obtain a broad cultural background, even if it had to be at the expense of cutting down on technical studies. Economics has been mentioned frequently as one of the subjects contributing to this, but no particular emphasis has been placed on the role of national income analysis in most of these suggestions.

There are a few exceptions to the general omission of direct reference to national economic analysis in accounting education. For example, two recent elementary accounting textbooks have included this subject matter. *Accounting in Action*, by Goetz and Klein, was published in
1960. A whole section was devoted to "Accounting and the Social Sciences," with two chapters in particular giving considerable attention to national economic analysis and its relationship to accounting.¹ Accounting and Economic Decisions by Donald Corbin, which was published in 1961, does not delve into this area as extensively as the text just mentioned, but it does contain a chapter which gives a brief factual summary of the National Income and Product Account.² If this trend in textbooks continues, the 1960s may be ushering in an era in which national economic analysis is to be considered an integral part of accounting education.

**Social control through accounting**

Although the individual enterprise point of view has been dominant in the uses made of accounting, there has also been an expansion of the accounting function as a device to exert direct control over business activity to further the public interest. This type of control was not exercised until unrestrained individualism aroused widespread resentment of its abuses and the public demanded governmental action.


The natural monopolies such as the railways were the first to be affected. Congress established the Interstate Commerce Commission in 1887, but control through accounting did not come until 1906. At this time the Commission was authorized to establish uniform accounting systems as a basis for determining rates to be charged the public for use of interstate transportation facilities. Although costs of most of the operations were still to be based on competitive market prices, proved by figures taken from accounting records, depreciation policies and the rates for services were subject to review and approval by the Commission.

This same principle of rate regulation was extended to public utilities and communications companies, at both the state and federal levels. In 1913 the Federal Reserve System was set up to control the banking industry.

Since the initial administrative supervision over railroads, public utilities, and financial institutions was put into effect in the United States before the accounting profession had really become a strong force, the rules and conventions that developed for the regulated industries were molded by legal ideas more than by accounting concepts.¹ These ran strongly along lines of recording receipts and

¹George O. May, Financial Accounting, p. 118.
disbursements, for accrual methods and depreciation accounting were not understood. In fact, it was not until the 1940s that depreciation accounting was effectively recognized by the regulatory commissions. Concerning the natural monopoly industries, however, the significant point is that accounting records have been used directly as a basis of control over their business activities.

In a sense the enactment of the income tax laws in 1913 represented a type of control over the accounting of private firms, because it subjected their business records to direct inspection by the Internal Revenue Service and required conformity to certain rules. Generally speaking, the Treasury Department's interpretation of income and its proper measurement followed recommendations of the accounting profession, in the formative years. Nevertheless, tax requirements have often had considerable effect on accounting conventions practiced by individual firms.

The extension of more direct controls over private business occurred in some of the New Deal legislation of the 1930s, and part of this was implemented through accounting. As was noted in the section on the public accounting profession, the Securities and Exchange

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2 Ibid., pp. 68-69.
Commission, established in 1933, required certified financial statements to be filed. This was mainly to insure the dissemination of accurate information to investors, but it also involved establishing criteria for content and methods of measurement of financial data for the reports.

The social security legislation added new expenses to be borne by industry, and increased the complexities of record keeping. Business firms were not only required to contribute directly to the social insurance programs, but were also expected to act as collection agents through withholding the employee contributions to the program, and keeping accurate records of all such transactions. This represented direct use of accounting for the public interest.

The Robinson Patman Act of 1936 represented an attempt to control monopolistic agreements or price fixing in restraint of trade. Accounting was involved because price discrimination which could be justified by cost saving was not considered a violation of the act.

Even though the scrutiny of accounting records by government officials was almost universally established as a device for business supervision and control, the country was still considered to be operating under a free enterprise system. The philosophy back of many of the controls was
that effective competition was being preserved by preventing monopolistic activities and by preventing fraudulent activity of unscrupulous promoters. Social security legislation was regarded as a cooperative insurance program, even though it was not entered into voluntarily.

The war period of the 1940s brought with it direct government control over business which, for the first time, involved central planning over the allocation of the nation's resources. Much of this was accomplished through accounting controls. In 1942 the Office of Price Administration fixed selling prices and rent ceilings by decree, adjusting hardship cases on the basis of cost figures. The letting of government contracts for war business was usually on a cost plus basis. This involved contractual controls over and inspection of the business records of the firms involved, and left the door open to renegotiation if excess profits became evident. The "planned economy" was strictly a war time measure, and the controls were removed as soon as hostilities were over. However, it demonstrated that such planning was possible in the United States, and that it was largely implemented by control over accounting procedures.

A by-product of this whole movement was increased data available to compilers of national income statistics. Summaries of income tax returns, S.E.C. reports, information
furnished to the regulatory agencies, and social security data were all sources used by the Department of Commerce, providing more complete and more accurate information than had ever been at their disposal before this.
CHAPTER VIII

ACCOUNTING: DEVELOPMENTS IN THEORY

The opinions that men hold often have great influence on their actions, so developments in ideas are significant. It is this writer's belief that one of the most encouraging signs of progress in the accounting profession is the fact that so many of its leaders are now interested in a search for sound theory to back up practice. Opinions change slowly, but the only real hope for an eventual correlation of the activities of accountants and economists is for them to understand and believe in the same fundamental ideas. Continued examination and evaluation of theoretical concepts may lead to recognition of underlying principles which can be used by both economists and accountants.

Webster's New Collegiate Dictionary defines "theory" as "a more or less plausible or scientifically acceptable general principle offered to explain phenomena." As related to business accounting, the phenomena to be explained might be interpreted as the things that accountants do, or the accounting process itself. On the other hand,
the interpretation might represent a more comprehensive attempt to fit accounting into the general scheme of the economic background. Both of these approaches may be found in varying degrees in the accounting theory that has evolved.

Early developments

Although it has been said that accountants did not give serious attention to theoretical concepts until the 1930s, it may be inferred that there were implicit assumptions about theory in the manner in which accounting was approached before this.

In fact, the very first printed words on accounting included a "theoretical" element when Pacioli included a comment on motivation. He stated simply and directly that the purpose of every merchant was to make an honest and legitimate profit for his living, and that a good record system kept efficiently would help him to achieve this objective. Thus he assumed a profit motive for business activity in general, and indicated the usefulness of bookkeeping in helping to accomplish this for the owner of the business. He also injected ethical and legal restraints on the pursuit of profit for it should be honest and legitimate. The point of view throughout was that of the owner or owners of an individual enterprise, with no attempt to consider the relationship of this enterprise to the entire
economy. However, many years later the profit motive, interpreted as enlightened self-interest, was made an integral part of a general theory of economic behavior by the moral philosopher, Adam Smith, and this became the background, explicitly or implicitly, for most of the accounting theory that developed after that.

For literally centuries the writings on bookkeeping were almost entirely confined to descriptions of techniques. The explicit introduction of theoretical elements did not come until the late nineteenth and early twentieth centuries, when educators began to cast about for a better way to teach the subject than by memorization of rules.

Sprague's *Philosophy of Accounts* (1907) probably had greater influence on subsequent accounting literature than any other book of this period, although other writers were also bringing out many of the same points. Since it was primarily a textbook it included a substantial amount of explanation of methods, but his expressed purpose was to give "the wherefore as well as the how" for "the best work is done by those who understand the theory and the reason of what they are doing."¹

He explicitly set forth the rationale that Littleton has maintained was implicit in double entry and which was

¹Sprague, *Philosophy of Accounts*, p. xxiii.
the very essence of it, namely, the interrelationship between profit determination and the financial position of the owners of a business enterprise.\footnote{Supra, p. 18.} Sprague approached this problem by explaining all transactions in terms of their effect on the balance sheet equation, which was expressed as Assets equal Liabilities plus Proprietorship.\footnote{Sprague, Philosophy of Accounts, p. 23.} He explained the record-keeping function by stating, "The all-important purpose of the proprietary accounts is to measure the success or failure in increasing wealth, and to analyze the success or failure so as to ascertain its causes as a guide for future conduct."\footnote{Ibid., p. 67.}

Sprague's "theory" was essentially that of explaining the logic of the bookkeeping process. It was not an attempt to explain economic behavior except as he recognized that "the whole purpose of the business struggle is increase of wealth, that is, increase of proprietorship,"\footnote{Ibid.} and in this sense accounting represented a measurement of the results of this behavior.

His view concerning assets has been considered quite perceptive by later writers. For example, after giving

\footnote{Supra, p. 18.} \footnote{Sprague, Philosophy of Accounts, p. 23.} \footnote{Ibid., p. 67.} \footnote{Ibid.}
several ways of looking at them he said, "In another aspect all assets are the embodiment of services previously given; and in still another they are storage of services to be received. . . . It must be observed that the aspect of assets as the present worth of future services is entirely based on opinion, while the aspect which regards them as the resultant of services given is based upon facts."¹ This line of reasoning was not developed more fully than this statement, to which there was not attached any specific recommendation as to preferable treatment, unless one infers it from the use of the words "opinion" and fact." However, he did emphasize that it was the using of these services that was significant, and which was properly recognized as expense.

As valuable as Sprague's contribution was, particularly as compared with the texts that preceded it, his book was really geared only to the activities of a fairly simple trading enterprise. It explained very well the logic of bookkeeping entries, based on the proprietorship viewpoint, but it offered no theory or logical reasoning for many of the complicated problems of income determination that were actually facing the already large-scale corporations of his day. His theory involved the framework of bookkeeping, but

¹Sprague, Philosophy of Accounts, pp. 46-47.
did not include a comprehensive concept of profit, and it may be inferred that his point of view was that of the individual enterprise as such, and not of the enterprise as part of society in general.

**Early attempts to correlate accounting and economic theory**

During this first decade of the twentieth century there was at least one effort made to correlate the role of accounting with general economic theory. The *Journal of Accountancy* reported with pride that the American Economic Association had devoted a whole session of its meeting on December 28, 1908 to the subject of accounting, and four distinguished accounting teachers had presented papers.

Professor William Morse Cole of Harvard had presided and stated that accounts were the best common ground between the theorist and the practitioner; that in America accounting was a new subject without tradition or legal handicaps, and could serve to correlate business management practices and the economic theories that were in the air.¹

Professor J. C. Duncan of the University of Illinois emphasized the fact that economics and accounting had much in common, for they both dealt with the same subject matter.

namely, the production and distribution of wealth, and the economic relationships that were involved. He advocated training in both disciplines by both professions.¹

Professor Maurice H. Robinson of the University of Illinois suggested that the practice of accountants and their standard definitions of accounting terms be modified to harmonize better with economic principles and definitions. For example, he recommended that income accounts be separated into receipts from land and from capital, and that expenditures be separated into classifications of land, capital, and wages.²

Evidently this proposal was not received with great enthusiasm by accountants, and the Journal reported that Professor Ripley of Harvard had made the comment that this would make accounting part of the field of statistics instead of confining itself to its proper function, namely, the measurement of individual business facts.³ (Emphasis mine.)

Thus the idea of correlating accounting and economics was suggested publicly in the first decade of the

²Ibid., p. 240.
³Ibid.
century, but apparently did not gain acceptance. Professor Ripley's comment probably represented the typical attitude—that the **proper** function of accounting was with the individual business firm, and not in the area of general economic analysis.

Later, there were further official attempts to correlate accounting and economic thought. For example, Wesley Clair Mitchell addressed the New York State C. P. A. meeting in January of 1923 and said, "As an economist I hope you will take a more aggressive line. Businessmen's ideas of profits help to determine supply of food, clothing, transportation, etc. . . . . Economists have a great deal to learn from accountants, and my eagerness to have you take up the study of business cycles may be colored by my desire to profit by what you can discover better than any other body of men."¹ By this statement he was referring to the fact that the economists have aggregate statistics but very little accurate information about the inner workings of business. Since accountants do have access to these facts, they could render service to the community by helping to correlate them with aggregate findings, and at

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the same time would become more valuable as advisers to their clients.\(^1\)

The educators were also maintaining contacts with economists as evidenced by the report on the proceedings of the annual meeting of December 1927. This indicated that joint meetings of the A.A.U.I.A. and the American Economic Association were desirable and should continue.\(^2\) Thus there was a spirit of cooperation between the academic world of accounting and economics, but very little evidence in published accounts of real integration of activities.

To men like Sir Josiah Stamp, who was very much interested in national income statistics, and who had published a book in 1916 which surveyed sources of data in relationship to their use for this purpose, it was exasperating that the results of business endeavor were not more available for economic analysis. When he made the caustic remark attributed to him in 1921 he did so to try to challenge accountants to make better use of their rich mine of economic data, and he devoted a great deal of effort to bring about a better rapport between accountants and economists, particularly in England.


In the United States, the economist, John B. Canning, felt that accounting and economics were "far from realizing their possibilities of mutual assistance."\(^1\) He spoke at the annual meeting of the A.A.U.I.A. in December 1928 and told the group that a "wholly new and wholly different kind of economic theory"\(^2\) was coming into existence, which he approved. He was referring to the work of such groups as the National Bureau of Economic Research, which he said had "much in common with accounting theory both in purpose and in technique. It deals quantitatively with the behavior of real people in a real market, ... almost purely an objective theory based on observations of objective phenomena."\(^3\) Canning also paid tribute to the economic theory of Irving Fisher, whom he quoted as saying, "I believe that the concept of income is, without exception, the most vital concept in economic science, and that on fully grasping its nature and interrelations with other concepts depends the full fruition both of economic theory


\(^3\) Ibid.
and of its applications to taxation and statistics.\(^1\) Fully aware that the 1920s had focused accounting attention on income, Canning pointed out that here, if there was one at all, was surely the meeting ground of accountant and economist.

However, differences were still fairly formidable and Canning attempted to make a critical analysis of accounting theory, stressing the areas where he hoped the two professions would coalesce. In doing so he said he had confined his study to what professional accountants actually did by examining their reports, for he found that modern accounting practice was, on the whole, "sounder than that which had been written about it."\(^2\)

Canning believed that Fisher's concept of income as a flow of services was a sound one that could be integrated with accounting concepts. However, he found three major differences between the ideas of Fisher and those he had gleaned from accounting reports:

1. **Scope of subject matter**
   Fisher included all scarce services of whatever nature, tracing them from their primary origins to final enjoyment, whereas the accountant included only those services involved in a particular enterprise, and thus at the very outset excludes much with which the economist undertakes to deal.

\(^1\)Canning, *Economics of Accountancy*, p. 175.

\(^2\)Ibid., p. 46.
2. Method of Analysis

Fisher established a self-consistent foundation and a logical framework of thought, but admitted statistical measurement of all of it was impossible, whereas the accountant had no complete philosophical system of thought about income and had apparently never greatly felt the need of it, but insisted on objectively measurable data.

3. Point of View

Fisher considered income in reference to the capital yielding it rather than the owner receiving it, whereas to the accountant the sources as such were not as important as measurement of volume of income, and his assets represented only residual services available to proprietor.\(^1\)

However, concerning the scope of the subject matter, Canning himself said, "The accountant's work lies within the domain of particular enterprises. . . . He does not engage in making summaries either of social capital or of social income, nor is it a part of his primary duty to supply statistics from which others may conveniently do so."\(^2\) (Emphasis mine.) But later he pleaded for more complete reports as follows, "From the economist's point of view, and for the good of the public, it is of very great importance that accountants should make their income statistics as full and as complete as the conditions of their professional practice will permit. The professional accountants as a whole are abundantly able to give us better statistics than

\(^1\)Canning, Economics of Accountancy, Adapted from Chapter 8, pp. 158-63.

\(^2\)Ibid., p. 16.
they do.... The world must, at least for a long time, look chiefly to the professional accountant for what is known as income."¹

Canning was more sympathetic toward accounting practice than most of his fellow economists, but pointed out the lack of an articulate theory. It would appear that he considered the sphere of accounting to be limited to the individual enterprise, but he pleaded for more complete data so that economic statisticians could interpret them more effectively.

Effect of the depression on accounting theory

Canning's comments came at the end of the prosperous decade of the 1920s, a period in which the country was characterized by many economists as being stabilized on a high plateau of financial activity. As noted above,² a few accountants had begun to be concerned about certain poor financial practices, but no effective action had been taken, and not much had been written on the subject. All this was changed by the depression that followed the stock market crash of October 1929. This caused unreasoning consternation, for the real productive capacity of the nation was

¹Canning, Economics of Accountancy, p. 177.
²Supra, p. 89.
not changed even though billions of dollars worth of paper wealth was wiped out. However, the psychological impact of this was to cause businessmen and the general public not only to lose confidence, but to start to ask why it had happened.

Against this background DR Scott wrote his Cultural Significance of Accounts, published in 1931. Started originally as a doctoral dissertation, it represented the first attempt by any accountant to relate the significance of accounts to the larger field of economic relationships. He endeavored to make an analysis of the economic organization of society from an accounting point of view, and acknowledged Thorstein Veblen's influence on him in the development of his discussion.¹

He traced the rise of market control, and the development of the current loss of faith in its ability to produce equitable results. He stated that accounting theory as well as practice had gone through several stages. Although it had begun as a theoretical summary of the use of double entry, it was his opinion that it was rapidly becoming a theoretical summary of the application of statistical methods to problems of public as well as

private administration. He outlined his views as follows:

Starting in a position entirely subordinate to the law of the competitive regime, accounting has become more and more independent in its viewpoint until it now commonly is depended upon by legal and administrative authorities for guidance in many decisions affecting economic interests. As market machinery has become less and less effective in a changing economic situation, accounting technique has been able to supplement and supplant it. So pervasive is this increasing dependence on accounts that it suggests an organization of economic institutions around accounts comparable to the earlier organization around the market.¹

Scott's doctoral adviser, Professor Allyn A. Young, criticized his fundamental hypothesis that there was a general cultural evolution toward a planned or regulated economy. The latter stated that accounting could not be a substitute for the market because accounting could not, of itself, supply any criteria of control; that it gets its concepts from the market.²

Scott's book was characterized as "a pioneer in the philosophical contemplation of accounting and its place in the social structure."³ It certainly represented a radical departure from Professor Ripley's statement in 1909 that the proper function of accounting was to measure individual

¹Scott, Cultural Significance of Accounts, p. 283.
²Ibid., p. 258.
business facts. Although it placed accounting in a potentially key position in the economy, the discussion was on a generalized level and offered no criteria that could be used as guides in implementing this lofty purpose.

Scott was not the only accountant to develop the idea that the function of accounting and accountants was broader than serving the individual enterprise.

A. C. Littleton wrote an article called "Socialized Accounts" for the Accounting Review of December 1933 in which he stated, "The third phase of the long evolution of accounting is probably upon us. It is that phase wherein accounting becomes a 'tighter rein' upon excessive individualism in business under the simple idea long recognized that business is in fact touched with public interest. . . . The experiences of the late twenties and early thirties have led public opinion to the conviction that unrestrained individualism in the pursuit of profit has proved detrimental to the general social welfare."\(^1\) And again in a later article he said, "The trend is already toward the substitution of account data for unrestricted competition as a means of securing social justice."\(^2\) However, Littleton


did not suggest that accounting data should ever replace market exchange data, and some years later showed a distinct aversion to a "planned economy" concept.¹

Eric Kohler also envisioned wider use of accounting when he made the following statement in his farewell address as president of the American Accounting Association in December 1936:

There are other reasons why the development of accounting theory needs careful study and supervision. Let us imagine the relation of accounting to socio-economic problems. That relation may be more real and more immediate than has generally been imagined. We will probably not dwell forever in the atmosphere of mixed notions underlying our national economic successes or failures, and underlying the legislation that seeks to insure the one and eliminate the other. The time will be reached when the distribution of income and the wealth that produces it will be national problems to be solved through direct procedures rather than through the indirect process of taxation. When that time comes, it is not unlikely that the controls which accounting affords will be employed. Cost, the technique of which has already been well developed by accountants, will be the principal control, and will be utilized to reduce speculative and windfall profits and to maintain values and prices at constant levels.

... We shall have a stabilized economic structure created through an uniform application of a controlled cost: a structure built and maintained by accounting and accountants.²

¹See Chapter IX, p. 175 which refers to article called, "But Is It Accounting?"

This statement was made in the depression era, when unsolved economic problems were still uppermost in everyone's mind, and represented an outline for implementing control through accounts, somewhat similar to that envisaged by DR Scott. However, Kohler's later writings did not emphasize the development of this concept.

First semi-official statement on accounting theory

The first definitive expression of opinion regarding accounting principles that emanated from an official group was A Tentative Statement of Accounting Principles Underlying Corporate Financial Statements, issued by the Executive Committee of the American Accounting Association, and published in the June 1936 Accounting Review. DR Scott's reaction to this proposal was that it did little more than emphasize the record function of accounting, and he would have preferred having more attention placed on the protection of equities and the exercise of a control function. However, the committee considered the statement to be only the starting point for a more comprehensive theory. It

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restricted its study to the corporation and stated only one fundamental axiom:

The basic assumption made here is that a corporation's periodic financial statements should be continuously in accord with a single coordinated body of accounting theory, and that the purpose of the statements is the expression, in financial terms, of the utilization of the economic resources of the enterprise and the resultant changes in and position of the interests of creditors and investors. Accounting is thus not essentially a process of valuation, but the allocation of historical costs and revenues to the current and succeeding fiscal periods.¹

This statement showed the influence of William A. Paton,² for it embodied his shift of emphasis from the viewpoint of the proprietor to that of the productive capacity of the business entity, as can be observed by the emphasis on the interrelationship between the utilization of economic resources of the enterprise and the resultant changes in the position of the creditors as well as the investors. Attention was definitely directed toward the individual enterprise, and not toward any evaluation of the relationships of the enterprise to the general social structure. However, a statement was made to the effect that so many


²The "entity" concept was developed in his book Modern Accounting, 1922.
decisions of business and government depend on such reports that they had come to have great economic and social significance.

One purpose of this statement was to establish the principle that all gains and losses should be reflected in the income statement, which meant that it included changes in financial position arising from the sale of capital assets and extraordinary gains or losses, as well as those arising from ordinary operations of the business. The practicing public accountants did not wish to include all of these items on the income statement, although they agreed that they caused changes in financial position. Economists considered capital gains and losses to be irrelevant to measurement of current productive effort, so on this point there were widely divergent views.

Another purpose of the statement was to establish historical cost as the foundation of accounting records, and to frown on the "present procedure" of revaluation of assets at will. During the prosperous twenties many companies had written up their assets, only to have the depression of the thirties invalidate the revised figures, and write-downs were used after more appraisals were made.

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1 American Accounting Association, Accounting and Reporting Standards, p. 61.
Thus accountants were endeavoring to eliminate this "hodgepodge" of values and to substitute a consistent record of verifiable costs as an essential starting point. This principle was also accepted by the practicing public accountants and hence became firmly fixed as "generally accepted." The accounting profession considered that it had won a hard fought battle and had made a real contribution to establishing reliability of business records. To those who had been in the thick of the fray, the stand thus achieved was not something to be lightly cast aside. At least one economist, John B. Canning, was also opposed to appraisals for he said, "The present writer is even more skeptical of most appraisals, particularly of cost of reproduction (of existing agencies), than accountants appear to be," although he also said that if estimates were disclosed as such, "confessed guesswork misleads no one." 

In the same year that a public statement of accountants favored historical costs, at least one accountant was most concerned with the unreliability of money as a

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1American Accounting Association, Accounting and Reporting Standards, p. 61.

2Canning, Economics of Accountancy, p. 255.

3Ibid., p. 245.
valid measuring rod. Henry W. Sweeney recommended in his book (Stabilized Accounting, published in 1936) that historical cost be adjusted by the use of suitable index figures to reflect purchasing power, and that these figures be made an integral part of the books and the reports. However, the attitude of most accountants at that time was typified by the following comment included in the Tentative Statement mentioned above, "An extreme change in the value of money might vitiate the usefulness of cost records, but there seems to be no sound reason for repeated adjustment of asset values for the ordinary changes in price levels commonly experienced from one generation to another."¹

Classic statement of "conservative" accounting theory

An Introduction to Corporate Accounting Standards by William A. Paton and A. C. Littleton was published under the auspices of the American Accounting Association in 1940. This did not contradict anything that had been suggested in the Executive Committee's Tentative Statement, but went much further in "weaving together the fundamental ideas of accounting"² into a more comprehensive theory. This became representative of the viewpoint of many accountants, although it was not universally accepted, particularly

¹American Accounting Association, Accounting and Reporting Standards, p. 61.

²Paton and Littleton, Introduction to Corporate Accounting Standards, Preface.
among the practitioners. For example, E. B. Wilcox, who later became president of the American Institute of Accountants, said of the monograph, "It has been helpful in pointing out matters of interest to investors and the general public, ... but we find it materially deficient in that it is based on an inadequate scope of examination, that its terminology is not conducive to full and clear disclosure, and that the accounting policies referred to therein are not consistent and are lacking in authoritative support."¹

However, there were many who were in agreement with its presentation and thought it represented an outstanding contribution. The authors did make explicit many of the assumptions about accounting that were apparently being used, and did attempt to offer a coherent theory of income against the background of classical economic theory. In discussing the increased significance of accounting due to the growth of the corporation, with its resultant separation of ownership and management, they said, "Capital should flow into industries which serve the public need, and dependable information regarding earning power is important."²


²Paton and Littleton, Introduction to Corporate Standards, Ch. I.
fundamental problem of accounting was regarded as the "division of the stream of costs incurred between the present and the future in the process of measuring periodic income."\(^1\)

The basic assumptions or concepts underlying accounting activity were stated as:

1. Business entity
   Accounting considers the business as an entity separate from those who provide the funds, and revenue and expenses should be explained in terms of enterprise changes, not proprietorship claims.

2. Continuity of activity
   Accounting is attempting to interpret a continuous stream of activities, those of the present conditioned by those of the past, and in turn conditioning those of the future, and any single period is therefore provisional in nature.
   Also the continuity concepts increases the importance of the earning power of the business enterprise.

3. Measured consideration
   Accounting measures activities quantitatively in terms of price-aggregates. Although money price is used because it is a convenient common denominator by which different objects and services may be expressed homogeneously, it is the underlying service potentialities that are significant. Changes in purchasing power may be important, but are most effectively presented in supplementary statements.

4. Matching of effort and accomplishment
   A periodic matching of the stream of costs and revenues is necessary to measure progress. The ideal is to match costs incurred with the effects attributed to, or significantly related to, such costs.
   Accounting measures the effectiveness of this effort by the difference between the costs (effort

\(^1\)Paton and Littleton, Introduction to Corporate Standards, Ch. V.
expended) and revenue (realized accomplishment). It excludes as costs the economist's price influencing factors such as imputed managerial services, interest, or rent, and restricts its measurements to costs actually incurred.

It involves long-term matching of costs as well as short-term, and therefore depreciation, windfall gains, or nonoperating losses are all part of the long-range allocation or matching of costs and revenues.

Assets are essentially revenue charges in suspense awaiting some future matching with revenue as cost or expense.

5. Verifiable objective evidence

Objective evidence is important to accounting. It is impersonal and external to the person most concerned, but it is recognized that it is impossible to attain complete objectivity at all times, for some opinion or judgment must be relied on in specific instances.¹

These concepts have been given in some detail, because they convey the essence of the assumptions underlying current "conservative" practice in accounting. Thus it may be noted that the work of the accountant was still centered on the individual enterprise, but the shift in emphasis from measuring owners' claims on profits to measuring the earning power of a productive enterprise carried with it an implied change in attitude toward the purpose of business activity in the case of the corporation. Measurement of profit was used primarily as a test of the effectiveness of management, and secondarily as a means of determining profits to be distributed to the owners.

¹Paton and Littleton, Corporate Standards, adapted from Chapter II.
The 1941 revision of the Accounting Principles by the Executive Committee of the American Accounting Association was a kind of shortened version of Paton and Littleton's monograph. The 1948 revision reaffirmed the essential soundness of the 1941 draft, although it was presented in slightly different form and there were some minor variations in terminology and treatment of specific items. The adherence to original cost was also reaffirmed. Although inflation was recognized to be a problem it was still considered that supplementary statements would be the best way to supply information concerning the changes in purchasing power.

Effect of inflation on accounting theory

In 1943 George O. May, a partner of Price-Waterhouse and Co., frankly stated that there were no accounting "principles," even though "many accountants are reluctant to admit that accounting is based on nothing of a higher order of sanctity than conventions."¹ Thus his implicit "theory" was that there was no separate logical explanation of income determination, for it was conditioned by social and economic concepts of the time and place; when these changed it

followed that accounting might have to change with them. He was convinced that inflation was a strong enough force to warrant a change, and argued for modification of the cost convention to provide for recognition of changing purchasing power. To help further this cause he became an active member of the Study Group on Business Income from 1947 to 1952, and helped to write up the first draft of its report, Changing Concepts of Business Income.

Three basic postulates of accounting were examined by this Study Group—the monetary postulate, the permanence postulate, and the realization postulate, but the first one was singled out for particular analysis. Although the tenor of the report throughout reflected the desirability of measuring revenues and costs in terms of equal purchasing power (which could be implemented either by application of some appropriate index number to the cost or by using replacement cost), the final recommendation said, "For the present, it may well be that the primary statements of income should continue to be made on bases now commonly accepted." However, it urged the presentation of supplemental information, as part of the material upon which the independent accountant expressed his opinion, if

practicable. It also recommended as a goal the expansion of the framework of accounting statements to include recognition of results of changes in purchasing power on the determination of income.

There were forty-four members who participated in the study up to the time of the final report, of whom ten expressed themselves as dissenting from major aspects of it. All of those dissenting were accountants except one, who was a representative of a trade union. Thus it would appear that almost half of the accountants involved had strong objections to the idea of departing from the cost basis. Those favoring a change were disappointed in having to issue such a mild recommendation, but it could not have been published at all if there had not been a compromise.

Just prior to the release of this report in 1952, a committee of the American Accounting Association had issued a Supplementary Statement on Price Level Changes and Financial Statements, which was published in the October 1951 Accounting Review. It included a comment that the principal significance of dollars was not in their number but in their purchasing power, but it, too, ended up by recommending that primary statements continue to reflect historical cost at the present state of accounting development. This group also strongly recommended experimentation with methods for showing changes, and urged business
companies to publish supplementary statements. However, this committee did not favor current value or replacement cost as an acceptable method, but suggested the application of a general price index to all statement items on a consistent basis. For experimental purposes the Bureau of Labor Statistics index of wholesale prices was considered satisfactory.

The price level controversy continued to rage during the 1950s. The American Accounting Association sponsored research by Ralph C. Jones and Perry Mason, and their recommendations were favorable to the desirability and feasibility of recognizing changes in purchasing power on the books and in the reports. Many articles on one side or the other appeared in the periodicals, and the committees appointed by accounting organizations urged business firms to include supplemental reports.

This subject matter received so much attention in the academic and professional periodicals that it might be supposed it would have had some effect on business reporting. Being interested in these developments, this writer once made a careful study of 1956 annual reports distributed on a national basis by 253 business firms. Only ten of these, or about four percent, made any comment at all about the deficiencies of the monetary unit. In general the discussion offered by these ten companies was restricted to
the fact that depreciation allowances were not adequate, and that this resulted in tax hardships or inequitable tax treatment of firms with large fixed investment in plant or equipment. The only company to make any comprehensive report at all was the United States Steel Corporation, which devoted six pages of its annual report to pointing out the effects of inflation, illustrated by appropriate graphs and charts. Coming at the time when such supplementary information was being so strongly urged, the meagerness of the response makes one realize how slowly new theoretical ideas penetrate customary practices.

**Accounting organizations' interest in theory**

In spite of public indifference research study was a continuing process. In 1953 the American Accounting Association published a monograph by A. C. Littleton called *Structure of Accounting Theory* in which he stated his viewpoint that accounting theory was thinking that was focused on doing, but which was derived from experience as distinguished from experiments. "Theory states the reason why accounting action is what it is, why it is not otherwise, or why it might well be otherwise."¹ He did not intend to

equate accounting theory with mere rationalization of practice, but thought that the inductive method was appropriate to the development of theory.

In 1957 the American Accounting Association published another revision of its Accounting and Reporting Standards for Corporate Financial Statements which was considerably changed in format from the preceding statements. While adhering generally to most of the previously expressed ideas, there were several significant changes in emphasis and definitions. It attempted to make even stronger the economic aspects of the business entity as the focal point of accounting analysis, but confused the issue somewhat by including the proprietary concept at the same time. "Realization" was not tied in quite as firmly to exchange transactions as before, for it was considered to represent the fact that "a change in an asset or liability has become sufficiently definite and objective to warrant recognition in the accounts,"\(^1\) of which a sale between independent parties was the first mentioned criterion of this, followed by other possibilities. Money was recognized as the measuring unit, but it was emphasized that it was useful only to the extent it reasonably reflected economic events. Assets were not treated as merely residuals resulting from

\(^1\)American Accounting Association, Accounting and Reporting Standards, 1957 Revision, p. 3.
allocation of expenditures between present and future time periods, but were conceptually considered to represent the money-equivalent of their service potentials. Although ideally this might be interpreted as the sum of the future market prices of all streams of service to be derived, discounted by probability and interest factors to their present worth, this approach was judged to be too abstract to be feasible as a basis of quantification. Therefore monetary assets were to be listed at the figures represented by discernible, measurable, and reasonably certain collection and availability of cash. Nonmonetary assets were to continue to be based on acquisition cost, modified by recognition of loss of service potential through depreciation, depletion, or obsolescence.¹

A shift in position was noted in the recommendations regarding supplementary information about changing price levels. Whereas the earlier pronouncement had approved only the use of a general price index applied to all items on financial statements, this report added to that method the approval of determining changes in specific assets by use of replacement cost or the use of specific price indexes. A strong recommendation was made that reports

¹American Accounting Association, Accounting and Reporting Standards, 1957 Revision, pp. 3-4.
provide more information as to specific practices adopted when alternative methods were possible.¹

This revision was considered to be the responsibility of the seven members of the Committee on Concepts and Standards Underlying Corporate Financial Statements, and was not officially endorsed by the Executive Committee of the American Accounting Association. However, it represented more of a step toward interpretation of income in terms of enterprise productivity expressed in purchasing power than had been given by any previous semiofficial statement.²

During the 1950s the research committee of the American Institute of Certified Public Accountants continued to issue suggestions on specific problems until 1959, when the new Accounting Principles Board was formed. No longer was its objective the piecemeal narrowing of differences, but the establishment of a logical, comprehensive theory of accounting. Maurice Moonitz, as the first Director of Research appointed by this Board, came to a conclusion about the development of theory opposite to that of Littleton, for he stated that "relatively heavy reliance must be placed on deductive reasoning in the development of

¹American Accounting Association, Accounting and Reporting Standards, 1957 Revision, p. 9

²Ibid., p. 1.
accounting postulates and principles. We must first recognize and define the problems to be solved, then move to their solution by careful attention to what 'ought' to be the case, not what 'is' the case. Hopefully, the two, 'ought' and 'is,' will not be too far apart, but we have no reason to expect them to be identical.\(^1\)

The Basic Postulates of Accounting was published as Research Study No. 1 in September 1961, and its companion Research Study No. 3, A Tentative Set of Broad Accounting Principles for Business Enterprises, written by Robert T. Sprouse and Maurice Moonitz, was published in April 1962. Apparently their colleagues thought the "ought" position was too far removed from the "is," for the Accounting Principles Board issued a statement that the studies were a valuable contribution to accounting thinking but were too radically different from generally accepted accounting principles for acceptance at the present time; that it would defer action on the proposals until after there had been a period of exposure and consideration.

In the Basic Postulates, Moonitz first related accounting to a general economic background, with the function of accounting defined as the measurement of resources held by specific entities and the reflections of

claims against and the interest in those entities, the measurement of the changes in those resources, claims, and interests as assigned to specific periods of time, and all of this expressed in terms of money as a common denominator.¹ Fourteen postulates were stated, which were related to the general environment, the field of accounting, and the goals or standards of accounting. These standards were the familiar ones: (1) continuity, (2) objectivity, (3) consistency, (4) stable unit (Accounting reports should be based on a stable measuring unit.), and (5) disclosure. There was also supplementary discussion on uniformity, materiality, and conservatism, without ranking them among the postulates.

Of the postulates as developed in this first study, the only one that seemed to depart radically from current procedures was the one related to the field of accounting which stated, "Accounting data are based on prices generated by past, present, or future exchanges which have actually taken place or are expected to."² (Emphasis mine.)

When the elaboration of principles resting on these postulates was disclosed, there were a number of concepts

¹Maurice Moonitz, The Basic Postulates of Accounting, p. 23.

²Ibid., p. 37.
that were diametrically opposed to current practice. The statement of the principle that profit was attributable to the whole process of business activity was not a new idea, for it had appeared in Paton and Littleton's monograph in 1940, but its application was different. The proposition was advanced that it was production that was significant, not just realization at the moment of sale. Therefore inventory items that had "objectively determinable" net realizable value (selling price less the cost of completion or disposition) would be so valued. This would place them in a kind of receivable classification, with profit recognized in the period of production. If this valuation could not be objectively determined, current replacement cost would be used, which would mean that holding gain or loss would be reflected in the current period. As a last resort acquisition cost would be used, if neither of the other measurements could be objectively determined.¹

Fixed assets were to be originally recorded at acquisition cost, but with appropriate modification for effects of the changing dollar either in primary or supplementary statements; they should be restated in terms of current replacement cost whenever some significant event

occurred, or perhaps in any event every five years.¹ Carmen Blough said of this proposal, "Shades of the 1920s! Those of us who remember how impossible it was to determine the fairness or reasonableness of the results of an appraisal shudder at the idea of going through it all over again."²

The main differences between the Sprouse and Moonitz proposals and conventional principles were:

1. More liberal concepts regarding what could be considered objectivity in measurement, which in essence meant departure from the acquisition cost principle.

2. Recognition of profit as due to the process of production and not necessarily dependent on waiting until revenue was validated by sale, which meant this was a departure from the realization principle.

3. Recognition of holding gains and losses due to changes in prices, which were to be reported separately on the income statement, and which would permit both the balance sheet and income statement to reflect current valuations.

In discussing the accounting entity, Moonitz did not restrict the problem to that of the corporation, for principles should be of more general application. He also raised this question:

Are existing accounting entities really independent or are they merely cells in a larger social organism? . . . In the sphere of practice this . . . is being felt in pressures from regulatory agencies

¹Sprouse and Moonitz, Tentative Principles, p. 57.
²Ibid., p. 62.
(and elsewhere) both for the adoption of procedures which will aid in the preparation of national accounts and for the abandonment of those which interfere. This development is probably a mild manifestation on the accounting level of the shift from a highly competitive society to the interdependent society toward which we seem to be moving so rapidly.¹

Moonitz raised this question but did not attempt to discuss its merits, and did not attempt to relate his basic postulates to this concept, for they are geared to analysis of business enterprise as an independent economic unit. However, adoption of the above postulates and principles would result in national income analysts making fewer modifications of business reports. Some of their objections to present accounting statements would be removed if profit were to be recognized on the basis of production rather than at the point of sale, and if current costs were used for income determination, with holding gains or losses clearly segregated in the statements.

Summary

Thus we see that the upsurge of interest of accounting leaders in theoretical concepts was essentially a movement of the twentieth century, especially in the period since the 1930s. The early attempts were related to the logic behind the bookkeeping processes, but later

¹Moonitz, Basic Postulates, p. 32.
discussions have revolved around the criteria for determining income. Although several attempts have been made to correlate the concepts of accountants and economists more effectively, certain fundamental differences have not yet been resolved, including the use of the monetary unit in expressing purchasing power.

Nevertheless, the continuing search by accounting leaders for basic principles is an encouraging sign. It is particularly significant that since the 1930s there has been an ever-increasing awareness of social responsibilities of accounting and accountants. With the exception of DR Scott's work, this social responsibility has been implicitly interpreted as being within the classical economic framework of a free enterprise system. Although there has been very little attempt to make explicit reference to the relationship of the individual business firm and the economy as a whole, there are growing signs that interest in this direction is beginning to develop.
CHAPTER IX

ACCOUNTING: COMMENTS ON NATIONAL ECONOMIC ANALYSIS

In the preceding chapter specific comments by accountants on concepts of social accounting were omitted, for they are more effectively presented as a unit instead of being distributed through the more general development of accounting theory.

Accountants in direct contact with work on national economic analysis

At the outset, it must be admitted that accountants have not participated actively in the national economic analysis movement, and that there are apparently not more than half a dozen accountants who have had any direct relationships with those who have been working on national income analysis in the United States.

George O. May served for a number of years as director at large on the Board of Directors of the National Bureau of Economic Research, and for the past twenty years or so Percival Brundage has served on this Board as a representative of the American Institute of (Certified
Public Accountants. In addition to his duties as director, Mr. May presided over a round table discussion on "Capital Gains in Income Theory and Taxation Policy"\(^1\) at the meeting held in April 1938 by the Conference on Research in National Income and Wealth. His comments are included in the published report of those proceedings. He also presented a paper on "Changes in Accounting Treatment of Capital Items During the Last Fifty Years"\(^2\) at the conference held in October 1953 which was devoted to the general topic, "Problems of Capital Formation."

Mr. Paul Kircher was a member of the National Income Committee of the American Accounting Association for four years. Under this committee's sponsorship a survey was made of business uses of national income data. His paper reporting on the result was given at the conference held in November, 1955, which was devoted to an appraisal of the National Income and Product Accounts prepared by the


National Income Division of Office of Business Economics, Department of Commerce.\(^1\)

In addition to the above contributions to the work of the Conference on National Income and Wealth, sponsored by the National Bureau of Economic Research, William A. Paton wrote a book, *Corporate Profits as Shown by Audit Reports*, which was published by the Bureau in 1935.

To this writer's knowledge there were no other accountants connected with the National Bureau of Economic Research, and there were none at all associated with the National Income Division of the Department of Commerce.

However, the names of two accountants are particularly outstanding because of the work they have done in attempting to correlate accounting concepts with those of national economic analysis. John P. Powelson of the United States and F. Sewell Bray of England have both made significant contributions in this area.

Powelson holds a C.P.A. certificate issued by the state of New York, so may be classified as an accountant. His background and training entitle him to be considered an economist, and most of his work has been done in that

capacity. For several years he conducted the training program of the International Monetary Fund and served on its research staff. He has published two books in the field of social accounting, *Economic Accounting* (1955), and *National Income and Flow of Funds Analysis* (1960). He also served as chairman of the National Income Committee of the American Accounting Association when it prepared *A Survey of Economic Accounting* for use by advanced accounting classes. Powelson has undoubtedly done more to correlate the concepts of business accounting with those of national income analysis than anyone else in the United States.

In England, Bray, who is primarily an accountant but is also an economist, has worked closely with those who have done national income work in Great Britain. In addition to a number of general works advocating the expansion of accounting concepts, he published a special monograph, *Social Accounts and the Business Enterprise Sector of the National Economy* (1949). In this he attempted to reset the accounts of the business sector, as originally prepared by Richard Stone and adopted by the United Nations as social accounts, into a format which would conform more closely to current business practice in England. Bray is also well known in accounting circles in the United States, for many of his articles have appeared in American periodicals, and his books are available in this country.
To the best of this writer's knowledge, the accountants named above are the only ones who have had any direct contacts with those who have worked on social accounting.

Early comments on social accounting

In the mid-1930s three interesting articles related to this subject appeared in the Accounting Review. Although they presented new concepts and were prophetic of future events, there was no follow-up work done on them, so they made no direct contributions to further developments in this area.

The term "social accounting" appeared in print in an article written by Elmer Hartzell in 1934, which was eight years before it appeared in The Social Framework: An Introduction to Economics by J. R. Hicks. As far as economists were concerned it was Hicks who had coined the phrase, and it was indeed he who popularized it. Nevertheless the idea was suggested by Hartzell as part of a philosophical essay on the place of accounting in our society. After a somewhat generalized summarization of past events he said:

Accounting as it is now conducted is concerned with the effect of a policy on the individual firm or business, only incidental consideration being given to the larger social setting. . . . It is presumed in theory that the economically proper thing will be worked out through the action of
the price system. As corporations grow to great size, however, their own policies have a perceptible effect on events... The opinion may be hazarded that there will be a movement toward a resolution of costs which may be called Social Accounting, the objective of which will be the harmonization of the viewpoints of the business firms and the human interests at large by tracing the effects of particular policies on groups other than those directly concerned.¹ (Emphasis mine.)

He went on to predict the enlargement of the scope of accounting toward a national outlook, and cited several stages in this progress as:

1. Bookkeeping of small firms or partnerships.
2. Accounting of corporations.
3. Accounting from the standpoint of an industry.
4. Accounting from the standpoint of a group of industries.
5. National accounting, under conditions which might vary from a minimum of government control to a "planned economy" or socialism.
6. Application of accounting principles to the measurement of the balance of foreign trade.
7. Application of accounting principles to the measurement of national wealth and income.²

He added the comment, "It may be anticipated that the meaning of such fundamental ideas as costs and profits will be transformed as the means become available for bringing

²Ibid., p. 163.
national perspective into a quantitative relationship with the affairs of individual corporate units. "¹ In a sense this was somewhat the same kind of thing DR Scott was trying to say when he suggested the orientation of economic institutions around accounts.

Hartzell added another idea, however, when he predicted the application of accounting principles to the measurement of national wealth and income. He did not follow through on this, so it had to wait for Meade and Stone of England to propose and implement it about six years later, in 1940-41. Although Hartzell's article actually went no further than to make a series of interesting predictions, it was indicative of a general trend of thought that was beginning to envision wider uses of accounting and to recognize greater responsibilities for it—a trend which had gained impetus through the soul-searching analysis prompted by the depression years.

The other two articles were those written by William T. Crandell in which he described his efforts to apply accounting concepts to the measurement of national income and wealth. He had started on the project for his doctoral dissertation at the University of Michigan because he had become intrigued with an idea expressed by Morris Copeland.

¹Hartzell, Accounting Review, (June, 1934), p. 163.
In an article entitled "Some Problems in the Theory of National Income," which appeared in the February 1932 issue of the Journal of Political Economy, Copeland had asserted that the national income statement had relationships to the statement of national wealth, or national balance sheet, which were analogous to the relationship of a corporate income statement to the corporation's balance sheet.¹

Crandell believed that national income and national wealth studies could be integrated through reporting methods adapted from business accounting, and that the results would be advantageous in appraising the accuracy of the work and the reasonableness of the interpretations. He limited the scope of his study to a single industry, privately-owned Electric Light and Power companies in continental United States, and his purpose was to outline a procedure which could be applied to other industries also. If all these industry reports were consolidated, he believed they would yield a fairly complete report on the national income and wealth, since measurable goods and services were practically all earned in business undertakings of some sort. Therefore he considered this study as a component part of a more comprehensive one which would be necessary to provide the total figures.

He discussed the various interpretations of "income," but decided on the accountant's concept for his study. He did so because it was more commonly used and therefore better understood, because the only data available came from financial records that were the products of accounting, and because it provided a valuable means of checking accuracy, and avoiding the fallacy of double counting, by correlating national income and national wealth. He recognized that money as such did not measure relative welfare of the people of the nation, and suggested that application of index numbers to his figures to show relative purchasing power might be an extension of his work.

When he prepared a series of statements for eleven years, 1921 through 1931, he used as benchmarks figures for the years 1922 and 1927 given in the Census of Electrical Industries reports, apparently interpolating and extrapolating data for the other years, with the aid of sampling techniques.

Without going into the details of his statements, let it suffice to say that he considered the national income to be an equitable distribution of the national product. The national product consisted of the total consolidated revenues less product produced by other industries, less wealth lost or consumed without producing income (a surplus adjustment). Income distributions were in three
main classifications—personal services (wages, salaries), property services (interest, dividends), and net income reinvested in the business. He felt that a measurement of reinvested income which could be correlated with balance sheet wealth was a valuable indicator of newly created resources which could be put to productive use. His general approach of preparing a consolidated profit and loss statement, deducting out purchases from other business companies to arrive at a net value added amount, was one which the Department of Commerce later described as being a correct conceptual method, but one which it could not follow in practice because of lack of data.

Considering the date of his work, no later than 1935, Crandell apparently made an original contribution in this area. It was only a year or so after the Department of Commerce had started the compilation of national income figures, and preceded by several years any official suggestions for the use of the accounting approach for economic analysis. However, there was no follow-up on this type of research, at least none that appeared in any accounting journals, so nothing further developed.

It must be admitted that Crandell's proposal greatly oversimplified the problem, for there are complicating aspects to a study of the total economy which are not apparent when one is working with a homogeneous portion of
it. Also, in his study he was not confronted with lack of comparable data to the extent found in other areas. The industry he chose was composed of relatively large companies which not only kept good records, but were also regulated. As a result there was probably greater uniformity in the reports he used than would be generally available if the entire economy were being studied.

Research of this nature was the kind that George O. May might have approved. Since he was a director of the National Bureau of Economic Research, he was familiar with work done on national income statistics, but he was concerned with a certain lack he felt was inherent in them. In his book *Financial Accounting* (1943), he commented on the valuable check which is supplied by double entry and went on to say:

> The importance of this point and its wide applicability are apparent to anyone who has examined with care the purely statistical information in regard to the so-called national income and savings that has been officially disseminated, including that presented by distinguished economists in testimony before the Temporary National Economic Committee, or in monographs published under auspices of that body. If such material had always been the product of a rigorous system of double-entry accounting, many fallacies and unwarranted conclusions would have been avoided. Professor Schumpeter, in discussing the practice which "turns the unit of money into a tool of rational cost-profit calculations" has spoken of double-entry bookkeeping as being its "towering monument." It is to be feared that most economists and statisticians regard double-entry bookkeeping as just
that—a monument to be admired from afar, rather than a technique to be acquired. They are less attracted by its humbler virtues than by the dangerous charms of extrapolation.¹

Later in a 1944 address called "Accounting as a Social Force" May said, "In the last few years there has been a disposition to treat something called 'national income' as a fundamental of economic policy. National income should be an accounting concept. . . . Today national income is a vague term that conveys widely different meaning to different minds. It is a task for accountants to make the term suitable for use as a control concept of our economic thinking. Indeed the economic statistician must become an accountant, or the accountant must take his place."² (Emphasis mine.)

Only three years after this, national income figures were cast in a double-entry framework by economic statisticians, so part of May's objection was overcome.

Comments on the National Income and Product

Following the 1948 annual meeting of the American Accounting Association in which the invitation was extended to the accounting profession to take part in national

¹George O. May, Financial Accounting, p. 15.

economic analysis, a National Income Committee was formed. After a period of self-education, various members made comments on the social accounting program which were published in the Accounting Review. Most of these comments were restricted to the work actually being done in the United States, and were primarily concerned with the National Income and Product Account as it was prepared by the National Income Division of the Department of Commerce.

Early comments emphasizing differences between accounting and economic analysis.—In the first report from the committee, the chairman, Eric Kohler, suggested that basic concepts, as well as techniques and reports, should be examined carefully. He expressed deep concern over inescapable imperfections in both available material and existing methods of compilation. Kohler outlined several major areas for study, in some of which he gave his own suggestions for improvement. Although not presented in the same order or in the same words, these may be summarized as follows:

1. As far as possible every-day accounting concepts of businessmen should be used in compiling national income data. The more this is done, the more directly will the overall results be related to the phenomena of the market place and their interpretation. The correspondence of basic notions in the two fields might find the end product more easily fitted to the present scheme of things.
2. More attention should be paid to an orderly account structure, particularly in the development of a method of coding and matching entries. At present, it is impossible to trace numerous inter-sector transactions.

3. Omit some if not all of the imputed transactions, possibly on the ground that if they do not in practice reach expression in the commercial world they exist in the minds of economists only.

4. Include information concerning capital turnover. Economic analysts have long assumed that capital gains and losses are not income, but the behavior of individuals and businesses indicates that this viewpoint is not shared in reality. Such gains or losses may prove critically important as determinants in important areas of production and consumption.

5. Omit much of the refinement of data. Tortuous and devious processes are used, including a good deal of assumption along the way, only to emerge with a minimum of change in the whole, or parts.

6. National income data should be integrated with the statement of money-flows and with a national balance sheet.

7. Determine what use is being made of the data, whether or not it is best suited for that purpose, and whether or not the same information might be furnished better in other ways.

In addition to these suggestions, Kohler later prepared an unpublished revision of the National Income and Product Account, and the related sector accounts, in which he re-arranged the data found in their published reports into a format much clearer from the point of view of a general user. This report will be discussed in more detail later.

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As a result of study and discussion other members of the committee wrote on various phases of the problem.

Wilson L. Farman warned that the basic assumptions underlying the purpose of the work and the gathering of data must be understood, or the resulting information would be misinterpreted or misused. He stated that in the Western World, social accounting rested on the basic assumption that to provide goods to consumers was the primary purpose of economic activity; that in an exchange society market place transactions comprised the bulk of what was measured, but that there were some very important exceptions because of imputed items that were included or exchange transactions that were excluded.¹

Gilbert P. Maynard’s reaction to a comparison of business income and national income was that the latter did not merely represent application of accounting concepts and standards on a different level. He said the accountant has sought to define and measure income from the point of view of the business entity. When national income aggregates were equated with current production, and were accepted as at least partial indicators of the material welfare of the economy, this represented a point of view so different that

he wrote, "It may be argued that the concepts are so dissimilar that comparison and contrast serves no purpose; that it is purely an accident of semantics that they bear the same name."

Also he remarked that standards regarding precision of measurement were quite different. Accountants have always placed great emphasis on objectivity and verifiability of business data, whereas the social accountant used estimates, often based largely on sampling, interpolation, extrapolation, and values imputed to considerations involved in noncash activities.

Thus differences in point of view and precision of measurement made business and social accounting essentially noncomparable in his opinion.

In attempting to evaluate the validity of the assumption in social accounting that modifications of accounting reports were necessary or desirable, Maynard directed considerable attention toward the imputations included in the data. The most important of these were wages and salaries paid in kind in the form of food, clothing, or lodging, rental value of owner occupied houses, value of food and fuel produced and consumed on farms, and non-monetary income and product flows arising in connection with

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financial intermediaries. He concluded that they were relatively substantial in amount, for they represented as much as 11.8 percent of the total in 1932 and 5 percent of the total in 1948. However, he questioned the logic of their use and said:

Defence of imputations cannot rest upon grounds that they are generally recognized as elements of real income, or that they may readily be associated with factor incomes. There are too many elements of "real" income clearly associated with factors of production which are not imputed in the compilation of national income and product statistics. One of the most significant is that of the services of housewives. Indeed there can hardly be a consistent defense on theoretical grounds of the imputations selected for inclusion in national income and product data. In the final analysis, tradition and availability of data are often the determining factors.\(^1\)

Then he asked, "If all elements of real income cannot be included in national income, should imputations be made for those most easily measured?"\(^2\)

Julius Margolis directed his attention to the classification of the sectors in the social accounts, which he described as functional rather than legal or institutional in character. The economy was divided into four main groups, the personal sector, the business sector, the


government sector, and the rest of the world (a net figure only), which when consolidated made up the national income and product accounts. He felt that their main deficiency was due to excessive aggregating. For example, the personal sector was a heterogeneous grouping for it included not only households, but nonprofit institutions. The transactions of units in this sector included some purely business functions of unincorporated business and farmers, and excluded some family activities involving housing. In the business sector he found it confusing to have certain elements of private households and government also included, but his primary criticism was the loss of valuable information that occurred when all intermediate production was completely omitted. Other objections were that it was impossible to trace any flow of investment funds, and that when capital gains and losses were ignored on the grounds that nothing was produced, transactions of real significance regarding liquidity positions of economic units were deleted from the economic process.

He said, "What is most deficient with the social accounts is . . . the incompleteness of the information that is provided. No elements of the balance sheet are reported. The bulk of the statistics are 'netted out.'"
The sectors are too all-inclusive for much of economic analysis. . . . The social accounts remain inadequate."¹

Paul Kircher commented that there was need for more understanding by everyone for "we are all part of the economic whole, and to an ever-increasing extent our fortunes are bound up with those of the rest of the economy." and "We do need an objective, factual report of the position and progress of our national economy."² However, he did not believe that the present form of reporting met the requirements for objective facts clearly shown and understood. His position was that the more clearly the national income estimates followed methods and reporting in common use by business enterprise the more confidence would be generated in the reports and the more they could be used with understanding by the general public.

He, too, commented on the need for more precisely defined sectors, and a sector for banks and financial institutions separate from that of general business was suggested as a move which would improve the quality of information. He was particularly critical of the imputed


items involving rentals and financial institutions. Kircher believed that integration of income with financial position was a necessary step in evaluating what had occurred in the economy and could serve as a cross check on accuracy. A major difficulty in interpreting the present system was lack of evidence as to the reliability of the estimates, even though some people had indicated that the relatively low amount reported as statistical discrepancy was sufficient to give a reader confidence in the data.  

Carl Nelson pointed out that the multiple uses of accounting data issued by American business usually meant that they could not be adequate for all the uses made of them, even on a business enterprise level, and that they could not be stretched further to provide meaningful data to economists and statisticians. The only way to meet the needs for national income purposes would be to add sampling procedures to fill in needed data, or to change the structure of accounting reports so as to provide the needed information. At the time of his writing no attention had been paid to this in America, but he mentioned that Sewell Bray of England had suggested such a move. Nelson made no recommendation that this be done, however. In summarizing

1Paul Kircher, Accounting Review, adapted from the entire article, pp. 191-99.
his views on the current use of accounting data in national income analysis he said:

The work of the accountant finds its way into use in the national income estimates by way of income tax returns, social security reports, census replies, and summaries of financial reports made to regulatory agencies. With the exception of social security reports, use of accounting data involves the summation of the results of a variety of accounting methods. . . . Compilers have no control over the methods used, and frequently have no information as to what the actual bases are. For this reason the data are unreliable but the extent of this unreliability is unknown."¹

Charles E. Johnson added a protest to the use expected of business reports to meet all purposes. He said, "One of the weapons frequently employed against the accounting concept of income is the fact that material adjustments for inventory price changes and depreciation are made officially and unofficially in connection with the use of such data. The implication is that there must be something seriously wrong with data which must be adjusted in order to be useful in macro-economic analysis,"² but he went on to say that there were at least three major differences in


viewpoint that indicated that the two should be sharply distinguished:

1. For the economy as a whole creation of consumable products or services is a measure of well-being, but for the individual enterprise, changes in money position are also important as an indicator of liquidity and ability to invest.

2. For the economy as a whole, an exchange transaction may or may not be indicative of productivity so it is not an important factor, whereas the exchange transaction is the focal point for the individual business firm.

3. For the economy as a whole, costs represent scarce resources that are lost or used up, but for the individual firm costs represent past, present, or future money payments to parties external to the enterprise.

He stated that it was only natural that the economic statistician would like to have information from a firm that could be used directly, but it did not follow that this would provide the most useful information for the business entity itself. Therefore he concluded that the concept of business income should not be molded into a macro-economic pattern to serve this specialized purpose alone.¹

A. C. Littleton was not a member of the committee, but since he was vitally interested in all accounting development he mentioned social accounting in a score of articles or essays. In one of these entitled "But Is It

Accounting?", he stated his opinion that the phrase "double-entry social accounting" was misleading because it conveyed the impression of an analogy with business accounting that did not exist in fact, for mere duality of entry was not the true essence of the latter. He pointed out two points of dissimilarity in particular:

1. There is no counterpart in our national economy to management in enterprise operation (or is such repudiation of a "managed economy" to be considered treasonable?).

2. National wealth and national income are not integrated in the way capital at work in an enterprise is integrated, with enterprise income as the fruit of effort.¹

He went on to say, "One reason the integration is different is that national well-being is not satisfactorily measured by aggregate national income,"² and then he added the comment, "Preservation of our way of life could be vastly more important to national welfare than the maintenance of a high standard of living, that is, a high net income for the whole nation derived from a centrally managed national economy."³

Littleton expressed the view that accounting data, being created for individual business enterprises, do not

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¹A. C. Littleton, Essays in Accountancy, p. 130.
²Ibid.
³Ibid.
satisfactorily express economic data for the whole nation. Regarding the adjustment of business accounting for use in national accounting, he said, "The organized compiling of statistics of national income is not, and cannot become, an application of accounting techniques; and surely accountants will not aspire to remake enterprise accrual accounting into a statistical methodology—to the detriment of the objectives of accounting as such—so that economists interested in national income data may have figures derived from business activities precast in a pattern to fit their ideological needs. The price for this accommodation would be, I think, too high to ask accounting to pay—the price of undermining the present public understanding of accounting figures."

Later comments emphasizing similarities between accounting and economic analysis.—All of the viewpoints expressed above stressed the differences between business accounting and social accounting, but the Department of Commerce representative on the committee believed that conceptually there was a great deal of fundamental similarity between consolidated business profit and loss statements, and national income and product. Raymond Nassimbene in two separate articles explained the composition of the latter in terms of its counterpart in business statements,

1Littleton, Essays in Accountancy, pp. 323-29.
although he commented that double-entry notation was abridged because no balance sheet was included. Also he stated that conceptually the product account might be built up by a consolidation of business profit and loss statements, but that in actual practice this was not done because such information was not available in sufficient detail or coverage. Therefore the account was actually constructed by estimation procedures in which more or less independent sources of data were used.1

John P. Powelson was the last chairman of the committee, and he believed in the fundamental consistency of accounting principles throughout all phases of economic activity, from the individual household to the business enterprise to the national economy. He said:

Both business and social accounts were born with the same intent, that of measuring income and indicating its relationship to net worth, or wealth. Because of these common purposes it is no accident that the same accounting rules should be applied to each system, and that the national income and product accounts should grow up as first cousins to business profit and loss statements and balance sheets. . . . Both businessman and economist have gradually widened the scope of accounting activity and achievement.2

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Thus he believed that from the same underlying data different reports could be prepared to meet varying purposes, merely by reorganizing the data, or making reconciliations reflecting changes required for the particular analysis that was desired. The prime obstacle to all this was the difficulty of collecting adequate data.

The importance of Powelson's contribution arose from the fact that instead of making generalized statements about consistency of concepts, he actually demonstrated how business accounting could be reconciled with social accounting, explaining it partly with the use of journal entries, partly with a correlation of financial statements, but mainly with a clear logical explanation of their interrelationships.¹

Although he recognized the deficiency of underlying data, he did not make any concrete suggestions about how to secure more accurate information, and assumed in his illustrative material that the correct data were available. In practice, he commented that the economic analyst welcomed more accurate sources of information, and had proved quite ingenious in making use of whatever was available.

¹John P. Powelson, Economic Accounting, Part I was devoted to "Individual Enterprise Accounts," and Part II explained the interrelationships of the "Aggregate Accounts."
In England, F. Sewell Bray was the accountant-economist who believed that social accounting was here to stay, and that accountants would do well to reconsider their techniques in terms of social as well as institutional aggregates.\(^1\) He thought that accountants and economists should work together, and that if the former were to make any real contribution to the solution of modern economic problems their observations, reflections, and analysis should be related to an understanding of pure economic theory.\(^2\)

Bray recognized that one of the main differences between economists and accountants revolved around the treatment of the changing value of the monetary unit. He believed that a careful accounting for costs was an essential starting point for any interpretation of business statements, and that cost figures alone were capable of providing useful ratios.\(^3\) However, in deference to the analytical needs of economists, he was willing to incorporate supplemental information in the accounts to show


\(^3\)Ibid., p. 35.
current cost figures for fixed assets and inventories for both Balance Sheet and Profit and Loss Statement. He undertook such a step toward cooperation in his monograph, "Social Accounts and the Business Enterprise Sector of the National Economy" (1949). Starting with the originating accounts of the business sector as set up by Richard Stone, he adapted them to a form more understandable by accountants, thus attempting to reconcile the techniques of the trained accountant with the conceptions of the economist. A detailed description of them will not be presented here, because the English terminology and form of business accounting vary just enough from the American that an example would require an undue amount of explanation.

A brief description of the resulting reports might be in order, however. His general form of presentation was to separate Profit and Loss Statements into two main divisions, operating and nonoperating. The operating costs included separate classifications for purchased goods and services, wages and salaries and their related contributions to social security funds, indirect taxes, insurance, bad debts, interest on borrowed money, changes in inventory at cost figures, a separate inventory replacement figure, depreciation on original cost, and a separate depreciation replacement amount. Thus the classifications involved were those that would yield results for national income accounts,
with depreciation and inventory figures available at both cost and the amount necessary to convert them to replacement amounts. The operating revenues consisted of sales and subsidies.

The nonoperating costs included direct taxes, charitable contributions, and contingency claims. Non-operating revenues included such items as interest and dividend income, net rents, net realized capital gains, and insurance and contingency claims. Thus operating and non-operating do not have the same connotations, as used here, that would be attached to them in the preparation of a multiple-step income statement in this country.

The English Balance Sheet related to its Profit and Loss Statement showed inventories and fixed assets at cost, with separate amounts for appropriate replacement valuation adjustments. On the other side of the Balance Sheet, under the general heading of "Capital and Liabilities," were figures for accumulated depreciation at cost plus the appropriate cumulative revaluation adjustment, an inventory valuation adjustment, and a separate "capital surplus" adjustment to complete the reconciliation required when the assets were revalued.¹

¹F. Sewell Bray, Social Accounts and the Business Enterprise Sector of the National Economy, University of Cambridge, Department of Applied Economics, Monograph No. 2, (Cambridge at the University Press, 1949). Suggested forms for financial statements were shown in Appendix III, pp. 93-100.
As can be noted, his suggestions might be generally applicable in principle to American statements, but the details do not conform to presentation considered desirable in this country. However, they do represent an attempt to make constructive suggestions in a practical vein.

In this country, the only suggestion that has been made to recast accounting statements in a national income mold came from Waino W. Suojanin, and this was proposed as a supplemental statement. In an article which he described as being an outgrowth of a seminar in accounting theory, conducted by Professors Perry Mason and Maurice Moonitz at the University of California, Berkeley, he wrote on the social responsibilities of the large corporation. In the "enterprise" theory he discussed, such a firm was represented as being a social institution in its own right--one which did not always regard the interests of the stockholders as paramount when the growth and preservation of the enterprise itself was concerned. He concluded that if the income generated by the business were to be analyzed on the basis of social considerations, the traditional type of income statement would be insufficient. "If accounting is to measure the contribution of the enterprise to society, in addition to profitability, many of the concepts developed
in national income analysis can be used to advantage in the preparation of a value added statement."¹

Soujanin proposed a supplemental report which would analyze the value added in production and its distribution among the organization participants, which would be classified as wages and salaries, taxes, interest, depreciation, and profit. In this report inventories would be valued at selling price rather than cost, which would focus attention on the flow of output rather than on realized sales. Apparently his suggestion was limited to providing supplemental statements which would provide information on the social contribution of the large corporation, and was not intended as being of general application.

The need for a national balance sheet was mentioned by several accountants in the comments noted above, and S. C. Yu also made a suggestion about this. Not a member of the National Income Committee, but an accountant who had become interested in the subject, he attempted to formulate a workable process for preparing a national position statement, and to establish certain guiding rules in regard to balance sheet items and valuation of assets. He used the "macro-accounting" approach (it was he who had advocated the

use of this term\textsuperscript{1}), in the sense that he was dealing with aggregates of individual accounting units in the entire economy. For his proposed balance sheet he included items on all business and institutional balance sheets, plus public assets of man-made tangibles if their costs were available, and in consolidation all claims to wealth were netted out. This left business, institutional, and public tangible items remaining as assets.\textsuperscript{2}

Another point concerning accounting theory should be mentioned at this time. The American Accounting Association had maintained a Committee on Accounting Theory, and various members made personal reports following a special two-year study ending December 31, 1959. When Maurice Moonitz and Carl Nelson reported on recent developments in accounting theory, they cited prominently among the fundamental forces that have been affecting it those generated by recent developments in economic theory and practice. After describing the various types of national accounts they raised the question of their significance, and said, "These economic studies will continue to generate powerful forces to make us define our terms more precisely


and to unify our procedures so that the financial reports of private business may be used more readily as grist for their mill. And finally, in the long view, we may get a more generalized theory of accounting than we now have, a theory which will unify the whole field whether at the private enterprise level or the national level.¹ (Emphasis mine.) There was no explicit recommendation that a more comprehensive theory be developed, but Moonitz' later work on the development of basic postulates and principles might be indicative of some such intention, for business concepts were realigned there to be more compatible with economic theory.

Plea for inclusion of national economic analysis in the accounting curriculum

National income analysis has not been a traditional subject in the accounting curriculum, but if accountants are to become aware of any relationship to this field, there must be some way of communicating such ideas to them. There have been a few appeals to the teaching profession urging that more work be done in this specific area.

One of the most eloquent of these came from the pen of Mary Murphy, the chairman of the National Income Committee

in 1956. She said that although the basic unity of economics and accounting seemed to continue to elude practical realization, the two professions should be working together more closely. Social accounting would appear to represent a challenging opportunity to accountants, and it would be a grave mistake to let the field go by default to economists. She urged that definite efforts be made to have colleges include this specialized study.¹

Dwight Flanders acknowledged the value of complementary roles of economics and accounting, but felt that Miss Murphy had unduly magnified the importance of social accounting as a part of the accounting curriculum. He did say, however, that social accounting could not be evaluated properly without an understanding of economic theory.²

J. Everett Smyth made a good case for including a study of national income accounting in an advanced undergraduate course in accounting. He pointed out that it would aid in educational objectives by providing a helpful perspective for contemplating an economic society in operation, that it would improve the accountant's position in the business world by giving him an understanding of business


and governmental uses of such data, and that it offered a general breadth of outlook.¹ S. C. Yu had also advocated the offering of such a course for much the same reasons.²

As was noted before, the 1958 National Income Committee of the American Accounting Association prepared a monograph containing material which would be suitable for teaching this subject to accounting students. It was intended as a survey course, which would provide a basic knowledge of the over-all framework of economic activity and the more important relationships within the accounts, but which did not attempt to discuss the problems of reporting economic accounting information or the techniques actually used in compiling data. The members of the group that prepared the material were Wilson L. Parman, J. Everett Smyth, John T. Wheeler, and John P. Powelson, chairman. Acknowledgment was made of the contributions made by Dr. Mary E. Murphy, who originally conceived the idea of publishing such a study, and by Mr. Raymond Nassimbene of the Department of Commerce, who offered constructive criticism.


This monograph provided specific economic accounting teaching aids. However, most recommendations that were made concerning the advantage of correlating accounting and economic concepts were more generally phrased, and did not mention social accounting as such.

This outline does not cover all of the articles that have appeared on this subject, for a number of them which were factual explanations of the work being done here and abroad have not been mentioned separately. There have also been other articles which contained passing references to social accounting, and there have been book reviews of economists' work in this area. All of this indicated an awareness of this type of analytical use of data, and an interest in the subject.

Even though these other contributions are taken into consideration, it is apparent that relatively few accountants have expressed opinions on social accounting, and the views that have been given vary widely. The early members of the National Income Committee of the American Accounting Association tended to be fairly critical of the content of and techniques involved in the National Income and Product Account as prepared by the Department of Commerce. The use of the term social accounting (or economic or national income accounting), and the implication that the business sector of the national economy was analogous to a
consolidated profit and loss statement of business enterprises, had probably led them to expect more business accounting treatment than they found to exist in fact. The later members of the committee were more enthusiastic about the subject, but their attention was directed toward conceptual relationships and not toward the woes involved in actually implementing them.

Summary and classification of accountants' comments on national economic analysis

The following summary gives the essence of the opinions that have been expressed on various phases of this study by accountants.


They represent two different areas, and no benefit can be derived from attempts to integrate their activities. (A. C. Littleton, Charles E. Johnson.)

Their points of view are so different they are not really comparable. (Gilbert P. Maynard.)

One must remember that the points of view are quite different, or the reports will be misunderstood. (Wilson L. Farman.)

National income should be a business accounting concept. (George O. May, Eric L. Kohler, Paul Kircher.)

They are conceptually the same, except for variation in emphasis, and can be integrated. (F. Sewell Bray, John P. Powelson.)

We may be moving toward a more generalized, all-inclusive economic and accounting theory? (Moonitz and Nelson.)
2. Critic is m of National Income and Product sector classifications

Excessive aggregating causes some confusion and loss of valuable information, particularly in two areas.

Nonprofit institutions and households do not represent homogeneous elements, but are grouped together in the personal account. (Julius Margolis.)

Financial institutions should be shown in a separate sector and not classified with industrial and commercial business. (Paul Kircher.)

A more orderly accounting structure is needed, coded in such a way that inter-sector flows can be traced. (Eric Kohler.)

3. Criticism of imputations

Use of imputations cannot be defended on logical grounds; their use is apparently determined by tradition and availability of material. (Gilbert P. Maynard.)

Market transactions represent better criteria for measurement of economic activity. (Eric L. Kohler.)

Imputed data for rentals and for financial institutions are particularly unsatisfactory because of failure to reflect economic activity correctly. (Paul Kircher.)

4. Criticism of modifications of accounting data

When capital gains and losses are excluded, much valuable information is lost, for these items do have effects on economic behavior. (Eric L. Kohler, Julius Margolis.)

Many of the modifications made of accounting data represent the injection of so much estimating, almost guesswork at times, that it impairs the reliability of the figures. This criticism is applicable to inventory valuation adjustments as well as other modifications. (Eric L. Kohler.)
5. Criticism of lack of precision in measurement

Standards for admissible evidence are very different from those of business accounting. Sampling, interpolation, extrapolation, imputed estimates, are used so freely that there is a great lack of reliability in the data. (Gilbert P. Maynard, Paul Kircher.)

Reliable, comprehensive data are not available to economic statistician, but the extent of the unreliability is not known. (Carl Nelson.)

Counter-comment:
The economic analyst shows great ingenuity in making use of all the material that is available to him. (John P. Powelson.)

6. Suggestions on reporting

Reports should be in a form more easily understood by the general public. (Eric L. Kohler, Paul Kircher.)

The Income and Product Account should be integrated with a National Balance Sheet. (Eric L. Kohler, Julius Margolis, Paul Kircher, S. C. Yu, John P. Powelson.)

The Income and Product Account should be integrated with the Money-flows Statement. (Eric L. Kohler, John P. Powelson.)

7. Social accounting as such should be included in the accounting curriculum. (Mary E. Murphy, J. E. Smyth, S. C. Yu.)
In addition to the comments or criticisms noted above, the following items, listed in chronological order, represent constructive research or concrete suggestions for improvement.

1935 William T. Crandell developed a reporting procedure to show how accounting statements from one industry could be consolidated to produce reports indicating that industry's contribution to national income and product, with its increases in capital resources integrated with the national wealth controlled by that group of companies. His thesis was that similar procedures extended to all industries could provide figures that would represent almost complete coverage for the national income and product, integrated with national wealth.

1949 F. Sewell Bray of England prepared sample accounts, journal entries, and reports which would enable the accountant to prepare statements from which the economic statistician could obtain national income data with a minimum of effort, but which also preserved cost figures of fixed assets and inventories for business accounting use. There has been no counterpart to this in America.

1955 John P. Powelson wrote a textbook which illustrated the fundamental structural interrelationship of all entities of the economy whether on a personal, business enterprise, or national level, and showed how their reports could be reconciled and interpreted.

1958 Paul Kircher reported on the 1955 survey made of business users of national data under the sponsorship of the National Income Committee of the American Accounting Association.

1958 The National Income Committee of the American Accounting Association published a monograph which could be used for teaching economic accounting to accounting students.

1959 S. C. Yu developed procedural steps for preparing a national position statement, and suggested criteria for valuation of assets thereon.
Eric L. Kohler prepared a suggested report form for national economic data. Using figures published by the Department of Commerce, he rearranged them into a more readable form, and coded them so that the flows could be traced from one sector to another. This has never been published, but Mr. Kohler made a copy of his work available to this writer.

This summary indicates that the attention of accountants has been directed primarily toward the business sector of the national economy and its relationship to individual enterprises. With the exception of Powelson's remarks about them, some of the controversial areas, such as the exclusion of government interest from national product, or the failure to identify foreign aid in the rest of the world sector, were not included in the comments. It was a little surprising that no specific mention was made of the exclusion of depletion as an income determining factor, as well as other adjustments of accounting data made for capital consumption allowances, although it might have been felt that their general recommendation that business accounting methods be used as much as possible covered all situations.

It is interesting to note that the use of the accounting technique of double entry as a useful analytical tool on the national level was not seriously questioned by any of the accountants except Littleton. He maintained that it was not suitable for national economic analysis, because it was essentially a method devised to measure the
effectiveness of capital put to use in productive enterprise, which should be completely integrated with the financial position, and that the evaluation of social welfare could not be served by this kind of analysis.

An entirely opposite view was taken by Powelson who maintained that the activities of the entire economy could be explained in terms of double-entry relationships.

Accountants have not participated in the active implementation of social accounting, with the exception of Powelson and Bray, who are also economists, but there are signs that a general increasing awareness of social responsibilities has been widened somewhat to include interest in economic accounting and its interpretations.
PART IV

ACCOUNTING EVALUATIONS OF NATIONAL ECONOMIC ANALYSIS
CHAPTER X

BASIC CONCEPTS

Are the accountants' criticisms of the National Income and Product Account valid? To evaluate them it is necessary to examine in more detail the work of the economic statisticians, to review their expressed purposes and assumptions, and to compare or contrast them with their accounting counterparts. These may be discussed as they are related to:

1. Purpose
2. Unit of measurement
3. Classifications
4. Transactions
   (To be discussed in Chapter XI.)

Purpose

When national income statistics were first prepared by individual scholars, their work was usually prompted by the desire to prove some point about taxation policy or the state of the welfare of the people, and sometimes by sheer intellectual curiosity fed by the hope that the resulting data might shed light on the reasons back of economic
events. However, no private individual or organization could possibly carry on such a program on a sustained basis, and eventually it came under the official jurisdiction of governments.

The United States government authorized this work to be started in 1932, during the depths of the depression, by Senate Resolution 220 of the Seventy-second Congress, which directed the Secretary of Commerce to prepare "estimates of the national income originating from agriculture, manufacturing, mining, transportation, and other gainful industries and occupations, and estimates of the distribution of the national income in the form of wages, rents, royalties, dividends, profits, and other types of payments." Thus the enabling act itself authorized the assembling of facts, with no specifications as to the purpose for which the facts might be used. Considering the times, it is quite possible that there might have been an underlying intention for the government to try to base corrective economic action on this information, but that was not explicitly stated.

"National income" was not defined, except as the term "gainful" might be construed to mean profitable or

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lucrative, or the offering of services or goods in exchange for money. Therefore, it was up to the Department of Commerce to decide on the concepts and the scope of activity that were involved. This work was entrusted to a staff of economic statisticians, with Simon Kuznets serving in an advisory capacity because of his previous experience in this area with the National Bureau of Economic Research. He made this statement about data collection, "All national income estimates are appraisals of the end products of the economic system rather than colorless statement of fact, and, like all appraisals, they are predetermined by criteria that are at worst a matter of chance, and at best a matter of deliberate choice."¹

Thus the criteria were established by economists, and were evident in the very act of collecting data, in the classifications that were established, in the transactions that were included or excluded, and in the end products that were measured. From the first, the attention of the Department of Commerce was focused on the ultimate consumer, and it undertook to measure goods or services that were produced for consumers, either for immediate consumption or to be added to the stock of tangible assets that would aid in producing future goods or services. This meant that the

¹Kuznets, National Income and Its Composition, p. 3.
factual information was implicitly oriented around the assumption that the purpose of economic activity was the production of goods and services for consumers.

The basic objectives underlying the processing of economic data by the Department of Commerce have been expressed publicly on several occasions. In the period during which the changeover to the accounting approach for national income determination was being prepared, representatives from England, Canada, and the United States met to try to standardize their estimates. Edward F. Denison reported that this group decided that the fundamental purpose underlying their work was to present a set of accounts that portrayed in summary form transactions in a national economy, and that facilitated analysis of its structure and development. This comment was made:

These social accounts should be a summary of the accounts of business, individuals, and government, as they exist in actual practice, except that adjustments must be made for differences in accounting procedure, for the failure of actual accounts to reflect real decisions, and for the inadequacy or utter lack of actual accounts for a fraction of the economy. . . . It may be contrasted in particular to the welfare approach to national income measurement, which seeks to obtain a unique series of fluctuations which may be accepted as a measure of changes in economic welfare. However, these proposals do not suggest the elimination of
data analysts may consider useful in the measurement of economic welfare.¹ (Emphasis mine.)

Thus, the official estimators had the avowed purpose of producing objective measurements, with no special intent to prove or disprove welfare, although they would not deny analysts the privilege of attempting to interpret the figures. Also, it was claimed that the intention was to summarize accounts as they existed in actual practice, but in effect this statement was nullified when they reserved the right to adjust accounts if they failed to reflect "real" decisions. They would report actual practice provided it coincided with their criteria.

In the 1951 National Income Supplement to Survey of Current Business, which first described in detail the new conceptual framework, the statement was made that the basic aim was the measurement of national output, its size, composition and uses. Then it added that more recently a supplemental aim had developed, the facilitation of understanding of the factors which determine the outcome of economic activity. In doing this a basic task was to summarize the innumerable records kept by business, consumers, and government, which reflected concrete

manifestations of the nation's economic life, into a limited number of significant categories. Concerning business, the Supplement repeated its 1947 statement that this sector was in essence a consolidated profit and loss account for the business system as a whole, and made quite a point of the parallelism between the two.¹ Here again was the assertion that the national accounts reflected actual conditions, but then once more a qualifying exception was added that it was necessary to adjust the accounts if they did not reflect "real" activities.

George Jaszi, the present chief of the National Income Division of the Department of Commerce, discussed the ambivalent purpose of the accounts in his statement before the November 1955 Conference on Research in National Income and Wealth, which was devoted to a critique of the work done by the Department of Commerce in this field. He commented that there were two basic uses of national economic data—for a study of economic behavior, what was actually occurring, or for "normative" analysis, an objective appraisal of economic results, and that these two uses called for different types of information. He said,

"I consider both of these objectives legitimate, and it seems to me foolish to think of discarding either one of them in the construction of national income statistics. . . . In practice, both purposes will have to be accommodated by the provision of detailed breakdowns, alternative variants. . . .\(^1\) He did not feel that two separate systems could be constructed, so called the present system a somewhat "uneasy compromise."\(^2\)

Thus the enabling act called for national income statistics which were to reflect objective information, but value judgments of some kind had to be made in order to implement the work. The value judgments were those of the economists in charge of the program, and when they spoke of collecting data as it "actually existed" in business they used their own criteria to interpret what was "really occurring."

When the accountants of the National Income Committee of the American Accounting Association began to investigate this field, the similarities in concepts had been emphasized to such an extent that they were probably not prepared for the gap that existed between "actual

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\(^2\)Ibid., p. 17.
practice" as they knew it, and "real facts" as they were accumulated for national income figures. As previously noted, it appeared to some that the purposes and point of view were so different that there was no reconciliation, and each group had better go its own way and not attempt a common approach to data interpretation. Others believed that so far as the national accounts purported to cover business activities that the two should be correlated. However, since the intention of Congress had been to reflect actual conditions, they believed this should mean accepting well-kept business records as they existed, subject only to such adaptations as might be required when they were consolidated for national reporting. The only research efforts by accountants to prepare national income or wealth figures have been based upon this viewpoint, and the resulting reports have represented consolidations of business accounting statements.

Still other accountants have felt that some of the current business practices should be changed, and their suggested modifications have reflected part of the economists' recommendations, which if implemented would close part of the gap between "actual" and "real" information. Thus among accounting leaders there is no general agreement on these matters. Among the rank and file the subject has probably received little if any consideration.
Differences of interpretation have developed between the two groups of professional men who are dealing with essentially the same phenomena—differences that have grown out of previous habits of thought and daily experiences, and which represent their own value judgments applied to economic activity. But certainly it should be possible to reconcile these differences, and to develop a more generalized theory which would integrate the purposes of accounting and economic analysis.

Unit of measurement

Accounting theory, as well as economic theory, has emphasized the point that it is the production and use of goods and services that is the essence of economic activity, but that these must be expressed in some homogeneous unit in order to be measured. The monetary unit in circulation in the nation has usually been chosen to serve as a measuring rod. Since values are subjective and can change from time to time, some objective criterion is needed. The money price agreed upon in a market exchange transaction, entered into by two independent parties free to act, has been considered to be concrete evidence of mutual valuation at the time of exchange, accepted by both economist and accountant. Although this amount may not necessarily reflect what ought to be the price if one were to apply criteria measuring the
effect on society as a whole, yet market exchange prices do not reflect amounts actually agreed upon which are subject to verification by others.

The differences between accountants and economists about money prices have arisen when the amount of goods and services they can command changes with the passage of time. Economists are practically unanimous in advocating adjustments to amounts reported in money terms so that the figures may be expressed in units of equal purchasing power. Accountants are not unanimous in their opinions about how to handle such situations. It has been noted that official statements from the leading accounting organizations have held to the use of original cost for primary statements, although urging supplemental reports to explain the effect of changing purchasing power on the figures in the statements. An increasingly vocal minority has insisted that this recognition should take place in the primary statements. In practice there has been very little done in the way of providing supplemental reports, so summaries of business statements reviewed by the economic statisticians are generally based on original cost data.

The recent release (1962) of the Director of Research for the Accounting Principles Board of the American Institute of Certified Public Accountants included in its recommendations on basic postulates and principles some
which would have permitted current prices to be entered on the primary reports, but the reaction of the accounting profession has been more or less negative toward these research studies. It is only fair to state that the now deeply ingrained reluctance of business practice to depart from original cost can be partly attributed to the fact that no technique for converting to current cost has been suggested that has received wholehearted approval. Not only do all of the proposed methods rely heavily on human judgment, but there is also some confusion regarding the treatment of specific changes as compared with general price level changes. In addition to this, business enterprises are confronted with legal restrictions regarding contractual relationships and dividend distributions, whereas economists are not bound by these restrictions in interpreting figures. However, research study is still in progress and some agreement as to appropriate action which will receive general acceptance may yet be forthcoming.

In the Department of Commerce reports an attempt is made to show all figures related to the current year in current prices. A conceptual decision must be made concerning the dollar amounts attributed to use in the current period of assets acquired in a prior period, at a cost different from that prevailing in the present. The Department attempts to restate inventories in current
prices through its inventory valuation adjustment, but so far depreciation figures as prepared by businessmen have not been changed. In the national income estimates prepared by Simon Kuznets, depreciation amounts were all adjusted to figures intended to reflect current use based on present replacement costs. Other members of the research staff of the National Bureau of Economic Research have also adjusted business depreciation figures, and they are critical of the Department of Commerce for not doing so.

In his paper at the 1955 Conference George Jaszi discussed this problem as follows:

Both because business accounting provides much of the conceptual background and statistical information for the measurement of depreciation, and because the problems that arise when one attempts to depart from this information are so thorny, there is a strong tendency in national income measurements to utilize business accounting records as far as possible. . . but the acceptance of business accounting methods has become an increasingly dubious practice. Extreme changes in the price level have made the interpretation of data difficult. . . .

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About the only theoretical defense of a continued reliance on business accounting practice is that it is relevant for studies of economic behavior. This is an important argument, but it loses some of its force when such factors are taken into account as the increasing skepticism of the business community itself as to the validity of the prevailing methods of depreciation. . . . However it is not necessary to come to a final evaluation of the relevance of the accounting measure to business behavior. This measure could continue to be carried in the accounts . . . by the adoption of a "depreciation valuation adjustment" analogous to the present "inventory valuation adjustment." Accordingly it seems clear to me that we should not try
to lean much longer on the crutch of actual accounting depreciation. We should supplement it by a new measure—which incidentally, may prove to be superior from the viewpoint of business as well.¹

Although not particularly complimentary in tone, this discussion did not indicate any intention to discard depreciation figures based on original cost, but proposed the addition of a valuation adjustment figure so that both amounts might be available to users of national income data. This idea of carrying separate inventory and depreciation valuation adjustments for the national accounts is similar in concept to Sewell Bray's proposal to develop such figures on the business level.

It should be noted that this particular discussion of depreciation is related to current purchasing power concepts, but that there are also other conceptual variations in the capital consumption allowances that have nothing to do with the value of the dollar.

Concerning changes in inventories, the Department of Commerce makes a correction of figures based on original cost found on business statements to those reflecting changes in physical quantities at current prices, by means of an inventory valuation adjustment. On the output side

this is not segregated, but the specific amount is available because it is shown as a separate figure on the national income side, in conjunction with corporate profits and net income from unincorporated enterprises. No adjustment is made for farm enterprises, because the figures provided by the Department of Agriculture are prepared with inventories valued at current prices.

This adjustment involves rather complicated procedures, and it must be admitted that the lack of uniformity of methods used in business accounting further complicates the situation. The use of different methods, such as FIFO, LIFO, or average cost, supplemented at times by lower of cost or market pricing, does not foster easy comparability of results, and adjustments to current price figures have to be made differently for each method. Many accountants have resisted any suggestion for imposing more uniform treatment on individual business concerns, claiming that managers of each enterprise should be free to exercise judgment as to what is best in the particular situation. Yet this is frustrating when comparable reports are needed, and is a problem for business accountants as well as economic statisticians.

The main complaint of the latter, however, is that business figures do not yield the change in physical quantities expressed in current prices. The data needed to convert aggregate business figures are incomplete, and the
results are admitted to be among the less reliable estimates, but the Department attempts to make the adjustments by taking each industry separately, and then combining the results. Several steps are necessary for non-LIFO inventories: first, beginning and ending book inventories are converted to a constant price basis in order to obtain the differences as measures of changes in physical quantities; then these figures are converted to average current prices by multiplying them by the ratio of average current prices to the constant price base; and finally the differences between these amounts and recorded business changes in book inventories are reported as inventory valuation adjustments.1

The accountants' reactions to this procedure tend to reflect their general attitudes toward price level adjustments.

To a staunch defender of the original cost concept, like Eric Kohler, this inventory valuation adjustment represents a rather torturous manipulation of figures, with the emerging data having questionable reliability and limited usefulness. His discounting of the problems in this area is typified by the remark, "In the case of inventories,

1National Income Supplement, 1951, pp. 122-23."
replacement costs would almost never differ in any way from actual costs. To an accountant like A. C. Littleton, current and/or constant dollars are appropriate figures for use by economic statisticians, but they are not suitable for business accounting purposes except as supplementary information.

On the other hand, an accountant like F. Sewell Bray, who is very much interested in correlating economic and accounting concepts, has suggested that individual firms make and report the adjustments. Being presumably closer to the specific factual data, these estimates would be more accurate, and would be available for summary by the economic statisticians. To one of the avant-garde, like Robert T. Sprouse or Maurice Moonitz, current cost data would be an integral part of business statements, and no inventory valuation adjustment would be necessary.

As was noted in the discussion on accounting theory, the whole question of price level adjustments is still an unresolved controversy.

The above discussion has revolved around the subject of current reports expressed in current dollars, but when several years are involved the economists have pointed out that comparable results are obtained only if all amounts

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are expressed in constant dollars. The Department of Commerce does not attempt to present a complete set of deflated accounts, but does give summary figures of national income and product in constant dollars on a quarterly as well as annual basis. This type of supplementary information is approved by accountants, and is consistent with their own recommendations that such data be made available to users of financial reports.

Classifications

In setting up the national accounts, the economic statisticians had to make decisions about national boundaries, problems which had limited application for individual business enterprises. For the latter such questions arose only when it became necessary to decide whether or not to consolidate foreign branches or foreign subsidiaries.

The Department of Commerce interpreted national output as the sum total of current goods and services produced during a calendar year by the labor and property of resident individuals of continental United States, with the new states of Hawaii and Alaska added in 1960. Nonprofit institutions and governmental bodies as well as natural persons were considered to be resident individuals. Corporations as such were not, and their status was determined by that of the resident individuals who owned them.
Residency was defined as consisting of two out of three of the following attributes related to geographical location—permanent residence, place of performing work, and location of employer.\textsuperscript{1} Accountants have apparently agreed with the criteria established concerning national boundaries, for no objections have been raised about them.

Of course national economic accounting could not deal with millions of separate entities unless they could be summarized in some fashion to yield significant and relatively few simple classifications. When the accounting approach was adopted in 1947, four main divisions were established—business, personal, government, and rest of the world. These were called sectors, and each one was intended to be composed of groups of entities having the same general function, and reacting in similar fashion to economic stimuli.

An "Account," or financial statement, was prepared for each sector. Their productive activities were consolidated into a National Income and Product Account, and their savings and investment activities were consolidated into a sixth account, which represented \textit{current changes in financial position}. However, no balance sheet statements were prepared, and only part of the changes in position of savings and investments appeared in the accounts.

\textsuperscript{1}National Income Supplement, 1951, p. 25.
It was the business sector which contributed the largest amounts to the national income and product, and which came under particular review by the first National Income Committee of the American Accounting Association, since its members expected to be able to look upon this as a consolidation of the profit and loss accounts of the business enterprises with which they had daily contact. Later, in 1958, this was dropped as a separate division, to be replaced by a "producing sector," which absorbed the entire business sector and also the productive activities of the household and government sectors. Included in this producing sector were all profit-seeking enterprises, corporate and noncorporate, farm and nonfarm; also included were mutual financial institutions, cooperatives, non-profit organizations serving business, government-operated enterprises, and owner-occupied houses and buildings.

In the personal sector were found all household consumers, plus nonprofit institutions (except those that served business), private trust funds, and private pension, health, and welfare funds.

George Jaszi had this to say about the classifications:

The principles of sectoring have never, to my knowledge, been clearly established. Terminology is ambiguous and basic disagreements seem to exist. . . At the risk of aggravating the present obscurity, I should like to make the following comments. The main purpose of the sectoring we actually do is
to facilitate the analysis of economic behavior. Therefore our aim is to group together economic transactors who behave similarly, summarize their transactions by a comprehensive set of accounts. . . . I do not see that any major change is called for in the broad threefold sectoring scheme among business, households, and government. . . . Needless to say there will be marginal classification problems, and the scheme will be too aggregative for intensive economic analysis, but these are different matters.¹

Thus the director was basically satisfied with the general classifications, and did not agree that more sectors were desirable. Concerning the handling of commercial banking, Jaszi admitted that it had been a subject of perennial controversy and that he was not too hopeful that a really satisfactory solution would ever be found.² His position generally was that national accounts were adapted to overall economic analysis, and that they were not intended to cover specific financial details.

The accountants had definitely complained of loss of information through excessive aggregating, and had objected to the inclusion of nonhomogeneous elements in the same sector, claiming that they would not react similarly to economic stimuli. In particular, they had cited the fact that financial institutions did not function in the

²Ibid., p. 63.
same way as other business enterprises, and that nonprofit institutions did not behave in the same way as individual households. These same criticisms were voiced later at the 1955 Conference on Research in Income and Wealth by the businessmen who had been invited to express their views.¹

Accountants and businessmen were not the only ones to disagree with the national income and product classifications. When the economists began work on the flow of funds throughout the economy, they relied heavily on data compiled by the National Income Division of the Department of Commerce but did not use the same sector classifications. First ten, and then eleven, sectors were established instead of four, and they were interpreted as institutional rather than functional classifications. Originally conceived by Morris Copeland as a kind of source and application of funds on a national level, the work on money-flows was taken over by the Board of Governors of the Federal Reserve System in 1948. No criticism was voiced of the Department of Commerce classifications, but the statement was made that the purpose of the Flow-of-Funds Statement was different, and that this could be best served by the treatment it adopted. In the publication, Flow of Funds in the United

States, 1939-1953, tables were given which carefully set forth the specific reasons for the differences in the figures, but the variations were so far-reaching in their effect that the two sets of reports could not readily be used together.

Eric Kohler strongly recommended that these two series of national economic analyses be correlated, for from an accountant's point of view income and funds statements represented complementary information. Later John P. Powelson also made this suggestion, and gave illustrations indicating how the two systems were conceptually interrelated in the national accounts. He said, "It is . . . to be regretted that the flow-of-funds accounts published in the Federal Reserve Bulletin are not readily and directly reconcilable with the national product accounts published in the Survey of Current Business, for surely the cause of understanding and analyzing economic events would be promoted thereby."¹ He followed this statement with the comment, "The accounts might have been so arranged that data for the seven separate producing sectors in the flow-of-funds system could be consolidated into the same data as those for the single producing sector in the national

product accounts. The two government sectors might have been so arranged as to be easily consolidated into a government sector consistent with that of the national product system.\(^1\)

Thus it may be observed that while sector classifications might have been consistently defined in the national economic systems, that this did not occur as they were actually developed, and that this remains a valid criticism of them. Also, had this correlation been effected, part of the complaint about excessive aggregation and consequent loss of information might have been averted, because the second system might have supplemented satisfactorily the broader summaries of the first.

Transactions

As was noted earlier, value judgments must be made when establishing any recording or reporting system, and fundamental decisions surround the admission of evidence to the records. This area involves a number of basic differences between national economic accounting and business accounting which are of three general types:

1. Market transactions which are excluded from national product.

2. Imputations, or transactions not entering the market which are included in national product.

3. Other modifications of business accounting data.

Market transactions which are excluded from national product

Individual businesses as well as national income analysts are confronted with the problem of whether a transaction does or does not affect current "net income" or current "national product" respectively.

For the individual business a transaction as such represents any event, subject to objective verification,
which changes the composition of the entity's assets or claims against its assets. Following Paton and Littleton's theoretical approach, transactions affecting net income result from the risk of resources and expending of personal effort in the process of rendering services or producing goods in the hope of receiving in return assets that have a greater monetary value than those given up. This involves the long-run as well as short-run matching of costs expended to generate the revenues received, so includes "realized capital gains and losses" as well as "operating gains and losses." True, in presenting this in the reports, many public accountants would prefer to show capital gains or losses as a direct entry to retained earnings, and thus bypass the current net income report, but these items do find expression in the statements, and do show up in the cumulative effect of lifetime earnings on the financial position.

The value judgments of the economic statisticians took a different turn. They have been strongly oriented toward a concept of production as meaning personal services or the results of labor applied to tangible resources, so when they look at the capital gains transactions they do not consider them to be "productive." They believe that no new goods or services have been created, but that already existing assets have merely been revalued, so they exclude
them from the product account. If the national income and product account were integrated with a balance sheet these revaluations could show up as direct changes in the national position, but since there is no balance sheet and no integration is possible, the impact of capital gains and losses is not revealed in any of the national accounts.

The business accountants who criticized this treatment claimed that an important behavioral determinant was thereby ignored, for a change in liquidity resulting from realized capital gains or losses can have a definite effect on consumption and investment. Although accountants might agree that part of realized gains or losses could be due to changes in general purchasing power, and to this extent would mean in effect a revaluation of existing assets, they also contend that there are factors other than changes in general purchasing power that can produce such results. Therefore it might be argued that entrepreneurial skill is involved in the ability to time sales and purchases advantageously, and that resulting gains or losses, or change in liquidity, can be considered remuneration for successful or unsuccessful effort. However, the essential criticism of the National Income Committee was that an important behavioral indicator was completely omitted.
Jaszi recognized this point briefly in his 1955 report and said, "I propose that another attempt be made to grapple with the problem of measuring capital gains and losses."¹

Other examples of transactions that do not enter the national product are those arising from illegal activities, such as smuggling, burglary, the outlawed forms of gambling, prostitution, prohibited drug peddling. Aside from the difficulty of getting factual information about them, they represent activities that society has specifically singled out as undesirable. Therefore the national economic analysts exercised their value judgments, and declared them nonproductive as far as national output was concerned. The accountants had no quarrel with this decision, or at least there was no formally stated objection to it. It might have been pointed out that data collection was influenced by decisions regarding national welfare, despite protestations to the contrary, so was not carried on in its entirety as objective assembling of facts.

Imputations: Economic activities included in national accounts which are not represented by overt market exchanges.

In discussing imputations the 1951 National Income Supplement included the following statement, which was also repeated in the 1954 Supplement, "The imputations made are the result of concrete considerations and of the traditions of national output measurement. They do not and cannot represent a logically clear-cut exhaustive list, but merely a pragmatic selection among a wide variety of possible imputations."¹ Thus the defects which Julius Margolis objected to were freely admitted in the official reports, namely, that imputations cannot be defended on a clear-cut logical basis, and that the choice among the wide variety of possible imputations was determined by tradition and the practical consideration of whether or not the information was available. Business accountants have been criticized by economists for adhering to traditional procedures that could not be defended logically, but in this case it was the other way around.

Kuznets discussed this problem in some detail, and pointed out that "economic activity" was not synonymous with "producing economic goods." The former consisted of

producing any scarce and disposable sources of satisfaction, and included services and products that may not actually appear on the market, whereas the latter had a close tie-up with recordable exchanges on the market.\textsuperscript{1} Even though he defined national income as the "net value of all economic goods produced by the nation,"\textsuperscript{2} he still chose to include as much economic activity as he could, considering market exchange transactions alone as being too narrow. Therefore he included various barter exchange items, such as payment of wages in kind by food, clothing, or lodging. He also chose to reconstruct certain flows of activity and attach a monetary value to them, such as farm products retained for personal consumption; services of certain commodities owned and used by the consumer, such as rental value of owner-occupied dwellings; and modifications of flows going through financial institutions. He excluded as not practical to evaluate in money terms the services of housewives, personal self-services such as the do-it-yourself jobs, the use of durable and nondurable goods owned by individuals, and the use of publicly-owned properties such as roads and public buildings. The Department of Commerce also followed this general line of reasoning in the presentation of its reports.

\begin{itemize}
\item\textsuperscript{1} Kuznets, \textit{National Income and Its Composition}, p. 5.
\item\textsuperscript{2} Ibid., p. 3.
\end{itemize}
The accountants on the early National Income Committee found the use of imputations generally undesirable, because they considered the market exchange transaction to represent the only logical criterion by which the line between economic activity that should be reported and that which should not be reported might be determined. At the 1955 Conference, the businessmen who were asked to comment on the national accounts also objected to the use of imputations, saying that market exchange transactions alone would be more indicative of the development of economic goods and services.¹

Jaszi vigorously defended the use of imputations, even though from a theoretical viewpoint they represented modifications of the operational concept of final output that he favored, claiming that they were important for both behavioral and normative analysis. He considered it rash to advocate their abandonment, and expressed the view that the objections represented to a great extent the "instinctive reaction against the unfamiliar rather than a genuine analysis of the actual usefulness of the data."² Then he went on to say, "Far from being artificial they are the


extension of such regular accepted business practice as the reporting of payroll inclusive of income in kind for social security purposes."¹

Imputations represent such important differences in the concepts of accountants and economic statisticians that they should be examined in more detail.

Wages and salaries paid in kind.—In certain industries food and lodging furnished employees assume quantitative importance, and they are included at cost to the employer. "Needless to say," went the official report, "difficult and somewhat arbitrary decisions are involved in delimiting the area of this imputation and in establishing the proper valuation."² At present the procedure is to add these amounts to the income side as part of wages and salaries, and to include them on the product side as part of sales to consumers. As an example of an arbitrary decision consider the following statement, "No imputation for lodging is made in the case of domestic servants, because it is felt that, as a general proposition, they do not regard the lodging furnished them as an addition to income."³ The implication here is that the furnishing of

³Ibid., p. 45.
lodging would be included if the domestics thought of it as income.

Imputations are also made for the food and standard clothing issued to members of the armed forces, but not for issues of special clothing or equipment, and not for lodging. The amounts are determined by the government purchases made for this purpose.

This comment was made in 1951:

In view of the fact that an imputation is made for wages and salaries received in kind, it may be wondered why transfer payments and subsidies are confined to monetary transactions. . . . By way of supplementary argument, it may be noted that the introduction of transfer payments and subsidies in kind would interfere with the function of the accounts as a record of actual transactions. Of course, wage and salary and other imputations that are made in the national accounts have a similar effect. In these instances, however, it is felt that the resulting improvement in the income and product components and totals outweighs the disadvantage involved.¹ (Emphasis mine.)

Thus there are many difficult and arbitrary decisions involved in imputations, many inconsistencies are evident, their use departs from a record of actual transactions, but the value judgments of the economic statisticians hold that their inclusion has improved the content of the national accounts.

It must be admitted that if good records were kept of costs of food, clothing, or lodging—records complete in

¹National Income Supplement, 1951, p. 49.
scope and used as a basis of social security reports—wages in kind might be theoretically considered as a market exchange represented by barter between employer and employee. It stretches the usual meaning of market exchange a little, but it still represents action between two independent parties, and might be defended logically on that ground, provided it was used consistently.

Food and fuel produced and consumed on farms.--In this instance independent parties are not involved. The accounts are reconstructed to follow the scheme of assuming that the farmers sell the food and fuel to themselves at the price they would receive if they sold them on the market. (No mention is made of the fact that if all the farmers actually did buy food and fuel on the market that the current estimates on prices they would receive might not still be valid.) An imputation is made for their full sales value on the product side, and the disposition of the product is imputed to purchases, labor, rent, profit, or whatever the estimates showed as average costs of production, including profit as a cost.

The business accountants did not single out farm imputations for special comment, but their general attitude toward them would probably hold here, that if the goods did in fact not reach the market, no independently determined price could emerge, and they should not be included as representative of economic goods.
The economic statisticians, on the other hand, have been unanimous in their opinion that farm imputations are necessary, particularly if there is to be any attempt at comparison of the output of different nations. The 1957 Yearbook of National Accounts Statistics, issued by the Statistical Office of the United Nations, outlines the conceptual framework of the national product to be used by those participating in the program. After stating that a main objective is the measurement of over-all value of production in a country's economy, it went on to say that "in the case of primary producers, that is, all those engaged in agriculture, forestry, fishing, and mining, all production is to be included whether exchanged or not."¹ Thus on an international level, the conceptual framework for imputations in this area is pretty well crystallized. How some of the less advanced countries manage to get any kind of reliable estimates in this situation is not completely clear, but all nations make such estimates.

In the United States, the Bureau of Agricultural Economics in the Department of Agriculture collects the data, and turns over its figures to the Department of Commerce. Its work covers about five and one-half million independent enterprises, most of whom do not keep accounts

on any uniform basis. The method used by this agency is to prepare an independent estimate of each item required for an income and expense statement covering all farms, by whatever means seems most appropriate to the item. For example, cash receipts are derived from estimated quantities (total acreage times average yield), multiplied by average prices. The value of home consumption is derived from data secured by sampling, which is then blown up to national proportions. A Census of Agriculture has been taken every five years, which has yielded some benchmark figures, and amounts for other years are estimated by interpolation, extrapolation, and sampling procedures, supplemented by data from auxiliary industries and agencies.¹

The Department of Agriculture has always received fairly generous congressional appropriations to carry on such statistical work. These figures are always termed estimates, but when they appear in print they tend to take on an aura of reliability which may or may not be justified.

**Imputed rentals of owner-occupied houses.**—This was an area singled out by accountants as one where imputations failed to follow actual movements in the economy, and which would also seriously invalidate any residual amounts

attributed to savings and investment in the personal sector. The Department of Commerce staunchly defends the practice, declaring that it provides more consistent treatment of housing, and has the statistical advantage of making it unnecessary to allocate mortgage interest, maintenance, taxes, depreciation, and other housing expenses between owner-occupied and tenant-occupied units.\(^1\)

The assumption made here is that home ownership is a business, producing housing services which are sold to the home owner in his capacity as tenant. These sales are estimated in terms of the sum for which the particular type of home could be rented, and the expenses of home owners are deducted to obtain imputed net rentals. The imputed gross rental becomes a part of sales to persons, or consumer expenditures on services, and imputed net rent becomes a part of the rental income of persons. Adjustments, corresponding to the expense items which constitute the difference between imputed gross and net rent, are made simultaneously in several components of the gross income and product flow, and are expected to secure the necessary balance in the accounts. One of the expenses, depreciation on owner-occupied homes, is added to capital consumption allowances. Indirect taxes of business are raised by the amount of the

\(^1\)National Income Supplement, 1954, p. 46.
property taxes included in the expenses of owner-occupants. Otherwise these taxes would have to be segregated and classified as personal taxes. Mortgage interest serves to raise the "net interest" item in the business account. Without the imputation it would be segregated and entered as interest paid by the personal sector. Finally all other expenses, covering the materials and services necessary to maintain owner-occupied homes, are classified as intermediate business purchases charged to current account. Without the imputation they would be counted as final products, as elements of business sales of goods or services to consumers.\footnote{The preceding portion of this paragraph is adapted from \textit{National Income Supplement}, 1951, p. 40.} This means that certain exchanges that affect households are removed from the personal sector and others are added. Since savings are defined as income less consumption, and are "plugged in" as residual figures, they are certainly distorted to the extent indicated by these deviations.

Are the accountants' objections in this area "instinctive reactions against the unfamiliar" which should yield to an appreciation of the usefulness of the information, or are they based on logically defensible reasoning?

Accountants have contended that rental imputations do not in fact follow a significant flow of economic goods
and services. Of course, owners do not actually collect rent from themselves, although they do actually pay mortgage interest, taxes, insurance, maintenance and repairs, and other upkeep. They are not permitted to include depreciation on homes as a tax deduction when they report their personal incomes. But more important than this, the motives behind the acquisition and upkeep of owner-occupied homes are not usually profit-oriented, and the average home-owner does not equate the satisfactions derived from home occupancy in terms of monetary or imputed profit, which is the meaning of the term "rental income of persons."

This point was the major conclusion of a recent study in this area, which was based on a detailed survey of 100 home-owners chosen by random sampling from an Ohio town. The authors concluded that the housing product was a consumer durable good to these home owners, and that their behavior could be described as consumers much more appropriately than as investors.¹ Thus this study tends to lend empirical justification to the viewpoint that consumer behavior is not being reflected in the housing measurements used in the National Income and Product Account.

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The argument advanced for the imputed flows is that all housing receives comparable treatment, and home occupancy is therefore not undervalued in the report on national output. Also owner-occupancy is given a numerical quantification which permits it to be compared to tenant-occupancy of homes. If one overlooked the need for actual market transaction verification of amounts, this has a certain appeal as completing information about economic activity and providing bases of comparison between owner and tenant-occupied homes. But is there in fact comparable treatment, as the figures are currently reported, which is useful?

On the national income side, rental profits earned by corporations are included with corporate profits, and rental activities of unincorporated real estate companies are included with "income of unincorporated enterprises." In the breakdown of national income by industry, the total real estate net income is segregated, but there is no division between income from business and home properties. It is not completely clear from the explanations just how farm rentals fit into this picture, but it appears that net rental income from farm property, both monetary and imputed, is considered to be part of farm gross income. Therefore this item is not listed separately, but is reflected in the net income of farms, which is also part of "income of unincorporated enterprises." In the published reports there
was no breakdown between actual net rentals and imputed net rentals on farm property. Thus what is left for "rental income of persons" represents nonfarm net rentals, or profits, of individuals who are not primarily engaged in real estate, the imputed rental profits from owner-occupied nonfarm dwellings, and the royalties received by persons from patents, copyrights, and rights to natural resources.

In this connection, it may be noted that an evaluation of estimates made in the 1954 Supplement places "rental income of persons" as the least reliable of any that are given, because of paucity of original data, and the number of assumptions that have to be made.¹

However, it is true that owner-occupancy net rental income is quantified, and it represents a substantial portion of the total "rental income of persons." The relative amounts for a recent four year period are shown in Table 1 on page 236. Although the percentages are not strictly accurate, because the published data are not available in exactly comparable form, it would appear that a little over half of the net rental income of persons is imputed.

## TABLE 1

**IMPUTED NET RENTAL INCOME COMPARED TO TOTAL RENTAL INCOME OF PERSONS FOR THE YEARS 1959-1962**

<table>
<thead>
<tr>
<th>Year</th>
<th>Rental Income of Persons Nonfarm (In millions of dollars)</th>
<th>Imputed Net Rentals of Owner-occupied Farm and Nonfarm Dwellings (In millions of dollars)</th>
<th>Imputed Net Rentals as Percentage of Rental Income of Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>11,902</td>
<td>6,721</td>
<td>56.5</td>
</tr>
<tr>
<td>1960</td>
<td>12,110</td>
<td>6,781</td>
<td>56.0</td>
</tr>
<tr>
<td>1961</td>
<td>12,075</td>
<td>6,953</td>
<td>57.6</td>
</tr>
<tr>
<td>1962</td>
<td>11,976</td>
<td>6,883</td>
<td>57.5</td>
</tr>
</tbody>
</table>


a) Page 12, Table 2 - National income, line 17.

b) Page 39, Table 72 - Major items of personal income, and personal consumption expenditures in kind, line 5.
Thus a dollar figure is attached to an estimate of the "profit" received by home owners who occupy the houses they own, but of what particular significance is this amount, when the data include nonhomogeneous elements, when other rental income is not separately available but is buried within farm and nonfarm unincorporated enterprise net income and in corporate profits, when the figures used are admittedly lacking in reliability, and when the measurements do not reflect consumer behavior?

On the product side the imputations have a greater impact because they represent gross rentals, and the amounts involved are considerably larger. For the same four years the relative magnitudes of imputed space rental values of owner-occupied nonfarm dwellings, and total housing expenditures, total personal consumption, and total Gross National Product may be found in Table 2 on page 238.

These figures indicate that over 60 percent of all housing expenditures in the personal sector is attributed to imputed nonfarm owner-occupied dwellings, and this percentage would be slightly higher if farm rentals were divided into tenant and owner classifications. It also accounts for about eight percent of all personal consumption expenditures, and a little over five percent of the Gross National Product, so is substantial in amount.
TABLE 2

IMPUTED SPACE RENTAL VALUES OF OWNER-OCUPIED NONFARM DWELLINGS COMPARED TO TOTAL HOUSING, TOTAL PERSONAL CONSUMPTION, AND GROSS NATIONAL PRODUCT FOR THE YEARS 1959-1962
(Expressed in millions of dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner-occupied nonfarm dwellings - space rental values</td>
<td>25,127</td>
<td>26,768</td>
<td>28,458</td>
<td>30,193</td>
</tr>
<tr>
<td>Tenant-occupied nonfarm dwellings - space rental values</td>
<td>11,351</td>
<td>11,797</td>
<td>12,288</td>
<td>12,914</td>
</tr>
<tr>
<td>Rental value of farm houses</td>
<td>1,957</td>
<td>1,974</td>
<td>2,006</td>
<td>2,064</td>
</tr>
<tr>
<td>Other - clubs, schools, institutions</td>
<td>1,211</td>
<td>1,313</td>
<td>1,373</td>
<td>1,424</td>
</tr>
<tr>
<td>a) Total housing expenditures</td>
<td>39,646</td>
<td>41,852</td>
<td>44,125</td>
<td>46,595</td>
</tr>
<tr>
<td>Owner-occupied nonfarm dwellings as percentage of a</td>
<td>63.4%</td>
<td>63.9%</td>
<td>64.5%</td>
<td>64.8%</td>
</tr>
<tr>
<td>b) Total personal consumption</td>
<td>313,538</td>
<td>328,232</td>
<td>336,828</td>
<td>355,360</td>
</tr>
<tr>
<td>Owner-occupied nonfarm dwellings as percentage of b</td>
<td>8.0%</td>
<td>8.2%</td>
<td>8.4%</td>
<td>8.5%</td>
</tr>
<tr>
<td>c) Total Gross National Product</td>
<td>482,704</td>
<td>502,601</td>
<td>518,173</td>
<td>554,894</td>
</tr>
<tr>
<td>Owner-occupied nonfarm dwellings as percentage of c</td>
<td>5.2%</td>
<td>5.3%</td>
<td>5.5%</td>
<td>5.4%</td>
</tr>
</tbody>
</table>


a) Page 20, Table 14, Personal Consumption Expenditures by Type of Product, Section IV - Housing.
b) Page 20, Table 14, Total Personal Consumption.
c) Page 12, Table 1, Gross National Product, 1947-1962.
Information about the relative space rentals of owner and tenant-occupied dwellings is significant, provided the data are accurate, so their sources and reliability should be examined. The Department of Commerce reports that the total number of nonfarm dwelling units has been benchmarked on the decennial Censuses of Population and Housing, with average annual rent for rented units also secured at those times. From these totals are deducted the estimates for governmental and business-owned rental units. (This information does not appear in the published statements, so is probably represented by worksheet data.) For intervening years between Censuses, periodic sample surveys and a Rent Index are used to interpolate and extrapolate data. A similar procedure has been used for imputed owner-occupied space rentals, except that 1940 represents the only benchmark year for which detailed information was specifically gathered for owner-occupied dwellings. Enumerators at the time were instructed to base their rental value estimates on rents actually being charged for similar dwellings in the neighborhood.\(^1\) Thus the proportions were established by census data and sample surveys, with 1940 representing the benchmark year from which the rest was derived. The information, blown up to national proportions and presented

\(^1\)National Income Supplement, 1951, p. 81.
in the national product, served to dramatize these facts, but the specific figures shown there were based on very slight primary data, being almost entirely the result of extrapolations and estimates.

What about the effect of these imputations on reported personal savings? To the extent the imputed rentals exceed the imputed rental income of persons they have the effect of reducing reported personal savings. Had the imputations been omitted, certain out-of-pocket costs would be returned to the personal sector, being added to personal taxes, personal interest payment on debt, final product payments on insurance and upkeep. However, depreciation would not represent a cash outlay, so almost to the extent this amount was deducted as capital consumption allowance, the effect of this appears in the business sector instead of the personal sector. Since unincorporated business saving was included with personal sector savings there would be some overlapping in the effect of housing depreciation on savings, but it is not possible to determine the amount since the figures are not presented in such a way as to be able to segregate them.

Assuming, however, that there was no overlapping, the 5.5 billion dollars attributed to depreciation on residential homes might more properly represent assets retained by persons than by business, and if this amount
were transferred from one to the other it would make a significant difference in the reported totals. The effect of such a transfer is shown in Table 3 on page 242. From these figures it is apparent that the adjusted totals give an effect quite different from the reported amounts, and this might affect interpretations derived from them.

Omitting imputed rentals would have the effect of reducing reported Gross National Product, although not to the full extent of the amount imputed, for shifting costs of interest, insurance, and maintenance back to the personal sector would permit those amounts to appear as final products instead of being netted out as intermediate expenses. Figures cannot be obtained for the exact amounts involved, for the only specific costs shown for owner-occupied dwellings in the published reports are taxes and depreciation, but the Gross National Product would be appreciably reduced.

Imputed rentals, both gross and net, represent significant amounts in the National Income and Product Account, with the latter affected more than the former. The statisticians candidly admit that these figures are among the least reliable of their estimates, and published reports are not entirely consistent in their presentation of figures that should be comparable.
TABLE 3

EFFECT OF TRANSFER OF ESTIMATED DEPRECIATION ON OWNER-OCCUPIED NONFARM DWELLINGS FROM SAVINGS OF BUSINESS SECTOR TO SAVINGS OF PERSONAL SECTOR FOR THE YEAR 1962

<table>
<thead>
<tr>
<th>Item</th>
<th>Personal saving</th>
<th>Capital consumption allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Amount appearing on 1962</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Savings and Investment Account</td>
<td>29.1</td>
<td>49.4</td>
</tr>
<tr>
<td>(In billions of dollars)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Depreciation allowances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attributed to owner-occupied dwellings, farm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and nonfarm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(In billions of dollars)</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Adjusted totals</td>
<td>34.6</td>
<td>43.9</td>
</tr>
<tr>
<td>(In billions of dollars)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


b) Page 39, Table 72 - Major items of personal income, and personal consumption expenditures in kind, line 12.
Thus it would seem that there is some justification in questioning the usefulness of including figures that do not inspire confidence in their reliability, which do not follow market transactions, and which do not reflect consumer behavior. This practice becomes even more questionable when the amounts are large enough to have a significant impact on important economic indicators, such as Gross National Product and personal savings, which are often used as bases for national policy decisions.

It is true that information about home ownership as compared with tenant occupancy of homes is important because it may reveal different spending patterns. However, the accountants' viewpoint is that actual spending patterns would be more significant in economic analysis than a forced imputation which does not appear to represent consumer motivation, and which certainly obscures data relating to personal savings. The most accurate reports on the proportions between tenant and owner occupancy of homes, both as to numbers and rental values, have been determined by censuses and surveys. The accountant would prefer to have the information directly from these sources, rather than rely on figures that are so far removed from primary sources, and which are subject to so much estimating and modifications.
Imputed interest and services of financial intermediaries.--This is another area where accountants have questioned the usefulness of the imputations. The Department of Commerce has admitted its treatment of data in this area is not satisfactory, but that no alternative approach has been found which represents any improvement. There are two kinds of situations involved, one related to commercial banks and the other related to life insurance companies. In both cases amounts can be determined with a reasonable degree of accuracy, but conceptual and mechanical factors have been the sources of the problems confronting the economic statisticians.

Commercial banks.--The immediate difficulty in this area seems to stem from mechanics of recording and reporting data, for the convention was adopted of showing interest only on the left, or debit, side of business accounts. However, a more fundamental concept is involved in the reason why the decision was made to follow this convention, and in the whole attitude toward the role of interest on borrowed money in our economy.

Although the techniques of recording and reporting are not strictly within the province of the present discussion, some explanation must be made in order to present the reasons for the imputations that are considered necessary. In national economic accounting,
received is deducted from interest paid out to show net interest paid to persons, and all interest entries are plus or minus debit entries. In the banking world interest received is naturally greater than interest paid out, so it appears as a kind of "negative cost" on the debit side, with relatively minor sales of banking services (such as loan fees, service charges for checking accounts, deposit box rentals) on the credit side to indicate its contributions to the national output. To overcome this unrealistic situation, the Department has taken the difference between interest received and that paid out, called it "services furnished without payment by financial intermediaries, except life insurance companies," when added to the credit or output side of the account, and considered it to be additional payment of interest to persons when added to the debit or income side of the account. To the extent that business has deposited funds in the banks, this charge and credit cancel out in consolidation. The remainder of the imputed debit cancels out the rest of the "negative cost," and the balance of the credit leaves the consumer payment for banking services noted above.

To give a concrete illustration of the procedure, consider the situation which would arise from national
income and product treatment of the following simplified bank income statement:

A COMMERCIAL BANK
INCOME STATEMENT
(In Thousands of Dollars)

Revenue
Interest income $100
Service charge receipts 10
Total revenue $110

Expense
Current purchases from other firms $ 25
Wages 50
Interest paid on deposits 5
Total expense 90

Net income $ 30

An exhibit appearing in the 1951 National Income Supplement indicates that this same information would be presented as follows if recast in conventional national accounting form:

EXHIBIT 13. Income and Product Account of a Commercial Bank, Monetary Transactions Only (In Thousands of Dollars)

| Wages paid | 50 | Service charge receipts | 10 |
| Net interest paid | -95 | Less: Current account purchases from other firms | 25 |
| Interest paid on deposits | 5 | |
| Less: Interest received | 100 | |
| Profit | 30 | Product originating | -15 |
| Income originating | -15 | |

In Exhibit 13 the assumption was made that all interest received comes from business and that all interest is paid to persons. The explanation accompanying this exhibit said, "It is evident that the conventional method fails to give proper accounting of output originating in the commercial banking area." Therefore imputed transactions were added to both sides—that on the left arising from an assumption that all interest received is paid out to depositors, and that on the right based on the assumption that depositors have paid in full for banking services to the extent of the difference between the bank's interest receipts and disbursements. After imputations the account was presented in Exhibit 14 as follows:


<table>
<thead>
<tr>
<th>Wages paid</th>
<th>50</th>
<th>Service charge receipts</th>
<th>105</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net interest paid</td>
<td>-0-</td>
<td>Monetary interest receipts</td>
<td></td>
</tr>
<tr>
<td>Monetary interest paid on deposits</td>
<td>5</td>
<td>Imputed interest</td>
<td>95</td>
</tr>
<tr>
<td>Imputed interest paid on deposits</td>
<td>95</td>
<td>Less: Current purchases from other firms</td>
<td>25</td>
</tr>
<tr>
<td>Less: Net interest received</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit</td>
<td>30</td>
<td>Product originating</td>
<td>80</td>
</tr>
<tr>
<td>Income originating</td>
<td>80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The imputation illustrated in Exhibit 14 involves an unrealistic assumption that interest received by banks is passed on in entirety to persons, with the banks serving as a means of channeling interest payments from business to persons. The difference between interest received and paid out is assumed to represent the dollar value of services rendered to depositors. This provides no recognition of the fact that borrowers have used banking facilities, and that at least part of the interest they pay on their loans is for these services as well as for the use of money alone.

To an accountant the whole situation might seem to be easily solved by placing the net amount from interest income on the right hand side where it would appear to belong as bank revenue. In consolidation, this net credit would be cancelled against net interest debits of other businesses, still leaving a net debit representing interest payments of all business to persons. Instead of setting up a straw man and then having to knock it down, so to speak, the straightforward approach seems uncomplicated, and no imputation would be necessary. But of course before recommending this forthright treatment, the reason back of the use of the left or debit position must be checked.
As was brought out in a discussion by Clark Warburton, of the Federal Deposit Insurance Corporation, the Department of Commerce attempts to classify the distribution of the national output according to the four-fold factors of production outlined by Alfred Marshall—labor, capital, entrepreneurial ability, and natural resources. Warburton contended that modern financial structure and business customs make this an archaic framework for the classification of income payments. He pointed out that the risks and managerial elements of handling loans are largely assumed by a special group of business enterprises, the financial intermediaries. A substantial part of interest payments by borrowers to banks represents a purchase of this kind of service, with interest paid out by banks representing the only element of pure interest involved. In his opinion, there was no reason why interest paid in, less interest paid out, should not be recognized directly as sales of banking services. To the extent they dealt with business enterprises these amounts would cancel out as intermediate business payments; to the extent they dealt with persons the credit would remain as a final product, to be included with national output. Under the existing system, he claimed there was in fact double counting to the extent of the imputations. Therefore, he
recommended interpreting interest received by financial intermediaries as sales of services and not as pure interest.¹

From this discussion can be derived the reason why interest is represented by a debit entry in the national income accounts. Since economic statisticians are attempting to explain the disposition of the output of the nation in terms of returns to the classical factors of production, "interest" is used as a title which denotes return for the use of property. As part of national income, represented by debit entries, it does not fit in conceptually as output, represented by credit entries.

**General role of interest in the economy.**—Interest, as such, has plagued the National Income Division of the Department of Commerce in other areas, which are not related to the particular banking imputation under consideration, but which are related to the underlying concept of interest which caused the mechanical difficulties which were experienced in this situation.

One widespread view of interest can be illustrated by the statements of Everett E. Hagen and Edward C. Budd. They opposed the inclusion of any interest as output, and

criticized the Department for showing *personal* interest payments on private debts as part of the nation's output. They said, "Output is created by the use of real resources—human or physical; interest, on the other hand, is merely a transfer or redistribution item among households, or between households and firms, and no productive services are furnished by the lender to the borrower for which interest is a payment. . . . We believe consideration should be given to eliminating interest payments from consumer expenditures."¹ According to this viewpoint of interest, the services rendered by the banking industry would have to be given some other name than interest to be considered productive, and Hagen and Budd approve the imputation practice of the Department.

This view of interest on borrowed money as being nonproductive is somehow faintly reminiscent of the medieval church's disapproval of usury, which in turn was an outgrowth of the philosophical views of Aristotle. Long ago he said, when generally censuring the art of producing wealth by exchange, "The most hated sort, and with greatest reason, is usury, which makes gain out of money itself, and not from the natural object of it. For money

was intended to be used in exchange, but not to increase at interest.\textsuperscript{1} Of course, Hagen and Budd's statement does not reflect condemnation of interest as such, as Aristotle's did, but it does reflect a similar downgrading of its role because it is not the result of using personal services or tangible assets, and does indicate that economic analysis still reflects traces of its philosophical origins.

This relegation of money to a role of being excluded from true capital, the use of which may be legitimately called interest, has been a source of much ambiguity in the presentation of economic theories, and the Department of Commerce treatment also shows confusion on the subject. In its presentation of national product it includes personal payments on private debt, and business interest payments which cancel out in consolidation, but excludes government interest payments, which are handled strictly as transfer payments. The reason given for the exclusion of government interest is that it does not represent a cost of acquiring capital, which is a factor of production, nor a cost connected with the services rendered by government buildings, but that it is due to the cost of financing past wars and depressions,

\textsuperscript{1}Introduction to Aristotle, ed. McKeon, p. 571.
which should not be allowed to influence the current situation. Thus the Department includes some interest as part of productive output, but excludes the rest, making the distinction on the basis of the use of the funds acquired.

John P. Powelson was most critical of this procedure. He considered interest to be payment for the service of lending capital, with money to be regarded as an integral part of capital resources, and interest payments reimbursed the lender for abstaining from immediate consumption or alternative uses. He believed the Department had confused the use of funds acquired by the borrower with the proper concept of interest as payment for resources made available by the lender. Therefore he recommended the recognition of all interest, including that paid by the government, as valid in the measurement of national output.¹

Following this line of thought to its ultimate conclusion, there would be no need for any further attempt to justify the place of net interest received by banks as part of output, and no imputations would be needed to justify the position of the banks. However, Powelson did

not use his views on interest to suggest the elimination of the banking imputation. In his textbook, *Economic Accounting*, he showed interest income as a credit entry, but explained the imputation as being needed because explicit service charges did not cover all of the services rendered to depositors, and to recognize the full value of the banking services it would be necessary to impute the rest. This treatment continued the unrealistic assumption that banking services were rendered to depositors and not borrowers.

Even though the expressed reason for the interest imputation was the necessity to recognize the value of the contribution of the banking industry to national output, it was this writer’s impression from the official explanations in the *National Income Supplements* to the *Survey of Current Business* that this imputation was made necessary by the mechanical quirk arising from the concept of interest as a factor payment, which was to be shown in the accounts only as a debit entry. It would certainly appear that interest should be treated consistently in the national accounts, either with all of it included in output, or all of it excluded and treated as transfer payments. The present hybrid treatment does not meet the problem logically or consistently.
In business accounting, it must be admitted that the philosophical justification of interest has not consciously been a factor in the thinking of those who borrowed or loaned money. Back in medieval days, when church edicts tended to interfere with business needs, businessmen simply circumvented them by the use of various devices. Now, of course, interest received is recorded as revenue, which if recognized this way on a national level would be equated with national output. And yet something of the economist's distinctions do tinge business accounting reports. If an individual enterprise wishes to appraise the results of its current efforts in producing and selling goods and services, as distinguished from financing costs and unusual items, it will prepare a statement with a subtotal showing net operating profit, followed by a nonoperating section to arrive at a final net profit figure. Interest revenue and interest expense are shown in the nonoperating section, and are thus segregated from "operating" results. But the significant point here is that, while removed from the appraisal of "current production" efforts, they are not omitted from an over-all review of their effect in the current period, or in their effect on the cumulative total of lifetime earnings.

After reviewing the arguments advanced about interest, it is this writer's opinion that interest
received from money loans represents one use of a nation's capital resources, for money and tangible resources are usually interchangeable. Thus all interest could be considered a return to a "factor of production," for it represents return on property belonging to residents of the nation, whether paid by government or by business or by persons.

An even more powerful argument may be related to Warburton's comment that the classical concept of returns to factors of production is a somewhat archaic framework for national income classifications in modern times. Going further than he suggested, it might be well to eliminate the idea of interest as a return to a factor of production, and frankly recognize it as an element of revenue, or output, as well as cost, or distribution of output. If this view were taken, a direct recognition of interest received as output would make imputations in the commercial banking area unnecessary. Of course, this involves some recasting of the theory behind the national income and product accounts, which will be discussed a little more fully later.

Life insurance companies.--The situation in regard to life insurance companies is quite different because they perform functions not typical of business enterprises in general, for they really help to manage and invest personal
funds. Part of every premium is applied toward a sum which is guaranteed to be paid to some beneficiary at the death of the policy holder, with the earnings from the funds invested gradually adding to the "paid up" value of the policy. Thus in this respect part of the premiums and part of the interest received by the companies represent savings of persons, managed by the companies for them. Another function of these companies is to insure against the risk of dying before one's time, so another portion of each premium goes toward a common pool of resources to be used to make up the difference between the accumulated totals and the full value of policies for those who do die early. The rest of the premium reimburses the companies for the cost of operations (if mutual), or the cost of operations plus profits (if a stock company).

Thus, since part of each premium payment represents personal savings, part of it reimburses the company for operating costs, and part will be transferred to some other individual (one hopes), the payments to the companies have little relationship to the usual sales of business to consumers, and cannot be handled satisfactorily in the same way in the social accounts. The national accounting

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1This explanation of the role of life insurance companies is adapted from the discussion on them by Powelson in Economic Accounting, on pp. 310-316.
treatment of life insurance statements is to ignore premium payments to the companies and the benefit payments made by them, to impute all interest received by these companies to persons, and to include as part of national output the operating costs, plus profits, if any, if they are stock companies. Any difference between interest received and operating costs, has a residual effect on personal savings. However, if one were to make the assumption that these companies are associations of persons, as Jaszi suggested,¹ with premium and benefit payments cancelling out in consolidation within the personal sector, with interest received already within this sector, and operating costs representing the payment of persons for the services of life insurance companies, there are really no imputations involved in the aggregate report.

While this approach satisfied the Department of Commerce for its national income and product accounts, the Federal Reserve Board took quite a different position for its flow of funds accounts. Regarding the financial intermediaries as business concerns with different economic motives than business in general, it established separate sectors for them, and eliminated most of the imputations. In the case of life insurance companies, the premium and

benefit payments were not ignored, but were recorded as flows to and from the personal and financial sectors. However, an imputation was involved, for the net accrual of equity in insurance funds was shown as a flow from these funds to consumers in a category entitled "credits imputed to consumers in connection with life insurance and pension plans."¹ As a counterpart to these credits, consumers were shown investing these assumed values back in the funds through the category "savings through life insurance and pension funds." (Pension funds were handled in the same way as life insurance funds.)

The Federal Reserve Board treatment of financial intermediaries would probably be more to the liking of the accountant, Paul Kircher, for he had suggested a separate sector for them.

In any event, it must be admitted that life insurance companies do not follow the general business firm pattern, since they include elements of personal saving not found elsewhere, so some specialized treatment is in order. If one accepts the basic assumption, proposed by Jaszi of the Department of Commerce, that life insurance companies are essentially associations of persons, there are really no imputations in the national income and product accounts,

but merely consolidation of personal sector accounts. On the other hand, the Federal Reserve Board treatment maintains the integrity of these companies as business firms, which is more in line with their legal status, and recognizes the factor of personal saving by a special imputation which serves to bring out the role of savings as managed by these companies.

One might ask, along with Powelson, why the Federal Reserve Board and the Department of Commerce could not agree on common classifications, and on the same imputations, if any. The answer is that there is an absence of a general theory to tie them together more effectively, and that different men approaching the same phenomena from varying viewpoints have set up different criteria. Thus there is actually a gulf between various aspects of economic analysis as well as between economic analysis and business accounting. A common goal for all these phases would be a general theory which would integrate their activities.

\[\text{Powelson, National Income and Flow-of-Funds Analysis, pp. 305-6.}\]
Other modifications of accounting data

All the variations noted above are modifications of accounting data because they represent a departure from a direct summary of business reports for national income and product accounts. Since the national output is interpreted as final products (goods and services for ultimate consumers plus private business capital formation), intermediate production is excluded because it would represent double counting. The inventory valuation adjustments are due to a different approach to the use of the monetary unit of measurement. The exclusion of capital gains and losses is explained as due to the fact that they are not the result of current productive effort. Other modifications represent addition of data not found on business reports—the imputations such as wages paid in kind, food and fuel produced and consumed on farms, rental value of owner-occupied homes, and imputed interest of financial intermediaries.

In addition to those already discussed, the classification "capital consumption allowances" also involves some modifications in the use of business accounting data. Depreciation of nonfarm private business fixed assets represents a substantial portion of this figure. As noted earlier,¹ this is reluctantly used as given on

¹See Jaszi's comments, quoted on p. 207.
business income tax returns, but valuation adjustments are being considered. Depreciation figures on farm properties are provided by the Department of Agriculture, and these estimates represent allocations on the basis of replacement rather than current cost. Residential depreciation is also added to the business depreciation figures. This is derived by applying a flat rate of two percent to the original cost value of all nonfarm dwellings.\(^1\) It is estimated for rental property because data are not available from reports, and it represents an estimated imputation for owner-occupied homes. Thus some of the depreciation allowances are taken from business reports, but a substantial portion is represented by sampling procedures. Farm figures are based on replacement costs, but all others are based on original cost, including those estimated directly by the Department.

Another part of the capital consumption allowance is represented by accidental damage to fixed business capital. About 60 percent of this amount represents loss by fire, with estimates based on figures secured from insurance companies and forest fire reports. Other losses include those involving accidents of business motor vehicles, ships, railroads, aircraft, and losses due to

\(^1\)National Income Supplement, 1951, p. 81.
tornados or floods.\(^1\) On business reports these are often carried directly to retained earnings as extraordinary events which would not be typical of current operations. From a national point of view these events are judged to be regularly occurring, and therefore proper to be included in current reports. In both business and social accounting the amounts are currently reported, so there is no fundamental variation in this area.

In the case of another category of capital consumption allowances, namely, "capital outlay charged to current expense," the Department has established an interpretation of capital formation which varies from business usage. It believes that all business assets having a life of three years or more should be capitalized, so when such items are expended directly this is not acceptable for the national accounts. Instead, the amounts are added to gross capital formation and then deducted as capital consumption allowance. This treatment is applied to oil and gas well drilling, and to purchases of producers' durable goods such as tools, dies, and durable containers. George Jaszi seems to favor the extension of the boundaries of capital formation even more to include new parts and major repair and maintenance costs, because they are often alternatives

\(^1\)National Income Supplement, 1951, pp. 36, 140.
to outright purchases of new assets, and because the line of demarcation between parts and a whole unit is somewhat ambiguous.¹

Although the business accountants did not direct any special comments to this aspect of national income accounting, the general recommendation that business practice be followed would presumably hold true here, on the grounds that such departure fails to reflect business economic behavior. It should definitely be noted that Gross National Product is automatically increased by this interpretation of the Department, for these purchases are treated as current final product, instead of being eliminated in consolidation as a current purchase from another business firm.

One item of business expense, depletion, is not included in the capital consumption, but is added back to reported net profit. The reason given for this exclusion is that corresponding discoveries of natural resources are not an element of capital formation or profits.² Economists are not unanimously in agreement on this. For example, Solomon Fabricant, of the National Bureau of


²National Income Supplement, 1951, p. 36.
Economic Research, thought this omission was incorrect, for the "current depletion of any valuable resource, whether man-made or a gift of the gods, is a current cost which should be charged off against gross product." He also stated that it was his impression that discoveries were more often the fruits of a process of investment rather than being "windfall" items, in which case the failure to recognize the consumption would definitely distort the figures.

The treatment of depletion was not commented on directly by accountants, but their opinion would undoubtedly follow the reasoning advanced by Fabricant as far as cost depletion is concerned. Percentage depletion is another matter, which the Department of Commerce did not have to face since it omitted all depletion. This could have been challenged, since it represents a tax policy decision which does not fit logically into business accounting structure.

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CHAPTER XII

TECHNIQUES

There are two phases to consider regarding techniques, one, the use of the double-entry accounting approach as a framework for national economic analysis, and the other, the methodology used in collecting data and allocating them to proper classifications within the general framework.

Double entry as a basis for the structural framework of the economic accounts

Concerning the former, it was suggested earlier that the use of the double-entry approach might provide a common meeting ground for the work of economic analysts and accountants, which would serve to coordinate their efforts. While some, perhaps most, authorities have been most enthusiastic about the results, others have not been impressed, and have questioned the usefulness of this technique for purposes of economic analysis. Also, as developed in the hands of the economic statisticians, the double-entry approach has not been a complete transfer of
the integrated business accounting system, but has represented only a partial transfer of the concepts involved.

Advantages of the double-entry approach.--The recognition that economic activity is made up of transactions, and that each transaction may be interpreted in two different ways, is considered by accountants to be only part of the characteristics of a double-entry system, but these are the only features that have received primary emphasis in the social accounting concepts. The duality of accounts does provide a certain comprehensiveness of coverage, and an arithmetic or consistency check, qualities that have been cited with approval by economic statisticians who have favored the accounting approach. They have also pointed out that interrelationships between production and the factors which have determined it have been clarified, but they have not meant precisely the same thing by these interrelationships as the business accountant does when he speaks of the integration of operations with financial position.

An official statement in 1951 on the theoretical and statistical advantages of the accounting approach includes these comments:

Such a system yields a set of interrelated tables which are a tremendous aid in revealing the structure of the economy, and thereby contribute toward a better understanding of its functioning. . . . National economic accounting has been of
some aid in improving the definition of national output. . . . A great deal of the discussion of definitions was formerly obscured by the failure to distinguish clearly between the income and product measurements of output, and by the lack of a clear grasp of the relation between them. The development of national income statistics in an accounting framework has made for clarity. . . .

The accounting approach is also an aid to the statistical aspect of national income work. To begin with, it is of considerable help in defining the task of statistical data collection. Once the particular accounting framework providing the most useful summary of the economic structure has been decided upon, a comprehensive list of requirements for economic statistics emerges rather automatically. A list provided in this way provides a useful guide for planning the collection of primary statistical data. . . . The use of the accounting approach also facilitates the estimation of the various national income aggregates. . . . by making clear that many items of information can be obtained from the records of either the buyer or the seller, and hence affords flexibility in adapting estimating methods to available information. . . . In addition this approach enables one to check every account for internal consistency by comparing the debit and credit totals as well as the relations among the various debit and credit entries. It also enables one to derive as residuals components of the national economic accounts which cannot be estimated directly from available data. . . . A major advantage of the system of national economic accounts is that it summarizes the actual transactions of economic units as reflected in their own accounting records.¹

The above discussion reveals that the interrelationships involved are essentially those of current business flows between producers and consumers, and that these do not involve integration with a national statement

¹National Income Supplement, 1951, p. 20.
of financial position, in spite of the claim that they reflect actual accounting records.

George Jaszi reaffirmed his belief in the advantages of the accounting approach at the 1955 Conference on Research in Income and Wealth when some questions concerning its value were raised. At the same time he also outlined what he considered to be its distinguishing characteristics, as follows:

The essence of the accounting approach involves first, the division of the economy into groups of transactors and the depiction of the economic process in terms of their transactions. This . . . will probably have to be organized around the concept of production, although it will include much more than transactions directly relevant to its measurement. Also, I think it will call for some distinction between current and capital transactions. Finally, it appears . . . we shall find it useful to emphasize the fact that in some sense the incomings and outgoings of each transactor must be equal.

These points I believe to be the essence of the accounting approach. Whether they are embodied in a set of accounts containing debits and credits, in equations, in matrixes, in sources-and-uses of funds tables, or in any other intelligible device, I consider a matter of secondary importance. Even though this sounds paradoxical, I certainly do not consider a set of T-accounts as of the essence of the accounting approach.¹

A little later in this same article he also brought out the point that "the study of economic behavior calls for a comprehensive accounting system showing the economy

in terms of an interrelated network of stocks and flows,\textsuperscript{1} and also that "production and its basic division into consumption and investment are the fundamental concepts which serve as the organizing principles for the construction of economic accounting systems."\textsuperscript{2}

These statements seem to indicate that the National Income Director of the Department of Commerce did not deem it important to emphasize the analogy between national accounting and business accounting, although earlier statements had made quite a point of doing so. Also, while he implied that the analysis of production and its basic division into consumption and investment are concepts which show the economy in terms of an interrelated network of stocks and flows, business accountants have stated that this portrayal of interrelationships is an incomplete one, both conceptually and in practice—conceptually because the system does not in fact provide for any systematic integration of stocks and flows, and in practice because of omission of transactions which would make such integration possible, such as capital gain or loss recognition.

Thus an examination of the double-entry approach in national economic analysis, as used by its advocates,

\textsuperscript{1}Jaszi, Studies in Income and Wealth: Critique, Vol. XXII, p. 22.
\textsuperscript{2}Ibid., p. 23.
reveals that this does not provide as satisfactory a common meeting ground for economic analysts and accountants as might have been expected. The Department of Commerce is convinced that its double-entry framework has widened its horizons conceptually, and improved its statistical procedures, but there is evident some tendency to move away from the business accounting analogy that was cited so prominently earlier. Also, as actually used in setting up the economic structural framework, the technique has not provided a complete integration of stocks and flows, although it is claimed that it reveals such relationships.

**Early criticisms of the double-entry approach.**

Some of the early workers in the national income field were never really sold on the accounting approach. Simon Kuznets, for example, was always a little skeptical of its value, and made the statement that the technique of a system did not help determine its proper scope, the basis of valuations, the classifications, or the kind of transactions that should be recorded, although he would recognize social accounts as a subsidiary, but not primary, form of analysis.\(^1\) This comment on the role of a technique

can, and has been, applied to business accounting also. The use of double-entry bookkeeping does not automatically decide the scope of business activity, the classifications, the bases of valuations, or the kinds of transactions to be recorded for business enterprises, but this does not invalidate the technique as a useful framework around which to organize such decisions in a comprehensive and consistently interrelated fashion.

Paul Studenski reported the phenomenal growth of the social accounting approach with an air of being astonished that it had received such widespread acceptance. He felt the simultaneous presentation of so many different phases of the same transactions in the forms of debits and credits was difficult to follow. He believed that some social accountants tended to assume that their double-entry accounts were real accounts existing in the economy, and that this did not accord with the facts. He said, "The only real account is that of the government sector. All the other sector accounts are no more than abstractions. They are the creation of the social accountant just as much as the national income is, if not more so. Their substance depends entirely on what the accountant decides to put into them or keep out of them. . . . What is to be included and what is not is determined by
economic rather than accounting decisions, just as it is in the case of a national income estimate.\(^1\)

However he also acknowledged that, "There can be no doubt that the social accounting approach is here to stay. At the same time it is probably still much too early to define the exact nature and extent of the contribution it is likely to make to national income analysis."\(^2\)

This might have represented an "instinctive reaction against the unfamiliar," for the early national income pioneers had been accustomed to a purely statistical approach and did not find the changes altogether to their liking.

**Later criticisms and rebuttal.**—Although the national economic analysis movement was strongly oriented toward the accounting approach by 1955, there were still several criticisms voiced at the Conference on Research in Income and Wealth in October of that year. For example, T. G. Schilling expressed a certain sympathy toward Kuznets' inability to see great value and relevance in the elaborate accounting framework, although he admitted it helped to bring out relationships among economic units.

\(^1\)Studenski, *The Income of Nations*, p. 213.

\(^2\)Ibid., p. 214.
His objections to the accounting approach were listed as:

1. Excessive comprehensiveness

Schilling stated that most people never used figures from both sides of an account simultaneously, but were interested in particular series. Also he felt that Gross National Product had developed into a kind of fetish to develop a single best estimator of economic condition, and that short-term estimates were never anything more than samples of industrial production multiplied by a constant, seasonally adjusted, plus a few other categories estimated in the same way.¹

Note: Jaszi pointed out in rebuttal that the use of a single series did not invalidate having it placed within a consistent framework, and that any emphasis on Gross National Product was not a result of the accounting approach.² It is not really clear why Schilling tried to relate this criticism of economic analysis to the accounting technique.

2. Excessive balance

Schilling believed that some transactions were handled as they were because of the necessity to be

²Ibid., p. 364.
consistent and to balance, rather than because of the intrinsic worth of the information. As an example, he thought that capital gains were important, but that this information was suppressed because it did not fit into the current accounting framework.¹

Note: Jaszi stated that capital gains were not omitted because they could not be accommodated in the accounting framework, but because economic analysts do not agree on a definition, and because there are substantial statistical difficulties in assembling such information.²

3. Real versus money magnitudes

Schilling stated that economists are primarily interested in "real" flows of production, and real flows do not follow the rules of accounting. Real flows do not balance, only money accounts do.³

Note: Jaszi agreed with the proposition that a comprehensive national accounting system in real terms was not possible, and said he had explicitly made this statement himself in an earlier paper. However, he did not


²Ibid., p. 366.

³Ibid., p. 331.
attribute the difficulty of deflating current reports to
the accounting approach, but to certain formidable
statistical problems.¹

Schilling's criticisms showed some misunderstanding of accounting technique, and a tendency to blame many
of the ills of the Commerce Department's economic analysis
on its use. Jaszi obviously felt that he had not made his
case, and that the items he condemned were the result of
other factors.

In spite of the criticisms of the accounting
approach by a few economists, it can be said that in
general the technique has received widespread acceptance
among most official compilers of national income and pro-
duct statistics.

Business accounting analogy and integration of
national economic systems. — Although the analogy with
business accounting has not been stressed as much in
official circles as it was originally, the integration of
the national economic systems would be effected more
readily if the similarities to business accounting were
recognized, for the latter does provide for such corre-
lation.

¹Schilling, Studies in Income and Wealth, Critique,
Vol. XXII, p. 367.
It is interesting to note that if Morris Copeland, instead of Simon Kuznets, had been asked to serve as adviser to the Department of Commerce when the national income figures were being initiated, they might have developed along lines related more closely to business accounting. As early as 1932, long before social accounting was officially adopted, he wrote on the analogy between the firm and the nation in the article which inspired William Crandall to make his study of the electric industry's contributions to national income and wealth.\(^1\)

In 1935, at the first meeting of the Conference on Research in Income and Wealth, he emphasized this point again when he said, "The concepts of income and wealth are essentially accounting concepts, or more precisely, financial statement concepts."\(^2\) "Social wealth and income are accounting concepts, the validity of which may be checked by accounting techniques."\(^3\)

As the original developer of the flow-of-funds type of analysis, he likened this to a business Source and Application of Funds Statement. He

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\(^1\) Supra, p. 160.


\(^3\) Ibid., p. 32.
has been a consistent advocate of correlation of the various national accounting systems. In recent meetings of the Conference on Research in Income and Wealth he has taken a leading part in discussions on the feasibility of doing this, including a concrete plan for implementing the integration.¹

The National Accounts Review Committee made a strong recommendation that the economic accounts be integrated. Many economists have commented on this as desirable, and considerable research has been done. For example, Raymond Goldsmith has amassed a great deal of statistical data about the assets of the country, so that such information will be available in the future if it is considered possible to integrate the national income with a national balance sheet.²

There are still formidable obstacles to this because legal entities own assets and have liabilities and equities, whereas the national income accounts are classified along functional rather than institutional lines. As


Richard and Nancy Ruggles remarked, "The national balance sheet is really an extension of the flow-of-funds accounts." 1

In 1959 Stanley Sigel made a progress report to the Conference on Research in Income and Wealth concerning the relationship of the Flow-of-Funds Account, prepared by the Board of Governors of the Federal Reserve System, with the National Income and Product Account, prepared by the Department of Commerce. 2 Although intended to advance the cause of integration, it actually revealed the wide gulf that still existed between the two because of the differences in classifications that have been adopted, and in the criteria used to determine allocation of transactions.

At this same conference it was revealed that "in Canada both the flow-of-funds and the input-output studies are consistent with the national income and expense accounts and are considered parts of one social accounting framework." 3


This serves to emphasize the fact that such an integration might have been possible in the United States had it been planned at the inception of the program. Now about all that can be done is to encourage efforts in this direction. Also, it might be helpful to discourage the present tendency of the economic statisticians to draw away from the business accounting analogy, for in doing so they tend to depart from the benefits of its integrated system as well.

Methodology used in collecting and allocating data

The other phase of technique to be considered is the methodology used in collecting data and allocating them to the economic accounts. Use of the double-entry approach does not mean that books are kept in the manner of business firms. No journal entries are made in any national record system, although the relationships are often expressed in such terms when explaining them. The double-entry concept is used primarily to establish a structural framework within which the statistician can describe the functioning of the economy.

Sources of data.--The Department of Commerce has practically no jurisdiction or control over primary collection of data, but relies on using information supplied to other government agencies, or collected by
private sources and made available to the Department. The only exception to this occurs in the periodic surveys of the incomes of the professions conducted by the Department of Commerce, which is the sole collection of primary data in which it engages.¹ The funds appropriated to the Department are quite restricted, and could not possibly be stretched to cover any more data-collecting activity.

Therefore the National Income Division is dependent on data which were assembled with other purposes in mind, and items are pieced together from literally hundreds of sources. It is this fact which has made the statisticians appreciative of a consistent structural framework within which to fit fragments of information gleaned from diverse sources. Also the fact that conceptually the same data can be secured from the buyer or the seller has made it possible to turn to the source more readily accessible, and still secure essentially the same information. One must agree with Powelson that the Department has been quite ingenious in making the most of what has been available to it, but accountants have felt, nevertheless, that the end results cannot be viewed with complete confidence as to their over-all accuracy.

Evaluation of reliability of data.—In making its own evaluations of the reliability of its estimates, the Department has been frank in admitting its limitations. Where do the data come from, and what are the evaluations as to their reliability? The answers to these questions were not provided when the accounting approach was first inaugurated in the 1947 report, but starting with the 1951 National Income Supplement to the Survey of Current Business, an attempt was made to identify the sources of data, to describe the statistical procedures used, and to evaluate the results of each item reported in the national income and product series.¹

Although pointing out that the reliability of national income estimates cannot be assessed with mathematical precision, qualitative factors were mentioned which might serve as a general guide. Four major characteristics were cited:

1. Type of transaction.—Straight-forward transactions of simple definition are more reliable than complex transactions with vague definitions.

2. Quality of records of reporting units.—Accurate records such as those kept by large corporations yield more reliable results than poorly kept accounts found in the case of many small proprietorships.

¹National Income Supplement, 1951, pp. 55-140.
3. Reporting system of the fact-collecting agency.--Complete census type coverage may provide more reliable information than small samples, although this may vary with the quality of the census or sample.

4. Variation of national income figures from amounts listed by the reporting units.--Long and involved estimating procedures which modify original data tend to produce less reliable results than if the original data were not subject to such refinement.¹

With these qualitative criteria in mind, the Department evaluated figures used in its National Income and Product Account as follows:

**National Income Items**

**Wages and salaries**

Most reliable, because of relative simplicity of the concept, the comprehensiveness and high quality of the record keeping system (a by-product of the Social Security System), and because adjustments to reported totals are small and well-founded statistically.

**Supplements to wages and salaries**

Next in reliability, because most of them are closely related to wages and salaries. An exception occurs in the case of "other labor income," which is less reliable statistically.

**Corporate profits before tax**

Next in reliability because of excellent records kept by most corporations, but subject to two

serious limitations:
(1) Since there is a two-year time lag before the data are available from the Bureau of Internal Revenue tabulations, the recent figures are based on sampling procedures.
(2) The addition of the "inventory valuation adjustment" reduces the statistical reliability of corporate profits because "the adjustment is based on information that is slender and procedures that are complex and subject to error."  

Net interest

Reliable to extent it is based on corporate data, but weakened by inadequacy of information on interest flows in noncorporate areas, and by general lack of reliable data for the latest years.

Income of unincorporated enterprises

On the lower scale of reliability for somewhat the same reasons as those noted for rental income of persons, rated as least reliable, but higher in rank than the latter, because the records and reporting systems are of better quality.

Rental income of persons

Least reliable component of national income, because definition of the profit-type income is complex and somewhat vague, record-keeping and reporting systems are fragmentary and poor, and estimating procedures used to convert reported data to national income entries are unusually complex and tenuous.

A similar evaluation of Gross National Product components was made, and the following list shows the items ranked in order from most to least reliable:

Government purchases of goods and services
Producers' purchases of durable equipment

Personal consumption expenditures, based on producers' sales records

Net foreign investment

Estimates of private construction

Estimates of changes in business inventories

As may be deduced from the above evaluations, reporting units having the benefit of business accounting services rate high in reliability of primary data. Corporate profits lag behind wages and salaries mainly because the collecting agency, the Bureau of Internal Revenue, requires over-all reporting on an annual rather than a quarterly basis. Also it does not have current tabulations available as soon as those that are supplied by the offices of the Social Security System. The inventory valuation adjustment, which affects total corporate profits in the national system, is rated as having doubtful accuracy, but since it is reported separately the effect can be segregated.

Two items coming in for specific conceptual criticism by accountants, on the early National Income Committee of the American Accounting Association, also show up as being unreliable statistically, namely, the rental income of persons, and inventory valuation adjustments applied to changes in inventories. In addition, the criteria of reliability concerning the straightforwardness
of transactions applied to the imputation procedures (which were questioned conceptually by accountants), indicate that they tend to weaken the accuracy of data incorporated in the national reports.

**Procedural steps.**—Returning to specific procedures used in assembling social accounting data, the Department has made the following comment:

Since national income and product are measures of total national output, it might appear that the most direct way to obtain these measures would be to sum the values added to total output by each of the industrial sectors of the economy. In terms of product flows, these values would, in general, be measured as the total product of the industry minus its purchases of intermediate products from other industries. This difference equals the sum of wages, interest, profits, and other distributive shares accruing in the industry, plus certain additional charges against the value of its production. (Note: This was the procedure used by Crandell in his analysis of the electrical industry.) . . . . In fact, however, the data on value added by each industry are not available directly, and total output must be estimated by other procedures.²

The "other procedures" involve the establishment of classifications of data, and then supplying the amounts from whatever source and by whatever method the statisticians think they can get them.

¹Supra, pp. 161-162.
Some of the information cells are filled in by fairly straightforward methods. For example, the Social Security System covers a substantial majority of wage earners, so the figures it supplies constitute the bulk of wages and salaries. But even here, adjustments have to be made because of the upper limit of wages subject to Social Security taxes, and because of wages earned that are not covered by this program. In the 1954 Supplement about four pages\(^1\) are devoted to a recitation of sources and procedures used to supplement Social Security figures to arrive at wages and salaries as shown in the National Income report. An additional eighty pages\(^2\) is devoted to an almost bewildering array of agencies who have compiled data, of benchmark data and procedures, of procedures for interpolating or extrapolating benchmark data to other years, of sampling procedures, and of application of ratios to base figures.

Among the more devious and complicated procedures are those used in estimating personal consumption expenditures on the product side of the national report. The "commodity flow" method developed by Simon Kuznets has provided a substantial amount of this information (about


\(^2\)Ibid., pp. 73-152.
80 percent of the total) with the retail valuation method accounting for most of the rest of consumer expenditures. The Census of Manufacturers, with its vast amount of commodity detail, has served as the basic statistical source, supplemented by less frequent Censuses of Retail and Wholesale Trade, plus interpolation of figures between benchmark census years, and ratios developed by census materials. Starting with commodity data at producers' prices on the output of factories, farms, and fisheries, the portion representing final product is first segregated for count. Then the remaining commodities are traced through the distributive system, adding transportation charges, markups, and inventory valuation adjustments until they reach final consumers. "The commodity flow method is admittedly 'roundabout' and complex. It was adopted because of the very detailed commodity classifications and comprehensive coverage of output afforded by the Census of Manufactures."¹

The retail valuation method is used in a few areas (notably passenger cars, gas and oil, household fuel), and this involves multiplying reported plus estimated quantities by an average retail price.² Based on a somewhat


more sophisticated group of estimates, this is still essentially the same procedure used by Petty when he made the first national income estimates in the seventeenth century. A direct analysis of retail sales has been rejected on the basis that they represent sales by type of store, and do not reveal in enough detail the nature of the commodities involved.

An accountant's reaction to the present data-collecting procedures.--This brief outline of sources and methods may serve to illustrate the complicated procedures used by the Department of Commerce in obtaining figures for national income and product classifications. To an accountant, accustomed to verifiable data assembled directly from primary sources, the liberal use of estimates based on estimates, which in turn are often based on assumptions and dependent on judgment, does not inspire a feeling of confidence in the accuracy of the figures that emerge from such a procedure. Yet these are the figures used in presenting the national income and product of the country, figures which are relied upon by the President and Congress in making decisions about tax policies and government spending. The relatively small statistical discrepancy between independently estimated output and distribution of output is cited as proof of general reliability in the over-all totals.
However, an accountant cannot refrain from pondering over the fact that the imputed space rental value of owner-occupied homes is a little over five percent of the Gross National Product, and that this estimate is derived from fragmentary and poor sources, pieced together with a good deal of assumption, and admittedly on a low scale of reliability. He cannot refrain from noting that other imputations account for another substantial portion of the Gross National Product, or from commenting on the fact that carefully compiled corporation figures are made less reliable by considerable modification in certain areas. Information about national economic activity is of vital importance, but to an accountant the present methods used in assembling the necessary data would not appear to yield results that are reliable enough to warrant using them for important decisions.

It is a little difficult to understand why the statisticians are so willing to include items based on tenuous statistical foundations, such as imputed rental income of persons, and at the same time be so critical of business depreciation allowances that they imply they invalidate economic analysis. One set of figures is rejected on conceptual grounds, although the amounts involved would not affect the reported totals nearly as much as the components that have been admitted to be statistically unreliable.
The fact that accountants may take a skeptical attitude toward the accuracy of national income and product figures may be due in part to a lack of confidence in the sampling and interpolating procedures used, and this in turn can probably be attributed in part to the "instinctive reaction against the unfamiliar." Perhaps a better understanding of statistical theory and practice might reduce part of the objections, but well-directed comprehensive assembling of data can usually be counted on to yield more accurate figures than small samples of the same universe.

Accountants are aware, however, of the fact that data assembled consistently can show significant ratios and trends over time, so while the absolute figures may be questioned, as long as they are developed in the same way the resulting relationships can yield figures for comparative analysis. On the other hand, this same principle might be applied to figures developed by business accounting methods. Even though the statisticians might not agree with the absolute amounts, as long as they are assembled consistently they can provide valuable ratios, and show trends over time.

If accountants object to the present methodology used in assembling national income and product statistics, can more reliable processes be recommended which would
provide more accurate data for the system? Business enterprises have profited by efficient data-processing methods developed by accounting, so it might be possible for accountants to direct their talents along these lines in the development of better national income statistics. This represents an area of potential contribution by accountants, which has not been really explored to date, but which might bear fruit if cultivated.
CHAPTER XIII

REPORTS

It is axiomatic that reports should be made which are understandable, and which provide information needed by the users of those reports. Business accountants have often commented that all-purpose types of financial statements can seldom be found which fully satisfy the needs of everyone who uses them, for it is impossible to be all things to all people at the same time. This same situation is found in the field of national economic analysis, for there is wide diversity in the needs of those who read the reports.

Users of national economic reports

The Department of Commerce has pointed out that there are three main types of users of national income and product accounts—government officials, academic theorists, and businessmen. The following statement was made in 1951:

Because they reduce the voluminous detail of economic activity to intelligible proportions, national income statistics have become widely used as the factual background for economic analysis and the preparation of economic programs. They
provide the basic statistical framework required for the study of long-term economic trends and of business fluctuations, and for the formulation of business and government economic policies. . . . Two broad practical uses of national income data may be cited. These data are needed, in the first place, when the automatic working of the market mechanism cannot be fully relied upon and steps must be taken to modify its functioning. The mitigation of business cycles in times of peace and planning for national defense are important instances in which an understanding of the economic mechanism, such as is facilitated by the use of national income statistics, is the prerequisite to intelligent action designed to improve its operation.

Secondly, even when active influencing of economic events is not the aim, it is desirable to have some knowledge of these events, so that the best possible adjustments to them can be made. . . . Whether for the purpose of exerting active influence on economic events or for passive adaptation to them, national income statistics are the most important single tool for orientation in the economic world.1

These are broad claims, but it certainly appears to be true that there are many users of national economic statistics, and, in the words of Joseph A. Pechman, "It is a tribute to those who have developed the accounts that their complicated system has achieved so prominent and respected a role."2 Gross National Product has become a term familiar to the man on the street, because he has seen it in newspapers and magazines, has heard it over the air during political campaigns, and has heard government


officials cite its growth, or lack of growth, as the reason taxes must be reduced or government spending must be increased.

Government users. — Aside from more or less superficial references to national economic statistics, which are freely used but only vaguely understood, there are serious analyses made by government officials. For example, the President of the United States has a Council of Economic Advisers whose members assist in the preparation of the annual economic budget, and advise him in the formulation of economic programs. The national income statistics form much of the factual background for these analyses. The Joint Economic Committee, which advises Congress in technical economic matters, also relies heavily on these figures, and has helped to popularize them. It sponsors the monthly publication, Economic Indicators, which features prominently information from the National Income and Product Account. The Council of Economic Advisers prepares the material for the Joint Committee, and attempts to present it in nontechnical terms for use by members of Congress, and by the general public as well.¹ Thus decisions that vitally affect the

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lives of many people are dependent to a certain extent on these reports, and everyone so affected has a stake in having such decisions based on accurate information as well as sound theory.

There is relatively little published evidence as to whether or not the reports as issued really satisfy the requirements of all the government officials who use them. The most searching evaluation was that instituted by the Bureau of the Budget. It established a National Accounts Review Committee, assisted by the National Bureau of Economic Research, requested it to report on the current status, and to present recommendations for improvement. In this connection a Congressional hearing was held in October, 1957, and the results were published under government auspices.¹ Some of the specific recommendations made at this time were incorporated into the reports prepared by the Department of Commerce. For example, more detailed information was included about the objects of government outlay, accompanied by better reconciliation with the Federal budget, and provision was made for separate listing of cash items of foreign aid.

Rejected, however, were some of the suggestions made to change the format of presentation. Also not accepted were the suggestions to include interest payments by Federal or state governments in the Gross National Product, so they are still shown in separate reports as transfer payments.¹

There is definite indication of a certain lack of coordination in the economic statistics put out by different branches of the Federal government. For example, the Board of Governors of the Federal Reserve System has a great deal of influence in determining monetary policies, which should be integrated with an over-all economic program to be most effective. However, its published reports on Flow-of-Funds cannot be correlated with the National Income and Product Account unless extensive and complicated reconciliations are furnished. This certainly indicates that a completely integrated, top-level economic analysis has not been achieved.

**Academic users.**—College teachers have studied the national economic reports and have been interested in trying to relate the factual data to economic theory. The National Bureau of Economic Research has served as one important medium through which opinions might be expressed, and the work of the Department of Commerce has been the

¹U.S. Income and Output, 1958, p. 60.
subject of many theoretical arguments. Much difference of opinion has been evident, and there has been a veritable barrage of suggestions about the theoretical content and presentation of the reports. Considerable pressure has been exerted at times to have the Department openly espouse the economic welfare approach, and economists generally want more imputations, rather than fewer, in order to implement this objective.

Most of the important viewpoints were advanced at the 1955 Conference on Research in Income and Wealth, and were subsequently published in 1958 in Volume XXII of Studies in Income and Wealth. In general the criticisms of the academicians stem from their own personal convictions about economic theory, and from a desire to have the empirical data available in a form which will help to explain this theory. So many views have been expressed that it would be difficult to list all of the suggestions offered, but on one point most of them do agree—that it would be desirable to have the various economic systems correlated so that they might complement or supplement each other.

Business users.—Several papers were presented at the 1955 Conference by business users of the national income and product statistics.
Morris Cohen and Martin R. Gainsbrugh, of the National Industrial Conference Board, stated that national income accounting, as developed by the National Income Division, was admirable for its thorough cultivation of all available sources of information, but that at present it only partly met the requirements of business. Their main plea was for more detailed information about the business and personal sectors, because the high degree of aggregating and netting obscured important data. They also disliked the inclusion of imputed income, for they felt that money income arising from commercial transactions was far more useful in appraising economic activity than the hybrid variety found in the national accounts, which they believed reflected an attempt to measure economic welfare.¹

Kenneth D. Ross also presented a business user's viewpoint. He praised the new mechanism for income and expenditure summation as adding immeasurably to knowledge of the way the economy functions, but he, too, said improvements could be made which would render the reports much more useful to businessmen.

He felt that, conceptually, it is a mistake to try to portray distribution of income at factor costs, for it is really impossible to separate factors from one another, or to express them independently of the nonfactor costs of taxes and depreciation. He claimed that wages, return of investment, depreciation, and taxes are not separate and distinct as economic theory assumes, but are so inter-twined that it is virtually impossible to isolate them well enough to produce significant results. As examples of this he cited the fact that there is no way of determining satisfactorily how much of the profit of individual business and farms is attributable to entrepreneurial efforts and how much to capital employed; how much the salaries of executives in closely held corporations reflect the value of their services, for some of this remuneration might actually represent a portion of the profits; or to what extent taxes can be classified as those which are "direct" and those which are not passed on and are therefore called "indirect." As was noted earlier, Clark Warburton also voiced a criticism of the factor of production concept.¹

Concerning the presentation of information on the product side, Ross felt that the breakdown into four main sectors was probably as satisfactory as any, but that some

¹Supra, p. 249.
reorganization of the components would be better. The most notable change he recommended was the inclusion of housing construction in the personal sector, which would also eliminate imputed rentals. It may be noted here that the Federal Reserve Flow-of-Funds report also considers this a more satisfactory presentation of this information.\(^1\) Ross stated that imputed rentals are a flagrant case of double counting, for when new housing construction is included in full as part of gross private domestic investment, the rentals on this same construction are included in personal consumption expenditures and serve to increase the total output unjustifiably.

Ross also felt that the reliability of the current national income estimates leaves a great deal to be desired, for numerous revisions to data are made when more accurate information is received, and some series have been revised at least four times. His conclusion was that the expenditure series have not been very satisfactory measures of short-term change, although they are more reliable for long-term movements prior to the last two years of reporting.

As a final suggestion, Ross thought that improvement in terminology and presentation of the reports would increase their usefulness. To him the term "Gross National Product" is not appropriate, since all intrabusiness sales are carefully eliminated, and "product" has a connotation of physical goods, whereas the measure includes distribution of services as well as goods. His suggestion was to use the term "national output," which is shorter and simpler, as well as being more descriptive of the goal of measuring the economic output of the nation. He also objected to the presentation of reports in account form, stressing debits and credits. To him, this is an awkward presentation, is not the kind of report that business accounting would present, although the word "account" tends to imply this, and it is not suitable for time series presentation.¹

Jaszi disagreed with most of Ross' suggestions, although he recognized that the account form is not advantageous for time series, and that it might encourage the mistaken assumption that national accounts automatically balance without statistical discrepancy. Concerning the reliability of reports, Jaszi pointed out that timeliness

and accuracy are not compatible concepts in national income data collection. For example, tabulated corporation data are not available from the Bureau of Internal Revenue until after a two year lag, so current estimates have to be based on other sources and on sampling procedures.¹

Paul Kircher reported on the "Survey of Business Uses of the Data," undertaken under the auspices of the National Income Committee of the American Accounting Association in 1954-55. Replies from 306 companies indicated that a majority of very large corporations used the data, whereas only one-fifth of the smaller and more local companies referred to them. In most cases those who used national income statistics considered them to be general indicators of the present state of business, although some attempt was made to use them as bases for limited forecasts of economic and business trends. There was an evident reluctance to disclose specific ways the information was used within the firm. However, there was a widespread desire to have more detailed national

information and more regional data, and to have the estimates available earlier.\(^1\)

Thus the general reaction of all classes of business users seemed to be that more detailed and more accurate data were wanted on a more timely basis. An objective comment on this might well be that if businessmen want that kind of information, business firms will have to see that all such data are made available promptly to the National Income Division of the Department of Commerce.

Presentation of national economic reports

In addition to interest in the contents of the reports, the users have expressed a desire to have them presented in a format that would be more serviceable. This concept is intertwined with the entire approach to classifications of the accounts.

One rather significant change in presentation was actually adopted in 1958. This involved the dropping of the business sector as such, and substituting a producing sector, which included the business activity of persons and government as well as business.\(^2\) Thus the

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\(^2\) *U.S. Income and Output*, 1958, p. 54.
institutional structure of business activity was no longer shown, and this meant a lessening of the conceptual analogy of national production and its accounting to business practice.

It is interesting to note that several suggestions about presentation followed a similar pattern, namely, that the distribution of the national product be reported along sector lines, rather than attempt the allocation to factors of production. The subtotal, "National Income," has represented an attempt to portray the cost of inducing the factors to engage in productive activity, but this has come in for considerable criticism. Claims have been made that it has doubtful value conceptually, and that statistically the separately compiled totals of personal income, and of personal disposable income, have been much more useful to those who wanted to evaluate economic behavior.

Morris Copeland was one who recommended a revision in the format of the National Income and Product Account. In addition to keying all the items to show the flow between the sector accounts and the financial supplementary accounts he advocated, he suggested that the "national income" subtotal be reconciled with one showing "proceeds accruing to persons from U.S. production." This was definitely a personal sector classification, and
his other major headings seemed similar in intent. They consisted of "proceeds accruing to government from U.S. production," "inside corporate funds," "noncorporate capital consumption allowances," plus the statistical discrepancy necessary to convert the total to that of the "Gross National Product."

Powelson's suggestion for presentation of the national income also followed sector classifications, although he did not identify them as such. His major groupings were:

Payments to Factors of Production, which was interpreted as representing payments to persons for compensation for services, and for returns from use of their property.

Business Savings, which included undistributed profits and capital consumption allowances.

Business Transfer Payments, which included business payments to government for corporate profits tax, indirect business taxes, employers' contributions to social insurance, and transfer payments to households.

Although these are not termed classifications by sectors, "business transfer payments to households" is the only item that is not consistent with that division.


Eric Kohler also suggested a reporting format for the data that are currently being developed. The figures on the income side were summarized in somewhat the same general groupings as those of Copeland and Powelson, but his titles were simpler and more descriptive. On the product side, his report provided for more consistent presentation of durables, nondurables, services, and new construction.

To appreciate the differences in presentation one should examine the reports. Table 4, on page 308, shows the format used by the Department of Commerce for its National Income and Product Account. Table 5, on pages 309-10, shows the same data recast in the manner suggested by Kohler.

The account of the producing sector is the only one illustrated here, but both sets indicate the relationships to the reports of other sectors. The Department uses the term "Table I" to identify the producing sector report, and those of the other sectors are identified as:

Table II--Personal Income and Outlay
Table III--Government Receipts and Expenditures
Table IV--Foreign Transactions Account
Table V--Gross Savings and Investment Account

The titles used by Kohler, which correspond to those listed above, are as follows:

Economic Activity of Persons
Economic Activity of Government
(Foreign - No separate account shown)
Savings and Investment
TABLE 4
NATIONAL INCOME AND PRODUCT ACCOUNT, 1962, AS PRESENTED IN TABLE I BY THE DEPARTMENT OF COMMERCE
BILLIONS OF DOLLARS

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Compensation of employees</td>
<td>322.9</td>
</tr>
<tr>
<td>2 Wages and salaries</td>
<td>297.1</td>
</tr>
<tr>
<td>3 Disbursements</td>
<td>(II-7)</td>
</tr>
<tr>
<td>4 Excess of accruals over disbursements</td>
<td>(V-11)</td>
</tr>
<tr>
<td>5 Supplements</td>
<td>25.7</td>
</tr>
<tr>
<td>6 Employer contributions for social insurance</td>
<td>(III-18)</td>
</tr>
<tr>
<td>7 Other labor income</td>
<td>(II-11)</td>
</tr>
<tr>
<td>8 Proprietor's income</td>
<td>(II-12)</td>
</tr>
<tr>
<td>9 Rental income of persons</td>
<td>(II-15)</td>
</tr>
<tr>
<td>10 Corporate profits and inventory valuation adjustment</td>
<td>47.0</td>
</tr>
<tr>
<td>11 Profits before tax</td>
<td>46.8</td>
</tr>
<tr>
<td>12 Tax liability</td>
<td>(III-15)</td>
</tr>
<tr>
<td>13 Profits after tax</td>
<td>(II-18)</td>
</tr>
<tr>
<td>14 Dividends</td>
<td>(II-16)</td>
</tr>
<tr>
<td>15 Undistributed</td>
<td>(V-12)</td>
</tr>
<tr>
<td>16 Inventory valuation adjustment</td>
<td>(V-13)</td>
</tr>
<tr>
<td>17 Net interest</td>
<td>(II-18)</td>
</tr>
<tr>
<td>18 NATIONAL INCOME</td>
<td>453.7</td>
</tr>
<tr>
<td>19 Business transfer payments</td>
<td>(II-21)</td>
</tr>
<tr>
<td>20 Indirect business tax and nontax liabilities</td>
<td>(III-16)</td>
</tr>
<tr>
<td>21 Current surplus of government enterprises, less subsidies</td>
<td>(III-10)</td>
</tr>
<tr>
<td>22 Capital consumption allowances</td>
<td>(V-14)</td>
</tr>
<tr>
<td>23 Statistical discrepancy</td>
<td>(V-16)</td>
</tr>
<tr>
<td>24 Personal consumption expenditures</td>
<td>(II-2)</td>
</tr>
<tr>
<td>25 Gross private domestic investment</td>
<td>(V-1)</td>
</tr>
<tr>
<td>26 Net export of goods and services</td>
<td>3.8</td>
</tr>
<tr>
<td>27 Exports</td>
<td>(IV-1)</td>
</tr>
<tr>
<td>28 Imports</td>
<td>(IV-2)</td>
</tr>
<tr>
<td>29 Government purchases of goods and services</td>
<td>117.0</td>
</tr>
</tbody>
</table>

GROSS NATIONAL PRODUCT                                         554.9

Source: U.S. Department of Commerce, Survey of Current Business, July, 1963, p. 16. Adapted from the original, which placed items 1-23 on the left side of the table, and items 24-29 on the right side of the table. The Roman numerals refer to the table where the other side of this transaction may be found, and Arabic numerals indicate the item number on a table.
TABLE 5

PRESENTATION OF NATIONAL INCOME AND PRODUCT ACCOUNT FOR THE YEARS 1961 AND 1962 AS SUGGESTED BY ERIC L. KOHLER

Economic Activity of Business
(In billions of dollars)

<table>
<thead>
<tr>
<th>Payments to persons</th>
<th>1961</th>
<th>1962</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and wages</td>
<td>290.2</td>
<td>309.1</td>
</tr>
</tbody>
</table>
| Benefits from business       | 2.1  | 2.3  *
| Individuals' profits         | 34.8 | 35.5 |
| Farming                      | 13.1 | 13.3 |
| Rents                        | 12.3 | 12.0 |
| Dividends                    | 15.0 | 16.6 |
| Interest                     | 20.0 | 22.0 |
| **Total**                    | 387.5| 411.8|

<table>
<thead>
<tr>
<th>Payments to government</th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| Indirect taxes               | 48.2 | 53.0 *
| Corporate income taxes       | 22.3 | 22.2 |
| Insurance contributions      | 12.0 | 13.7 |
| Subsidies, net               | -1.7 | -1.7 *
| **Government revenues**      | b 80.8| 87.2 |

<table>
<thead>
<tr>
<th>Retained by corporations</th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| Depreciation provisions      | 44.3 | 49.4 *
| Undistributed profits        | 8.3  | 8.3  |
| Statistical discrepancy      | -3.1 | -1.8 *
| **New corporate funds**      | c 50.5| 55.9 |

| Disposition of Gross National Product | 518.8| 554.9 |

* Excluded in computing national income
a To table showing Economic Activity of Persons
b To table showing Economic Activity of Government
c To table showing Savings and Investments

Note: The figures listed above appeared on the left side of the table. Those appearing on the right side are shown on the continuation of the table on p. 310.
### TABLE 5—Continued

**Economic Activity of Business**

*(In billions of dollars)*

<table>
<thead>
<tr>
<th></th>
<th>1961</th>
<th>1962</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales to persons</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durables</td>
<td>43.8</td>
<td>48.2</td>
</tr>
<tr>
<td>Nondurables</td>
<td>155.2</td>
<td>161.4</td>
</tr>
<tr>
<td>Services</td>
<td>139.1</td>
<td>145.7</td>
</tr>
<tr>
<td><strong>Consumer purchases</strong></td>
<td><strong>338.1</strong></td>
<td><strong>355.3</strong></td>
</tr>
<tr>
<td><strong>Sales to government</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durables</td>
<td>20.5</td>
<td>20.6</td>
</tr>
<tr>
<td>Nondurables</td>
<td>7.3</td>
<td>9.8</td>
</tr>
<tr>
<td>Services</td>
<td>62.6</td>
<td>68.9</td>
</tr>
<tr>
<td>New construction</td>
<td>17.0</td>
<td>17.7</td>
</tr>
<tr>
<td><strong>Government purchases</strong></td>
<td><strong>107.1</strong></td>
<td><strong>117.0</strong></td>
</tr>
<tr>
<td><strong>Creation of new assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential building</td>
<td>21.1</td>
<td>23.2</td>
</tr>
<tr>
<td>Other construction</td>
<td>20.6</td>
<td>21.2</td>
</tr>
<tr>
<td>Producers' equipment</td>
<td>25.5</td>
<td>28.8</td>
</tr>
<tr>
<td>Inventory increase</td>
<td>2.1</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>New assets generated</strong></td>
<td><strong>69.3</strong></td>
<td><strong>78.8</strong></td>
</tr>
<tr>
<td><strong>Excess of exports</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>27.3</td>
<td>28.9</td>
</tr>
<tr>
<td>Imports</td>
<td>23.3</td>
<td>25.1</td>
</tr>
<tr>
<td><strong>Excess of exports</strong></td>
<td><strong>4.0</strong></td>
<td><strong>3.8</strong></td>
</tr>
<tr>
<td><strong>Gross National Product</strong></td>
<td><strong>518.8</strong></td>
<td><strong>554.9</strong></td>
</tr>
</tbody>
</table>

*To table showing Economic Activity of Persons*
*e To table showing Economic Activity of Government*
*f To table showing Savings and Investment*
*g To table showing Savings and Investment*

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Source: Tabulation supplied by Eric L. Kohler, who derived it from the National Income and Product Account and supporting tables prepared by the U.S. Department of Commerce.
Kohler has never formally presented his suggestions to the Department of Commerce. However, somewhat similar proposals were made through the National Accounts Review Committee in 1957, which would show the national output as being distributed to persons, to government, or retained by business. These were rejected by the Department on the grounds that they did not provide any separate place for the "National Income," the subtotal that was intended to show national income at factor cost; also, that they did not show a total figure for corporate profits before tax, for that amount was scattered among persons, government, and business.\(^1\) Thus the Department remains convinced that national income at factor cost is a useful economic concept, and that total corporate profits, before tax or distribution of profits, represents one of these factors of production.

To this writer, Kohler's suggested format appears superior to the official presentations and to any of the other suggested revisions relating to the data as they are being currently assembled. Other authorities have also indicated that the factor-of-production approach was outmoded and lacking in real significance, but their suggested presentations have lacked the clear, simple

\(^1\)U.S. Income and Output, 1958, p. 61.
terminology which he uses. Also, they have not presented the product side with the same consistent subclassifications of sales into services, nondurables, durables, and new construction. His more effective use of space and lines makes the figures much easier to follow, an advantage not to be overlooked.

The space limitations of the typed page made it impossible to reproduce the illustrations in the original account form, with the income on the left and the product on the right. However, the effectiveness was really not materially lessened by presenting one section following the other, instead of being side by side. This indicates that it is not necessary to maintain the account form, and when that is abandoned, a time series can be developed without any difficulty.

Kohler's suggestions are related to the data as currently interpreted by the Department of Commerce, and are an attempt to portray the broad economic movements developed there in clearly understood terms. However, they do not represent a solution to the problem of integrating national income and product accounts with other forms of economic analyses, such as the Flow-of-Funds, the Input-Output tables, or the National Balance Sheet, and they do not provide the answer to the problems of supplying more detailed information. These are conceptual and
statistical problems, which mere form of presentation cannot correct.

Although soundness of fundamental concepts and accuracy of data outrank presentation of reports in importance, clearly worded statements are also needed. Ideas are conveyed more effectively if titles are descriptive and simply worded. The figures are easier to understand if they are spaced to emphasize the important subtotals. Perhaps the presentation of financial aspects of economic analysis is an area that needs to be explored in greater depth by accountants.
PART V

POTENTIAL DEVELOPMENTS
CHAPTER XIV

REALISTIC APPRAISAL OF POTENTIAL DEVELOPMENTS

At the present time the main contribution of business accounting to national economic analysis is that of the double-entry technique, which serves as a tool to provide a consistent, comprehensive framework around which may be organized information about national output and the distribution of that output.

Accountants, as individuals, or in the aggregate as a profession, have not contributed directly to national economic analysis, although a few have studied the subject and have made comments or suggestions. However, their work is reflected in the national economic reports, for they are responsible for assembling or approving most of the business enterprise reports whose figures find their way into the national accounts. The direct control over primary data means that the original interpretations of business economic activities are those developed by accountants, acting on behalf of businessmen. The gulf that still exists between the interpretations of
accountants and economists in these matters acts as a distinct impediment to a smooth flow of data from individual firms to national accounts.

What about the future? Discussion of possible developments may be approached in two ways. First, from a realistic viewpoint, what developments may be expected, taking into consideration past events and present trends? Second, what should be the role of accounting and accountants in the field of national economic analysis? The latter point will be discussed in Chapter XV.

Taking the realistic approach, it is possible to detect opposing forces, some appearing to favor closer ties between business and economic accounting, others appearing to involve conceptual and practical barriers that indicate an almost irreconcilable impasse.

An examination of the developments in accounting and economic analysis over the centuries reveals that they have evolved from widely diverse origins to a point where there are substantial similarities. From a long-range viewpoint there are indications that the trend toward a common meeting ground may be expected to continue, and this is a factor favoring more cooperation in the future.
Review and summary of accounting developments

Accounting has slowly but consistently responded to changing economic conditions. The long-range trend has been toward a broadening of activities and horizons, which may be summarized as follows:

Expanding functions of accounting.--When double-entry bookkeeping originated in Italy, over a two-century period of trial and error during the middle ages, its function was to serve as a memory jog for businessmen, and to help them in their earning of an "honest and legitimate profit," in the words of Pacioli. As enterprises grew in size and combined the capital resources of more than one individual, the accounting function expanded to serve as a source of information for distributing partnership profits. As ordinary partnerships developed into joint-stock partnerships (such as the East India Company) the purpose of accounting was not essentially changed, but it was called upon to differentiate very explicitly between capital and income in the determination of profits to be distributed.

In the middle of the nineteenth century in England a semipublic function was added to accounting. It was called on to help supply control over incorporated enterprises through stewardship accountability of managers to owners, which eventually involved compulsory auditing. As
corporations increased in number and in size during the twentieth century, particularly in America, the stewardship function became more and more important, since a large proportion of business activity was carried on in the corporate form.

A change in emphasis from the proprietary viewpoint to the entity concept was first introduced in the 1920s. By the 1940s many accountants began to take the viewpoint that the primary function of corporate accounting was to provide information to management to aid in the making of business decisions and to measure the effectiveness of business enterprises; that accountability for the distribution of profits was important but secondary in nature. While "effectiveness" was still to be judged in terms of "profitability," there was nevertheless a subtle distinction between "earning power" as such and the distribution of profits. The capacity to earn implied an ability to produce goods wanted by consumers, which put more emphasis on the over-all role of business in society than was apparent when ownership claims alone were paramount.

Another function was added to the expanding role of accounting in the twentieth century when it was used more directly as a tool to exert economic control over business enterprise. The natural monopolies, such as
railroads, public utilities, and communication industries were the first ones to be regulated, and accounting costs were used as a basis for determining rates to be charged the consuming public. During the depression years of the 1930s and the war period of the 1940s the accounting function was further expanded to include control over general business enterprises. In some cases reports were used as a means of deterring monopolistic practices or fraudulent activities. In other cases accounting was used directly in the public interest through such services as the withholding and reporting of social security taxes. Also the function of accounting pertaining to the determination of net income became vitally important when income taxes became such a dominant factor in providing revenue for the government.

Thus the accounting function has evolved from serving the owner of an individual business only to a point where it is also used for important semipublic functions and for serving as a tool for direct and indirect government control over business activity. It has not yet reached a stage where it is expected to contribute directly to aggregate data for economic analysis, but information furnished regulatory agencies provides the bulk of the data used for such purposes.
This steady movement toward more socially-oriented aspects of individual business accounting and toward the use of accounting for direct social control purposes represents a long-range trend that shows no indication of being reversed at the present time.

**Improved techniques.**—The methodology used in recording and classifying information has also reflected changing economic conditions.

The double-entry bookkeeping framework has proved to be flexible enough to adapt readily to different customs. Although the manual recording of transactions in the day book, journal, and ledger served business without much variation for several centuries, the twentieth century brought in significant modifications, with America leading the way. Some of the changes were represented by internal conversions of data which aided business analysis, particularly in techniques developed to analyze costs more effectively. The main point to be derived from this is the fact that accounting was not confined to overt transactions with outside entities, but was supplemented by judgmental decisions involving internal cost conversions. This may be interpreted as providing precedence for other kinds of conversions of data which may be considered valuable in analyzing business activity.
The most dramatic change came in the ability to process and record vast quantities of data. The streamlining of the record-keeping process, and the subsequent use of mechanical or electronic equipment, has helped to implement large-scale business enterprise. It also suggests that the ability to handle aggregate economic data might evolve from an extension of such business methods, which would lead toward more rapid, accurate assembling of information for economic analysis.

Expanding use of accounting reports.--Communicating the results of business activity is closely related to the function of accounting and reflects its purposes.

In the beginning, formal reports were probably not prepared, because the owner could look at his books and get the information he wanted. As business became more complex, and as ownership became more widespread and separated from management, reports reflecting financial position and operation were prepared for use within the firm. They were made semipublic for the first time in England when audited reports were required for the stockholders of a corporation.

In America, the trend toward reports being made freely available to the general public was started in the early part of the twentieth century, although at that time auditing was not compulsory. Now, summarized forms
of financial reports are provided by all corporate enterprises that are required to report to the Securities and Exchange Commission. Although such published reports disclose comparatively little detailed information, the significant point is that the results of corporate business enterprise are considered to be of public interest, and are available to people not directly related to the firm.

Thus public dissemination of the results of private enterprise indicates a trend favorable to the availability of such information for national economic analysis, although the stage has not yet been reached where reports are expected to supply data in a form directly applicable to economic analysis.

Developments in professional accounting.—Although specialized services for record-keeping were known to have been available as far back as the middle ages, accounting did not emerge as a profession until the latter part of the nineteenth century. The formation of professional accounting organizations has provided opportunities for exchange of ideas, and has supplied the mechanics whereby leaders may influence general accounting practice. Although much of the effort of such groups has been directed toward technical matters and professional competence, there are two areas of activity in which the
trends are favorable to greater cooperation in general economic analysis.

First, there has been the development of a recognition of the need for sound accounting theory to provide standards by which accounting practice might be judged. Apparently no such need was felt at all until the latter part of the nineteenth century. At first, theory took the form of explaining the logical framework of the double-entry system, but this did not satisfy the need for criteria by which the admissibility of, or values attached to, transactions might be judged. The 1930s saw the first attempt by the accounting profession to provide such criteria. The standards advanced for corporate accounting by Paton and Littleton in 1940 revolved around the allocation of costs into present and future accounting periods, and typified the thinking of most accountants at that time. As inflation became more and more of a problem during the 1940s and 1950s, a growing dissatisfaction was evident concerning a theory that restricted accounting to past historical costs in current records. In the 1940s a militant minority started to agitate for an accounting theory that would recognize the limitations of the monetary measuring unit, and correct it in the accounting process, instead of ignoring the effect of changing purchasing power. In recent years, renewed efforts have been made in this area, and the subject is very much alive.
Thus, from a long-range viewpoint, professional accountants have moved from a position of being interested only in practical uses of accounting, to a point where the leaders are intensely interested in the development of sound accounting theory to provide standards by which the practical uses may be evaluated more effectively. Even though this may not be in accord with current economic theory or practice, the mere fact that there is widespread interest in this area indicates a trend favorable toward broadening the understanding of accounting in its overall relationship to society.

The second factor worthy of notice is the relatively recent recognition of social responsibility by the accounting profession. The chartered accounting societies of Scotland and England felt the public responsibility attaching to the compulsory audits of incorporated business enterprises, but tended to interpret this as providing thoroughly accurate reports on company financial activities. In the United States, audits were not compulsory in the early part of the twentieth century, but such services were used voluntarily. Public accountants felt responsibility toward their clients, the stockholders, but it was not until the latter part of the 1920s that, as a profession, they began to express a sense of responsibility to the general public as well. The
depression of the 1930s started a veritable flood of statements similar to the following one included in the 1939 bulletin of the American Institute of (Certified Public) Accountants:

The test of the corporate system, and of the special phase of it represented by corporate accounting, ultimately lies in the results that are produced. The results must be judged from the standpoint of society as a whole—not merely from that of any group of interested persons.¹

Almost every speech by an incoming or outgoing officer after this contained some reference to the responsibility of the accounting profession to the general public. Thus the realization and acceptance of social responsibility has been given lip service, at least, by the leaders of the accounting profession, and such an awareness is a trend favoring the widening of accounting horizons.

Developments in accounting education.—The placing of a substantial part of accounting training on a college level has not been a long-range trend, but has represented an upsurge evident in the twentieth century, particularly in America. The admission of accounting to college curricula around the turn of the century, and its further extension to graduate level instruction, has helped to

furnish leaders with more vision and with more understanding of general social problems.

During the last ten years there has been increasing emphasis on providing prospective accountants with a broader cultural background. One evidence of this is that economic theory, of an elementary nature at least, is a required subject for all accounting students. Since elementary economic training now includes aggregate analysis in most cases, some understanding of national income and output is usually available, even though it is not covered in accounting courses. A very recent development has been the inclusion of a section on national income analysis in two elementary accounting textbooks.

College teachers were the ones who first insisted on the necessity for having a coordinated theory of accounting, and who started the movement with the 1936 Tentative Statement of Corporate Accounting Standards. Although the practitioners have considered themselves to be the final judges of the acceptability of accounting standards, they have leaned heavily on the services of educators in recent attempts to develop such criteria.

Accounting education has become increasingly oriented toward a broader cultural background for its students, and accounting educators have supplied leadership in promoting concepts of sound accounting theory and
social responsibility. These are all indicative of a trend toward broader horizons for accounting.

**Review and summary of developments in economic analysis**

In the case of economic analysis, there has been a gradual development of implicit, then explicit, relationships to accounting. The long-range trend has been away from its philosophical origins and toward its applied aspects, supplemented by quantitative measurements.

**Philosophical origins of economic thought.**—The churchmen of the middle ages were interested in economic matters from a philosophical and ethical viewpoint, with many ideas quite evidently traceable back to Aristotle. As a result certain business activities were subject to moral sanctions, such as the ban on interest charged for the use of money, which was called usury. Through accounting manipulation, many businessmen used a device of burying interest charges in a rate of exchange or in a reported loss. Not only was there no evidence of a common meeting ground for thought, but there was actual opposition of interest at times.

**First estimates of national income.**—In the seventeenth century Sir William Petty hit upon two ideas that implied a bond between business accounting and economic analysis, although no one recognized them as such at
the time. His assumption that national income equalled national expenses was a recognition on a national level that there was a fundamental duality in economic activity. Business accounting had utilized another variation of the concept of duality in economic activity ever since double-entry record-keeping had been in use. Also Petty's belief that national economic activity was capable of being quantified and measured was an application on a national level of a principle long used on an individual business firm level.

Classical and neoclassical economic theory.—The development of economic analysis as a separate science brought business into closer relationship with economic thought, for Adam Smith built his theory around the market place. This meant that accountants, who had always used the prices generated by the market as the basis of record-keeping, were dealing with the same subject matter as those who were trying to explain human behavior. At the time there was little apparent recognition of this conceptual link between economics and accounting. The economists were talking in abstract, generalized terms, and accountants were dealing with concrete, specific situations, but nevertheless the market-oriented theory had brought them both to the same area. Businessmen and their accountants had nothing to do with the formulation
of this theory, but their acceptance of it was a factor in popularizing its main theme—that individual seeking of profit was linked with general welfare through the self-regulating mechanism of the market place.

For many years, however, there seemed to be no common ground except a general acceptance of this central idea, for those who followed Adam Smith were even more abstract and generalized than he was. In the latter part of the nineteenth century Alfred Marshall directed some attention toward the "national dividend" and its distribution among the "factors of production." This represented a concept which influenced the thinking of those in the national income field, and indicated again, in generalized terms, an implicit duality in economic activity.

**Development of applied economic analysis.**—In America, the Institutionalists represented a group of men who had revolted against the abstractions of classical theory, and who favored more analysis of real life situations, based on empirical evidence. The rapid expansion of national income statistics in the period after World War I also represented an increasing awareness of the need for quantitative measurements of economic data. Concepts of economic theory and national income measurement were united under the aggregate type of analysis advocated by John Maynard Keynes in the 1930s. Finally, in the 1940s,
accounting was also brought into the picture when the concept of duality, linked to measurement of economic transactions, was recognized by economists as they began to use the double-entry accounting approach to supply a framework around which the national income and output data could be organized.

Thus economic analysis has evolved from a point where it seemed to have no relationship to business practice, to a point where its double-entry technique was hailed as a valuable tool.

This review of long-range developments reveals the trend in accounting toward expanding functions and increasing awareness of social responsibility. Economic analysis has gradually evolved from philosophical discussions to an acceptance of quantitative measurements of economic activity. Both trends represent a movement toward a common meeting ground for accounting and economic analysis, and it may be assumed that a certain momentum has been developed which will help to carry this forward in the future.

Conceptual and practical barriers to uniting accounting and economic analysis

From the long-range viewpoint, accounting and economic analysis now seem to have much in common, but
closer examination of the current situation reveals elements in their relationship that indicate an almost irreconcilable impasse.

**Individualism versus collective action.**—It is ironical, in a way, that the conceptual link forged by Adam Smith between economic theory and business accounting should prove to be a barrier to current improvement in coordinating the work carried on by accountants and economists. A strong belief in individual enterprise is very much in evidence in the business community, even though it is somewhat modified by the fact of widespread economic interdependence and the implications of large-scale enterprise. This belief is still geared to the general principle that the competitive efforts of individual enterprises, seeking profit by satisfying consumers' needs and wants, provide the most effective method of allocating economic resources to the satisfaction of the people of a nation.

With the exception of the views of DR Scott, most of the statements of accountants concerning their social responsibilities are expressed within the framework of neoclassical economic theory—that is, they should supply information to businessmen to help make their decisions more effective, and should supply accurate appraisals of business earnings and financial position to the general
public so that new investment may flow toward deserving enterprises. The depression of the 1930s made accountants, as well as others, aware of deficiencies in the self-regulating mechanism of the market place, and made them willing to accept emergency control measures to stimulate business activity. The remedies they tended to favor involved curbing the operations of unscrupulous businessmen, and of preventing monopolies or collusion so that competition would be able to function more effectively again.

On the other hand, the aggregate analysis advanced by Keynes and his followers emphasized the dynamic role of government planning and spending—as a supplement to the market place in the regulation of economic activity, and as an active agent in offsetting its deficiencies. Their approach to the evaluation of the nation's economic activity has been to emphasize the production of goods and services, and they have tended to discount dollar profitability as an effective measurement of economic well-being.

Representatives of the Department of Commerce have specifically stated that they are not attempting to evaluate economic welfare, but are merely gathering factual information on the functioning of the economic life of the nation. Nevertheless, in describing the uses of
statistical data, the National Income Supplements of 1951 and 1954 have frankly said that these facts are needed as a basis for making decisions about government action that must be taken to offset the deficiencies generated by our capitalistic system.¹ The 1954 edition is said to remain the basic document covering details of methods and underlying concepts.² The 1958 edition includes this point, "Even the government, which has come to play such a vital role, works its economic influence by entering the market and by modifying, rather than replacing, market forces."³

There is a fundamental conceptual barrier between those who advocate free enterprise unreservedly and those who favor planned control over economic activity. Also, there is considerable difference of opinion about the role that government should play in the economic life of the nation. To those who tend to distrust central planning it might not seem necessary or appropriate to supply information to government agencies to advance the cause of further planning. Indeed, one author has expressed the opinion that one reason that Leontief's input-output type

³ U.S. Income and Output, 1958, p. 3.
of analysis has not received more widespread interest and support has been the fear that such analysis would "accelerate government planning and possibly in some devious unexplained way lead to socialism."¹

Thus the fact that accountants are generally more oriented toward neoclassical economic theory, and that the current thinking of most economists is dominated by Keynesian aggregative analysis, represents a certain conceptual barrier between the two disciplines, one that keeps accounting attention focused on individual behavior rather than on aggregate behavior.

Differences of opinion about the concepts and measurement of business income.---In addition to differences in general theoretical outlook, there are specific disagreements about concepts of business income and the proper measurement of that income.

The use of historical cost by accountants has been severely criticized by economists, criticized to such an extent that some have tended to overlook many good qualities of business accounting reports. There have even been suggestions that economists cut loose from their dependence on such reports and get their information

by other means. This may be illustrated by the following statement about depreciation by Solomon Fabricant, the present director of research of the National Bureau of Economic Research:

Economists are interested in the way business firms keep their books, for this exerts some influence on economic behavior. Whether or not business accounts are taken with a grain of salt by managers, investors, and others, they must be taken, for there are no other figures on the profits, assets, and net worth of individual companies. But this is not a reason for using business calculations as they stand in the national accounts. Rough as the results may be, national income estimators are duty bound to adjust business accounting figures, if they are used, to fit better than they do now the concepts for national income. . . . We must in fact give up starting with business calculations of capital consumption and then adjusting them. I agree with Hagen and Budd that the time has come when we must abandon business calculations entirely and turn to "synthetic" estimates of the kind now calculated by the NID for housing.¹

Although the Department of Commerce still uses business accounting figures for depreciation, the pressure has been great to depart from them, and to add more "synthetic" estimates as noted in the preceding comment.

This represents a fundamental clash in concepts, augmented by a certain fundamental clash in personalities as well. In the past, economists like Mitchell, or Canning, or Copeland have urged accountants to take a more

active role in economic analysis. This writer has not found any recent articles with similar intent. Fabricant and some of his colleagues might consider such cooperation a lost cause, because they did attempt to work with accountants in preparing the *Changing Concepts of Business Income*, published in 1952 under the sponsorship of the American Institute of (Certified Public) Accountants after five years of study. This resulted in recommendations for measuring purchasing power, but no positive action. In the twelve years that have elapsed since then there has continued to be a great deal of discussion on the subject, but still no positive action.

On the other hand, accountants and businessmen are already critical of imputations. To increase their use in national economic analysis, as was suggested by Fabricant, would give rise to an even stronger feeling that the reports were not representative of economic reality. To use synthetic estimates, similar to those now employed in housing, would certainly tend to reduce belief in the reliability of the national estimates. Objective, verifiable evidence is important to most accountants, and they cannot see that anything is to be gained by cutting loose from the reliability engendered by procedures that provide this. To substitute amounts based on judgmental procedures, statistically difficult to measure, for amounts
closely related to primary data, even though they deviate to a certain extent in concept, would seem somewhat irresponsible and unrealistic to most accountants.

Lack of interest.—However, the most significant barrier to more participation in economic analysis is general indifference to it by the majority of accountants, for continued effort from both sides might eventually iron out the conceptual and practical differences.

The average accountant is busy with the daily problems of individual firms. He usually has an awareness of social responsibility, but that concept is not equated with participation in economic analysis.

Among accounting leaders there was a certain flurry of interest for about ten years following the 1948 invitation to the accounting profession to participate in the new program of economic analysis. As was outlined above, the American Accounting Association committee members who were among the early appointees embarked upon a period of self-education about the national economic system. Most of them disagreed with many of the things being done, particularly in regard to departures from business accounting data. Their activity was limited to writing several articles about their views, and apparently they did not care to embark on any crusade to change the objectionable features. Meanwhile these concepts and
methods have had just that much more time to become crystallized as an integral part of economic analysis.

Later members of the committee, notably Mary Murphy and John P. Powelson, and their committee members advocated accounting participation in and study of national economic analysis, and were not as critical of the economic concepts. However, the American Accounting Association committee was dissolved in 1958 following the publication of a monograph designed to serve as the background for an accounting course on the subject.

Since then there has been no committee actively considering or working on this subject, and very few articles dealing directly with it have appeared in either the Accounting Review or the Journal of Accountancy.

Thus the current situation represents an impasse which is not conducive to accounting participation in a national economic analysis program in the near future. The fundamentally different approach to general economic theory, the sharp differences over the concept of business income and its proper measurement, combined with general indifference toward active participation in aggregate analysis, are factors discouraging closer cooperation.

One ray of hope is represented by the fact that there is a continuing and sincere interest among accounting leaders in developing sound theory, and in
coming to grips with the price level problem. Since economists and accountants are dealing with the same basic phenomena, this search may eventually lead to a path which will actually bring them together. Also, accounting leaders seem to be very much aware of social responsibilities, and this may eventually take the turn of including in its scope the participation in some program of cooperation in national economic analysis.

When one views the present situation from a long-range viewpoint, the current apparent stalemate may take its place in an over-all perspective as a temporary lull, and not as a permanent impasse.
Although it is not apparent that any significant extension of the accounting function will occur in the near future, what should be the role of business accounting in national economic analysis? Of course any answer to this brings in value judgments affected by one's whole philosophy and outlook on political as well as economic affairs. To the extent that opinions have been expressed on this subject there is wide divergence, ranging in nature from that of A. C. Littleton, to the effect that business accounting and economic analysis are in different categories and should not be mixed, to that of F. Sewell Bray, to the effect that social accounting is here to stay and that business accounting should be a vital part of it.

After reviewing the background and literature, this writer has come to the conclusion, along with Bray, that business accounting should play a vital role in national economic accounting, even though it does not do so at the present. Therefore the following recommendations
are made concerning the role of accountants and accounting in national economic analysis.

**Explicit recognition that accounting has a role in aggregate economic analysis**

First of all there should be an explicit recognition that participation in national economic analysis is a legitimate function of accounting. This would have to be initiated by the leaders of the profession and by educators when they became personally convinced that this was a valid activity.

The biting criticism of Josiah Stamp in 1921 was intended to prod accountants into taking action, but far more appealing was the plea made a year or so later by Wesley Clair Mitchell in a speech before the New York CPAs.¹ He pointed out that aggregate statistics needed to be supplemented by concurrent studies of the effect of general economic events on the inner working of the business firm. Accountants have access to this kind of information and if they could help to correlate it with aggregate analysis they would be rendering two distinct services. Not only would this benefit the general public by helping to supply insight on the operations of our economy, but accountants could render much more valuable

¹*Supra*, p. 121.
advise to their own clients because they would have a better understanding of the economic environment in which they were operating.

Mitchell was referring to the study of business cycles, but the same type of argument could be advanced to encourage participation in national income and product studies. Accountants should recognize that they have knowledge and skills to offer that could make valuable contributions to national economic analysis. Access to primary data and skill in processing information are assets that could be put to good use on the aggregate level if they were available for that purpose. In return, accountants would be able to advise their clients more effectively if they were familiar with the general economic outlook.

There are still other reasons for being interested in studies made about the national output. Data supplied by the national accounts are used by government officials in planning Federal fiscal and monetary policies, and in making many of the decisions involving regulatory control over individual businesses. Thus the latter are involved directly through taxing and regulatory measures, and indirectly through the effect on the general economic climate in which they operate. Since they are affected so vitally, accountants representing them should be
thoroughly conversant with the economic concepts used in making such national decisions, and with the facts on which they are based.

However, to understand them is not enough, and accountants should be very much interested in seeing that the facts secured about business are accurate. Gross National Product is being used as an indication of economic growth, and as a yardstick by which government spending or the national debt may be justified because of the relative amounts involved. As spokesmen for business and as private citizens, accountants have a stake in understanding exactly what makes up this figure, and should have a sense of responsibility about supplying information so that the amounts used will represent an accurate reflection of economic activity.

Explicit recognition of the accountants' role in aggregate economic analysis might be implemented in a number of ways. Formal acknowledgment could be provided in the organizational structure of accounting societies by establishing regular committees, whose members would devote their attention to this subject, would help to correlate it with other activities, and would help to publicize it. The editors of accounting publications might encourage the writing of articles that discussed various aspects of the problem. Those who have charge of
professional meetings or conventions might include speeches or round table discussions on the subject.

The most effective action in the long run could be taken by accounting educators if they would include the subject in the regular accounting curriculum. A step in this direction was taken recently when a section on national economic analysis was included in two of the newly published elementary accounting textbooks. If students are made aware of the wider opportunities presented by participation in this type of analysis, their interest can be kindled. The movement would then grow as they take their places in the community after graduation.

More aggressive action in resolving differences between accounting and economic analysis

After recognizing that participation in national economic analysis is a legitimate function of accounting, the leaders of the profession and the educators should take positive action to overcome the differences that exist between accounting and economic analysis at the present time.

Purchasing power adjustments in accounting records.—First, it would be necessary for accountants to set their own house in order. Theoretically, it has always been acknowledged that it is command over goods and
services that is important in the measurement of the results of enterprise, and that money serves only as a convenient way of quantifying this. If money measurements fail to reflect comparable command over goods and services, much of the purpose of reporting for decision making is defeated. The most often-cited objections of the statisticians to accounting reports have revolved around the inadequacy of historical cost figures to reflect current cost flows when there has been a significant change in price levels. This is a valid criticism which merits serious consideration. However, to say that historical costs are completely meaningless for analysis is not realistic, for they do serve as a valuable and objectively determined point of departure from which estimates of replacements or changed price levels can be made.

It would be rash to claim there is any easy solution, since accounting research during the past twenty years has not yet provided an answer satisfactory to the majority of accountants. Work is still in progress, and accounting leaders are apparently sincere in a desire to find a practical program which will make it possible to adjust for changes in purchasing power.

Until a permanent solution is found, Sewell Bray's suggestion seems a reasonable compromise that could be implemented at the present time—identify historical costs
on both the balance sheet and income statement, and portray as separate figures beside them the estimates necessary to convert them to current dollars for each accounting year. Presumably individual enterprises would be in a position to investigate the current figures applicable to their particular businesses, and such amounts, made an integral part of the reports, would be informative without being deceptive if they were clearly labeled. Estimates that are clearly identified as such indicate the judgment of the one making the report, but may be evaluated more effectively by the one reading the report if they can be checked against figures that have met the objective test of a bargained price. If such information were made available in the accounting process, much of the present criticism of business reports would be overcome.

Active program to encourage objective analysis for national accounting.--In recent statements by representatives of the Department of Commerce there has been an observable trend away from emphasizing the analogy of national income measurement to business accounting, which was stressed so prominently when the double-entry approach was first put into effect. This has been accompanied by mounting pressure from economists to increase the use of imputations. These trends should call for mounting
pressure from accountants to insist on more objectively determined measurements.

The National Income Division of the Department of Commerce has claimed that it seeks to report actual conditions when it reports the output and distribution of output of the nation. This writer agrees with the statements made by accountants that this purpose can best be served by summarizing the reports actually prepared by the entities operating within the national boundaries, to the extent that they are available. Extensive modification means that subjective value judgments of those collecting the data are being substituted for the value judgments of those engaged in the basic activity.

Since the reports of business enterprises reflect delivery of goods and services, there are objective measurements available at the point where customers receive them. From then on, the length of time they are used, or the satisfactions derived from their use, are matters that may reflect welfare but which defy objective measurement unless the reporting entities are prepared to quantify them consistently and regularly. Business enterprises do quantify and report the use of long-lived assets and inventories, and these facts enter the province of national income measurements. It is possible that the use of government-owned public facilities might be carefully
studied and quantified, for there are record-keeping agencies capable of handling this, even if they are not at present attempting to do so. On the other hand, individuals making up the personal sector have no regularly organized program for measuring the use of their long-lived possessions, and consistent reporting of such measurements would be a practical impossibility. In such situations it would be better for official statistics to reflect the objectively determined flows, rather than attempt to impute flows such as those attributed to owner-occupied dwellings. Useful relationships and trends can be obtained from any consistently assembled data, but actual flows can be measured with more accuracy than imputed flows. Anyone who wished to make special or supplementary studies could use the official figures as a point of departure for his own explanations, but subjective interpretations should not be part of the basic official reports.

If business enterprises included adjustments for changes in purchasing power in their reports, and if national income statisticians kept to objectively determined measurements for their reports, many of the differences between business and economic accounting would be overcome.
Development of accounting research programs on concepts, techniques, and reports of national economic analysis

Although removing present barriers is of primary importance, the suggestion is made that accountants might have a more dynamic role in future developments. If they can offer constructive ideas or concrete help, it is quite likely that the statisticians would be willing to listen to suggestions and to accept the proffered assistance.

Serious study should precede any attempt to make suggestions. Therefore it is recommended that professional and educational accounting organizations sponsor research programs in appropriate areas of national economic analysis, and encourage doctoral candidates to explore these topics. There are a number of problems that might be tackled, but the following areas seem particularly important:

1. Extension of research in accounting theory to include the specific goal of unifying general accounting and economic theory.

2. Study of methods to improve the fact-gathering techniques of economic analysis.

3. Research directed toward improvement of the national economic reports--through more effective classifications, through integration of the various economic systems, or through improved format.

4. Specific research studies:

   Accuracy and significance of the inventory valuation adjustment.
Feasibility and significance of depreciation valuation adjustment.

Case study comparing internal business changes with reported national income and product data.

All of these topics appear to be challenging and worthwhile areas for intensive study. The scope of the subject matter and possible approaches to the problems may be elaborated as follows.

Extension of research in accounting theory.—This calls for a more generalized theory than has been developed to date, one that will specifically make the business accountant aware of his place in the over-all scheme of things.

DR Scott made an attempt to do this in 1931, but his ideas departed too radically from the market-oriented views of accountants to receive any general acceptance of his concept of an economy organized around accounts.

Maurice Moonitz made an attempt to place accounting in a general economic setting in his 1961 Basic Postulates of Accounting, although this was discounted by one critic as consisting of "self-evident observations."3

1 Supra, pp. 127-8.
2 Supra, p. 147.
3 Leonard Spacek, "Comments," The Basic Postulates of Accounting, p. 56.
Nevertheless, it represented an explicit effort to relate accounting to a broader background, instead of ignoring that aspect.

Meade and Stone advanced some thoughts on the structural concept of economic activity. In setting up the double-entry approach for national economic analysis they commented that economic activity could be viewed as transactions carried on by a vast interrelated matrix of separate economic entities, or groups of economic entities.\(^1\) George Jaszi emphasized the fact that transactors and transactions were the basic ingredients for national economic measurement and analysis.\(^2\)

Accountants have been closely related to the individual entities whose activity has been directed primarily toward producing goods and services. Economic statisticians have tried to report on groups of entities, classified for convenience into four main divisions, with the producing sector being one of them. If the groups are considered to reflect consolidated activities of the individual entities they include, there does not seem to be any major conflict in the idea of reporting on an

\(^1\)\textit{Supra}, p. 74.

\(^2\)\textit{Supra}, p. 269.
individual entity as one phase of analysis, and in reporting on groups of individuals for other phases of analysis.

Although economic activity can be a very broad term, covering all functions related to the "allocation of scarce means to alternative uses," it is the exchange transactions that can be quantified most readily. In general it is only when goods or services are transferred from one entity to another that bargaining occurs which permits a mutually established monetary valuation to be placed on economic activity. Business accounting and national income accounting are primarily concerned with these exchange transactions, although they may be supplemented by internal conversions if the entities are prepared to quantify them consistently and regularly.

On both an individual and aggregate level economic activity is carried on by separate entities, and this activity is capable of being quantified when there are exchange transactions representing the transfer of goods or services. It would appear that a generalized theory might evolve from these concepts, with business accounting representing one phase of over-all economic accounting.

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1This is a widely quoted definition of economic activity which was first suggested by the English economist, Lionel Robbins.
Although different aspects might be emphasized when reporting the activities, this would not destroy the underlying consistent interrelationships.

Research on methods to improve fact-gathering techniques of economic analysis.---One of the most severe limitations on national economic analysis has been the lack of comprehensive, accurate, and timely data in many areas. The national estimators have had to resort to such devious ways to get information that confidence in the reliability of the results has been lessened.

This is an area where accountants might offer very valuable assistance, if they and their business clients felt they had a vital role in the program, both in the supplying and using of data for national analysis. Having access to primary data, they could supply information which would make the national reports more accurate and more comprehensive.

The comment has been made that conceptually business reports might be used in consolidation to build up the value added by each industry, but that such information was not available. If business enterprises did supply such data, and if electronic devices could be used to speed up their processing, it might well usher in a period when the final figures used in the reports were the result of comprehensive, direct assembling of data,
instead of being compiled from benchmark amounts, supplemented by sampling, interpolation, and extrapolation.

The representatives of the business enterprises that make use of national income statistics at the present time have all expressed a desire for more detailed information on a more timely basis. Of course, for this to become an accomplished fact, business must be willing to supply more detailed information on a more timely basis.

Assuming that business and accounting leaders were willing to assemble the needed data and to report regularly, how could this be implemented? This is an area for research for which accountants are particularly suited, although it poses difficult questions.

To establish a comprehensive direct reporting system to the Department of Commerce, or to whatever agency was designated, would be a monumental task, unwieldy to handle, and probably difficult to enforce in many areas as well as being expensive to operate. A possible workable alternative might be to use the facilities of agencies already in existence, such as the Internal Revenue Service and the Social Security System, to modify or expand somewhat the information required there, and to arrange for faster processing of the returns.
The advantage of using the Internal Revenue Service is that every profit-seeking enterprise is already required to report, all nonprofit institutions are required to file information returns, and all individuals who have at least $600 of income are required to report. Thus with the exception of very low-income individuals, a reporting system is already in existence, one which represents comprehensive coverage of consuming as well as producing entities.

The main practical drawback to this suggestion is that the Internal Revenue Service has as its only objective the collection of taxes, and the forms are designed to show taxable income. This is not necessarily the same as the reported profits of business, due to specific regulations concerning exclusions or modifications of income or expense items. This drawback is partially offset in the case of corporations in the reconciliation required for the equity section. In the case of individual taxpayers only a few special expenditures are noted, and the tax form does not involve any general coverage of personal expense or capital outlays. This makes personal returns of doubtful value for use in this connection.

However, the Internal Revenue Service does represent the most complete financial reporting system in
existence, and one which might be modified or expanded enough to supply the comprehensive data needed from the producing sector, composed primarily of business enterprises.

Perhaps a few well-planned changes in the format of the returns might be devised. Perhaps a coding system might be established whereby every line on the tax form affected a particular national income or product account in a certain way, or which was transferred to a supplementary reconciling account. Of course, considering the present maze of regulations surrounding tax returns, it is much easier to state that such a program might be accomplished than it would be to actually implement it. Nevertheless, this is not outside the boundaries of feasibility, and could be the subject of an accounting research project.

Research on methods to improve reports from the national economic systems.—While business accountants have no direct responsibility for attempting to improve the content or format of the national economic reports, yet it is possible that well-planned suggestions might have some effect on those preparing them. At least a formal protest might be registered which would deter departures from desirable reporting.
For example, this writer agrees with those who object to the present classifications used in the presentation of the income side of the National Income and Product Account, and to the excessive aggregating on the product side.

The reports are set up to reflect distribution of output to "factors of production," their total adding up to "National Income," but requiring additional figures for "indirect business taxes" and "capital consumption allowances" to be reconciled with the "Gross National Product." Under the neoclassical approach, the returns to the factors of production indicate the amounts presumed necessary to induce them to commit personal labor or property to production. However, the classifications of rent or interest as used in modern practice do not reflect the meanings attached to them in economic theory, and it is very difficult to segregate returns for ordinary labor from entrepreneurial skill in proprietorships, or even in corporations. It does not seem appropriate to cling to classifications which do not reflect general practice, and indeed which have never done so. But even more important than this, these classifications tend to obscure the impact of government participation in the fruits of national output. Also they separate the amounts received by individuals or retained by business, so that the
results have to be refigured to obtain a complete picture of the flows to these sectors.

The present national income reports consider corporate profits before income tax or distribution of dividends as a significant "factor of production" indicator, but to this writer the returns to individuals, the amounts transferred to government in taxes, and the amount retained by business represent a more important basic analysis of the results of business as related to general economic behavior. This still permits supplemental regrouping of corporate profits for special study, but emphasizes the more significant analysis for the primary presentation. Thus in this writer's opinion, the classifications suggested by Eric Kohler\(^1\) represent a superior reflection of national economic behavior, one that fits in more significantly with aggregative economic analysis.

Accountants might undertake a research study to determine which measurement of their earnings has the most impact on the managers of corporate enterprises--profits before taxes and dividends, profits after tax and before dividends, or profits retained in the business. The Department of Commerce is acting under the assumption

\(^1\) *Supra*, pp. 309-310.
that the first measurement is the one influencing corporate behavior. This should be verified or disproved by objective research.

The present National Income and Product Account is not correlated with other forms of national economic analysis, such as the Flow-of-Funds report, because of the variations in classifications and interpretations of transactions. Conceptually it would be quite possible to have completely integrated statements, as was pointed out so effectively by Powelson. Suppose national statistical reports were in fact a consolidation of all business entities and other sectors of the economy, with data secured directly through income tax returns for the business entities. An important corollary of this would be the inclusion of the effects of some of the items now omitted, such as capital gains and losses, which could show up as supplementary changes in national position, even though omitted from national output. Also it could serve to implement the integration of the various kinds of national economic analysis, including a national balance sheet.

The principal objection to the consolidation of reporting entities, as found on tax returns, is due to the fact that they are expressed in terms of legal entities,
some of which include several kinds of economic activity. This might obscure to some extent details of the products involved.

Nevertheless, research helping to secure direct, comprehensive coverage of transactions might be expanded to include an attempt to correlate supplementary information to effect an integration of the National Income and Product Account with some of the other forms of national economic analysis.

Even if no changes were made in concepts or classifications, the format of currently presented data could be vastly improved by making use of the more effective type of presentation used in business accounting. The desire to compress a great deal of information into as small a space as possible would probably be given as an explanation for the existing formats used for national statistics. Nevertheless, it does seem as though something might be done to overcome the confusion created by long strings of figures, which require the reader to sift out the information for himself. Perhaps some ingenious accountant might create a format which would not take up any more room, but which would make the reports more understandable by better descriptive captions, by judicious use of spaces and lines, and by emphasis on significant subtotals.
Specific areas for research study.--There are a few areas where better knowledge of facts might throw more light on present national income practices. One example has already been cited concerning the presentation of corporate profits.

Another point needs to be cleared up. Economists, like Kuznets, have claimed that using historical cost figures for inventories has seriously distorted business reports and has contributed to wider fluctuations in business cycles. Accountants, like Kohler, have discounted the effect of changing prices on inventories, since the turnover period is usually short enough that the price change during any one such interval would not involve amounts large enough to cause serious distortions. Accounting research might be most valuable to test the accuracy of the opposing claims.

Another area for fruitful research might be that of testing the feasibility and significance of a depreciation valuation adjustment, made directly by each individual firm, and available as given for use in the national accounts. This would be testing on a practical basis the suggestion made by Sewell Bray, which was recommended by this writer as a possible compromise treatment of the price level dilemma, until the accounting profession developed a permanent solution.
Mitchell's plea to accountants suggested the possibility of several kinds of interesting case studies. His idea was that study of internal behavior of a firm's operations and position in relation to some phase of aggregate statistics might bring out facts that would be helpful in interpreting the data more effectively at both levels. For example, how is the attitude toward working capital position affected by movements in the national economy? How are plans for financing expansion of the firm's operations affected by reported changes in the national accounts? How does a cut in the Federal income tax rate affect the plans of a business firm?

In summary, for accountants to take advantage of the vital role they might play in national economic analysis, they must first explicitly recognize that it is a legitimate function of accounting. Then positive efforts should be made to resolve some of the current differences between individual and aggregate analysis. On the individual level this would involve providing information about changes in purchasing power in business accounting reports. On the national level this would involve more direct use of business reports, and fewer imputations or other modifications of primary exchange data.
Although removing barriers is of great importance, accountants may assume a more dynamic role if they can offer concrete assistance or constructive ideas. Careful research should precede any suggestions, and several challenging areas of study are provided. The most immediate and practical contribution would probably be in helping to improve fact-gathering techniques, so that the national reports might be based on data that were more accurate, more comprehensive, and more timely. Empirical studies which help to clarify present concepts, or to suggest new ones, might also prove valuable.

The national economic statisticians have performed valuable services in summarizing the results of the nation's economic activity, subject to severe limitations as to availability of data. Accountants can be of great assistance in helping to overcome this limitation, and at the same time help to improve the reliability of the reports because they would be based on more objective primary data.

In overcoming the present lull in the long-range trend toward closer cooperation between accounting and economic analysis, the accounting profession would also be taking advantage of a challenging opportunity to broaden its horizons.
Books

Accounting History and Theory


An attempt to reset the original social accounts in a form consistent with and reasonably acceptable to current English accounting practice.

In addition to tracing accounting background, it includes biographical sketches of a number of outstanding accounting leaders.

Based on a conviction that accounting and economics could render more mutual assistance, Canning discusses points that would further this cause.

The writings of two teachers and two practitioners reflect a brief history of accounting thought since 1900.

Factual, but not an impressive analysis.

Traces the expanding role of accounting in an interesting fashion.

Essays on accounting history, accounting theory, the profession, and accounting education.

Published as Monograph No. 5 of the American Accounting Association. Littleton's position was that good accounting logic has evolved from trial and error in the field.
A collection of more than 20 articles, spanning various phases of accounting development over a period of 2000 years to about 1900. Scholarly and interesting.

Chapter 22 discusses the progress of accounting methods, and the first known writer on the subject, Benedetto Cotrugli.

To May the rules of accounting are the product of experience rather than logic; practice should change to reflect needs evident in the social and economic background.

An attempt to use deductive reasoning to establish basic assumptions of accounting, and to relate accounting to the general economic framework.

One of the early efforts to establish a coherent accounting theory, revolving around allocation of costs to present or future accounting periods.

An analysis of the economic organization of society from an accounting point of view, which placed accounts at a pivotal point, since the market had lost its efficacy.

A new edition of the book originally published in 1907, one of the first to emphasize theory and the logic of accounts.
Sets forth major criteria to guide accounting activity, which is interpreted as administration of economic resources. Conclusions of the authors proved controversial because they differed too radically from generally accepted views.

A study group of accountants and economists recommended an expansion of the framework of accounting statements to show effect of price level changes.

The first book written by an accountant to make a strong plea to adjust accounting reports to reflect changes in purchasing power.

Economic Theory and History of Economic Thought

Traces history of economic thought from antiquity to the present time.

Calls for a reorientation of the theory of value, since there is very little perfect competition.

Discussion of the Institutional viewpoint by one of its leading exponents.

Discusses the influence of collective action on individual action, primarily that of the courts of law.
An elementary economics textbook which incorporates a substantial amount of national income analysis.

The constructive synthesis of tradition and the new dynamics, as typified by John M. Clark, is discussed in Chapter XV.


Another leading book in this field.

Described as a critical account of the origin and development of the economic theories of the leading thinkers in the leading nations. An encyclopedic work, covering economic thought from Biblical times down to the early 1940s.

A book intended to assist and induce students to read Keynes General Theory.

The American edition of the text by Hicks, one of the first written to explain economic analysis within an accounting framework.

The book which revolutionized economic theory. It includes emphasis on aggregate analysis and the dynamic role of government in our economy.


Robinson, Joan. *The Economics of Imperfect Competition.* London: Macmillan and Co., Limited, 1933. Discusses a concept very similar in nature to that of Chamberlain—the theory of value should be treated in terms of monopoly analysis.


Conference on Research in Income and Wealth. Studies in Income and Wealth. New York: National Bureau of Economic Research. A series of volumes devoted to the findings of the Conference on Research in Income and Wealth, sponsored by the National Bureau of Economic Research. The following volumes were found to be most informative for this study:

Vol. I. 1937. Articles by leading economists tried to clarify the concepts and procedures to be used in measuring national income.

Vol. II. 1938. Measurement of national wealth and its relationship to national income was the theme of this volume.

Vol. X. 1947. The volume included the official report by Edward F. Denison of the tripartite discussion of national income measurement by representatives from the United States, Canada, and England.

Vol. XII. 1950. The entire volume was devoted to a discussion of national wealth, including the problems of defining a national balance sheet and its relationship to national income.

Vol. XVIII. 1955. This volume was given the general title "Input-Output Analysis: An Appraisal," and included an article comparing the structures of the three social accounting systems.

Vol. XIX. 1957. This volume was given the general title "Problems of Capital Formation: Concepts, Measurements, and Controlling Factors." This included an article by the accountant, George O. May.


Vol. XXII. 1958. General Title "A Critique of the United States Income and Product Accounts." The entire volume was devoted to penetrating appraisals of the work being done by the Department of Commerce. It gave George Jaszi, the present chief of The National Income Division, an opportunity to outline the ideas of the Department and to answer directly the criticisms that were raised. It was in this volume that the survey on business uses was reported by the accountant, Paul Kircher.
Vol. XXVI. 1962. General Title, "The Flow-of-Funds Approach to Social Accounting." This included a progress report on the attempts to correlate the flow of funds with national income and product accounts.

One purpose of this book was to preserve the only correct series of estimates of tangible wealth which go back in reasonably comparable form to the turn of the century, and which may be of use if, and when, it becomes feasible to integrate a national balance sheet with national income.

In layman's terms attempts to let the business community become aware of the vast amount of data available; includes considerable comment on the National Income and Product Account.

A pioneer worker in the field discusses basic concepts and procedures as well as statistical data.


Prepared as a textbook in accounting principles for students of economics and the liberal arts. Powelson's theme was the close relationship that exists among different accounting systems, business and social alike.


Public Documents


Board of Governors of the Federal Reserve System. "A Quarterly Presentation of Flow of Funds, Savings, and Investment." Federal Reserve Bulletin, August, 1959. This article describes the major revisions that were recently inaugurated, some of which were intended to make the report easier to compare to the National Income and Product Account.


This continued the same series of supplements as those of 1947, 1951, and 1954, but the name was changed in 1958. It updated the information and indicated the incorporation of some of the suggestions of the National Accounts Review Committee.

Periodicals


