The Influence of Accounting on the Development of an Economy

By George O. May

Introductory

The series of articles of which this is the first constitutes an expansion of a paper under the same title which I read before the annual meeting of the American Institute of Accountants in October last. That paper fell naturally into three parts, each of which I propose now to make the subject of a separate article. Inasmuch, however, as there is a certain inter-relation between the parts, it seems desirable at the outset to indicate briefly their scope.

The first deals with the question how accounting can influence the development of an economy, which involves some consideration of the nature and purposes of accounting. The second will discuss the accounting practice in the treatment of gain or loss on the sale of capital assets and some of the economic effects of such accounting and of the habit of thought which it reflects. The third will be devoted to a historical consideration of the accounting treatment of the exhaustion of property in the course of operation, in the case of railroads and public utilities, and a discussion of the effect of the accounting theories adopted upon the growth of the capital equipment of the United States.

I. The Nature of Accounting

Growing recognition of the importance of accounting is bound to result in closer examination of the relation between accounting and economics, a subject that has not as yet received very extended consideration. Professor John B. Canning, in his *The Economics of Accountancy*, suggests that the accountant's approach to problems is similar to that of the economist, but there is little to suggest that the course of accounting has been consciously influenced to any considerable extent by economic thought. The fact is, rather, I think, that accounting is a tool of business, and that the development of accounting, like the development of business law, has been determined by the practices of business men.* Where accounting and economic thought are

* This being so, the subject of this paper is, I recognize, merely one phase of the broader question of the effect of business practice on economic development.—G. O. M.

found to run along parallel lines, it is probable that both will be found to be running parallel to good business practice. Where accounting treatment diverges from economic theory, a similar divergence is likely to be found between economic theory and business practice.

To many persons, even in the business and financial world, the first question which our title would suggest is: How can accounting have any effect upon the development of a national economy? "Is not accounting," they would ask, "the application to particular facts of certain definite rules which can produce only one result?" Such a misconception of the nature of accounting is, I believe, less general today than it was a few years ago. During the last five years much has been done to secure recognition of the fact that accounting is not exact and rigid but is based very largely on convention and judgment. To the necessary work of education on this point the New York Stock Exchange and the Securities and Exchange Commission have made important contributions.

The regulations of the Commission have followed the policy adopted by the Exchange in allowing registrants to follow their own methods of accounting, provided that those methods were not obviously unacceptable and were clearly disclosed. I have understood that objection was offered to this proposal on the ground of its novelty, and it was, therefore, with particular interest that I read an editorial brought to my notice, in which this principle was referred to many years ago, almost as a truism. The editorial appeared in the *Morning Chronicle* of London in 1849, when the question of railway accounts was being widely agitated and was under consideration by a select committee of the House of Lords:

> "What are the precise criteria which distinguish revenue from construction charges it is no easy matter to determine. . . . At present there is great room for controversy, but this, at least, will be generally agreed to, that the principle adopted by any company in the distribution of its expenditure between the two accounts is of comparatively minor importance, provided that the system pursued be distinctly avowed and understood by the shareholders."

The English courts, in decisions under the income-tax law, have repeatedly taken the view that what is profit is to be determined by the practices of business men. Moreover, as I have pointed out on other occasions, our own tax law has since 1918 laid down the rule that taxable income is normally to be determined "in accordance with the method of accounting regularly employed by the taxpayer in keeping his accounts," and this language remains on the statute book, although it must be admitted that the Bureau of Internal Revenue has done its best to make it nugatory.

So today it is, I think, clear that upon both principle and authority, accounting must be regarded as a process involving the recognition of custom and convention and the use of judgment, rather than as the application of rigid and unvarying rules. It follows that rules may, and sometimes must be changed as conditions change. This is of course true of law; and it may serve to emphasize the point in relation to accounting if I refer here to certain legal decisions on an accounting question with which I I expect to deal in a later article.

In 1876, the Supreme Court said that the public "rarely ever took into account the depreciation of the buildings in which the business is carried on," and in 1878 it supported the government in its claim that a railroad company should not be allowed to include a depreciation charge in operating expenses, holding that "only such expenditures as are actually made can with any propriety be claimed as a deduction from earnings." In 1909, however, we find the court saying: "Before coming to the question of profit at all, the company is entitled to earn a sufficient sum annually to provide not only for current repairs but for making good the depreciation and replacing the parts of the property when they come to the end of their life." *

Now, once it is recognized that accounting is largely a matter of convention, it is easy to perceive that the nature of the conventions adopted may greatly influence the development of an economy. This is particularly apparent under a system of free enterprise, under which the hope of profit is the main reliance for the upbuilding of the industry of the community; for what is profit in the commercial sense here involved is not only an accounting question but is, indeed, the central question of modern accounting.

In the simplest forms of organized life, accounting problems arise, and the way in which they are decided influences action. The administrators of even a non-profit institution—a club, for

* *Eyster* v. *Centennial Board of Finance*, 94 U. S. (1876); *U. S.* v. *Kansas Pacific Ry. Co.*, 99 U. S. 459 (1878); *City of Knoxville* v. *Knoxville Water Company*, 212 U. S. 13 (1909).

instance—are called upon to account to its members. Shall they limit the accounts to actual receipts and disbursements? Must they not at least exclude or deal separately with borrowings and repayments; and if they ignore unpaid bills, may there not be a temptation to delay payments that ought to be made in order to present a more favorable showing? If bills owing by the club but unpaid are to be brought into account, should amounts owing to the club also be taken into consideration? In technical language, should not the account be one of income and expenditure rather than one of receipts and disbursements? Taking a further step—in order to reduce the cost thereof, insurance has been written for three years; should the whole cost be charged against the one year and the next two years be relieved of any corresponding charge? Or, an automobile has been bought—should the cost be charged against the year or distributed over the probably useful life of the car? Speaking technically again, should not some accrual basis of accounting be employed?

From this example, it is easy to see how considerations of policy may influence accounting, or how the form of accounting may influence the course of events. One form of accounting may show a balance for the year in favor of the club, with the result that the dues may be left unchanged or even reduced; another might show a balance against the club and lead to an increase of dues. Reluctance to put an increase in force may lead the administrators to choose the method which gives the seemingly more favorable result. Indeed, to leave bills unpaid at the end of an administration, thus unfairly relieving the accounts of the outgoing and unfairly burdening those of the incoming administration, is a well-known device of dishonest politicians.

Apart from such crude devices as this, what would have been the effects if our municipalities had adopted the accounting practice of providing for future pensions in the years in which the service which gave rise to the right thereto was rendered? It is by no means abnormal that the actuarial value of the pension benefits attaching to municipal employment should be equal to twenty per cent. of the nominal compensation of the employee. If, therefore, municipal budgets provided currently for the deferred compensation as well as for that immediately paid, and if the present value of the future liability were treated as a part of the indebtedness of the municipality, both the budgets and the borrowing capacity of the municipality might be very largely affected. In the city of New York, some of the funds are maintained on at least a quasi-actuarial basis, while in other cases no provision is made for future liabilities, the present value of which today runs into several hundred millions of dollars. As against the advantages of a more accurate disclosure of the costs of government and of the financial position of a municipality which would be derived from the inclusion of the provision for deferred-pensions liabilities, there would no doubt have to be considered the possibilities of abuse that would be created if funds to meet such liabilities were currently set aside and entrusted to city officials for investment in order to provide for the obligations as they become due.

The most important group of problems which the accountant has to consider relates to the distinction between capital and income. In some cases, the question is whether amounts receivable or payable shall be carried once and for all to the income account or to the capital account. In other cases, the issue is how and when amounts which have been carried in the first instance to the capital account shall be transferred to the income account.

At this point it seems desirable to emphasize the fact that accounting is not essentially a process of valuation, as some writers on accounting and some economists conceive it to be. Professor C. R. Rorem's book, *Accounting Method*, seems to me to suffer from this misconception, and it is hardly too much to say that Professor Canning's book (to which I have already referred) is built up on it. Primarily, accounting is historical in its approach, with valuation entering into it at times as a safeguard. The emphasis is on cost, though where an asset is intended for sale and its selling value is known to be less than cost, the lower figure may be substituted for cost. The outstanding illustration of this practice is the almost universal custom of valuing goods on hand at cost or market, whichever is lower.*

Capital assets, in particular, have traditionally been recorded by the accountant at cost or at cost less deduction for depreciation. To the accountant it has seemed to be neither a practicable nor a useful undertaking to attempt to determine the value of assets not intended to be sold and for which there is no ready market, especially as the concepts of value differ; (and it has been said that in one English act the word "value" is used in twenty-seven different senses†). If the accountant accepts the economic

* Incidentally, the growing emphasis on the income account as an index of earning capacity, and hence of capital value, may make desirable some modification of the treatment commonly adopted in this matter.—G. O. M.

† See *Proceedings of the International Congress on Accounting*, London, 1933, p. 135.

measure of value as being the discounted value of a prospective income stream, it seems to him futile to attempt to reflect fluctuations of the income prospects and the discount rate on the books of a corporation which has no thought of attempting to realize its capital or of doing anything except receive and deal with the income stream as it comes in. He would rather concentrate on the more useful task of measuring—with what accuracy is attainable—the income stream as it flows.

True, during the 1920's, accountants fell from grace and took to readjusting capital values on the books of companies to an extent never before attempted. In extenuation, they might plead that unsound laws, unpractical economics, and a widespread if unfounded belief in a new order of things combined to recommend such a course, but the wiser policy is to admit the error and to determine not to be misled into committing it again.

The accounting function in relation to capital assets is to measure and record not the fluctuations in their value but the extent to which their usefulness is being exhausted through age or use, and to make proper charges against income in respect of such exhaustion, based on the cost of the property exhausted, with the intent that the property shall stand on the books at its salvage value when the term of its usefulness is ended. Conversely, when money is borrowed to be repaid at a premium (as, for instance, when a bond is sold at a discount), the amount borrowed forms the basis of the accounting, with sums added thereto and charged to income periodically as the obligation is maturing, so that at maturity the full amount repayable will stand on the books as a liability.

In practice, two accounts are frequently used in dealing with either capital assets or capital liabilities. In the case of an asset, one will record the original cost and the other the accumulated provision for exhaustion. In the case of a liability, one will record the ultimate amount repayable and the other the proportion of the discount which is carried forward to be charged against the unexpired period of the loan; but this subdivision of the account into two parts is merely a technique employed for the sake of convenience.

The fact that cost rather than present value is thus commonly used in the accounting upon which published balance-sheets are based is by no means universally recognized; and, when recognized, it is sometimes criticized on the ground that the main purpose of a balance-sheet is to enlighten the investor, and that what the investor is interested in is the value of property, not its cost. The misunderstanding and the criticism are so common, and reflect so many disputable assumptions, that it seems desirable to discuss them briefly.

The misunderstanding appears to arise mainly from the looseness in the use of language which is responsible for so much of the existing confusion of thought in relation to accounts. I have already alluded to the fact that in a single act of the English parliament the word "value" is alleged to have been used in at least twenty-seven senses, and it would certainly not be difficult to match this record in our own experience.

Any thoughtful student of finance must have been struck by the fact that one constantly encounters the word "value" with a qualifying adjective attached to it which in every case limits and in some cases negatives the meaning of the noun. Thus we have the phrases—"book value," "cost value," "replacement value," "assessed value," "going concern value," "liquidation value," "market value," "intrinsic value," "fair value," "sound value," "discovery value" (perhaps the most fantastic of all), etc., etc. Almost any asset will be found to be stated in the balance-sheet at one or other of these so-called values.

These expressions, no doubt, have a certain usefulness, though in some instances the concept they are used to describe is remote from the concept of value. The real trouble is, that since the word "value" forms a part of each phrase, and since all of them represent things that are expressed in money, essential dissimilarities in their significance are apt to be overlooked. Hence people who would not dream of adding together a cart-horse and a saw-horse and speaking of the result as two horses, have no compunction at all about adding together a book figure (or, as they call it, a book "value") and a market value, and speaking of the result as a "value," even in the case of a stock the selling price of which is a mere fraction of that "value." Oscar Wilde defined a cynic as a man who knew the price of everything and the value of nothing.* It would be well if some of those who talk glibly of value would develop enough cynicism to keep the test of salability (and earning capacity) more constantly in mind.

* "Cecil Graham: What is a cynic?
Lord Darlington: A man who knows the price of everything and the value of nothing.
Cecil Graham: And a sentimentalist, my dear Darlington, is a man who sees an absurd value in everything and doesn't know the market price of any single thing."
Lady Windermere's Fan, Act III.

The fact is that the word "value" has come to be used to describe what is often really a mere figure—"book figure" would be more accurate than "book value," and the "figure" at which an asset is carried more accurate than the "value" at which an asset is carried. It must be admitted that accountants have themselves some responsibility for the misunderstanding that exists, and academic writers, regulatory bodies and appraisers have also largely contributed to it. However, what has come to be called "wishful thinking" is probably mainly responsible for it. The transition from the thought that it would be convenient and helpful if balance-sheets did represent realizable values to the thought that they do has been all too easy.

A similar misunderstanding is not altogether uncommon in England, though there is little or no real justification for it there. In the case of railroads and public utilities, to which what is known as the "double account" system has applied (as prescribed, for instance, in the Regulation of Railways Act of 1868), capital assets have not appeared as such in any balance-sheet—instead, the expenditures thereon have been recorded in a statement of receipts and expenditures on account of capital, only the balance of which has entered into the general balance-sheet of the company. In the case of companies incorporated under the general incorporation law, the model balance-sheet embodied in Table A of the Act of 1862 contained an instruction in respect of not only capital assets but also stock in trade, reading as follows: "The cost to be stated with deductions for deterioration in value as charged to the reserve fund or profit-and-loss account." I have even seen an opinion by eminent counsel, now on the English bench, to the effect that it was no part of the purpose of a balance-sheet to reflect the values of assets, though directors might, in their discretion, see fit to embody in it information which would throw light on those values.

Turning now to the objection that if balance-sheets do not reflect values they ought to do so, because that is what the investor is interested in—a number of minor exceptions to the position thus asserted might be taken, but the answer to the objection is that it is utterly impracticable to ascertain the values of capital assets in the case of businesses of any magnitude, and that the figures would be of no real interest to the investor if they could be ascertained. What the investor is actually interested in is, obviously, the value of his investment; and the objection therefore presupposes that the value of an investment may be computed by adding up the values of the assets which represent that investment and deducting from the total any liabilities to which they are subject.

Now, only brief consideration is necessary to show that this assumption is valid in the case of a profitable business only upon the further assumption that the value of the assets essential to the business and not intended for sale is simply the difference between the value of the business as a whole and the realizable value of the assets which can be separately sold without sacrifice. By the hypothesis and, in fact, what the investor or speculator is interested in is the value of the business as a whole, and that is dependent mainly on what it will produce in the future and is not determinable by any purely accounting process. Not only so, but if the accountant were to assume the task of valuing the business as a whole, he would have met the assumed need, and it would be entirely supererogatory for him to attempt to allocate that value as between the different assets of the business.

How great the difficulties presented by such an allocation would be may be indicated by stating generally the character of the problem presented, as follows: "How shall we compute the value of a producing unit which has been in use for a term of years, assuming that another type of unit could be bought new today for substantially less than the cost of reproducing the existing unit and would effect an economy in operation; assuming, further, that there is a strong probability that still another type will be developed within a few years which will cost less and be more efficient than any now available, and making due allowance for the fact that the existing unit is in actual operation and that a period of time more or less considerable would be needed for the installation of a new unit?"

There may be other elements in the problem to be considered, but certainly any so-called valuation which ignores those I have suggested can not be claimed to represent the value of the asset. The easy solutions, termed "replacement values" or "sound values" beg the question. While it is impossible to say what percentage of the capital equipment of the country would be replaced even substantially where and as it is, it is quite certain that the percentage is small. It is well known, also, that correct timing of major replacements is one of the most important factors in determining whether a given industrial enterprise shall succeed or fail.

To carry consideration of the question one step further—inasmuch as the value of a successful business is dependent mainly on its earning capacity, it follows that to anyone interested in determining that value the greatest service which accounts can render is to throw light on earning capacity—not on the so-called values of assets which are not intended to be sold. And, so far as the records of the past can be an aid to the estimation of future earning capacity, an account which ignores fluctuations in the value of capital assets is likely to be far more useful than one that attempts to reflect them.

Accounts have other important uses, possibly not less important than that of throwing light on the value of the evidences of ownership in a business. The determination of realized profits, and of the income subject to taxation, and the presentation of fairly comparable statements of operating results for successive periods, would all be made more difficult and more complex if at the same time the accounts were being adjusted periodically so as to reflect the fluctuations in the value of the assets held for use and not for sale.

The canon of sound accounting, that fluctuations in the value of capital assets not only may but should be ignored, rests on surer ground and is more realistic than the contention that balance-sheets should aim to reflect values. In this, as in so many other fields, error has resulted from attempts at over-simplification. What the equation: "Assets minus liabilities equals proprietorship" and the phrase "net worth" gain in simplicity they sacrifice in significance. A balance-sheet, in which one asset is stated at book value, another at replacement value, a third at liquidation value and a fourth at going-concern value, and the liabilities at their face value, does not yield a figure that can be described as net worth expressed in a single measure of value any more than one in which were mingled American and Chinese dollars and Mexican and Chilean pesos all preceded by the same familiar dollar sign, could produce a net worth expressed in any one of those currencies.

Of those who decline to recognize the impossibility of determining capital value by the methods commonly proposed, few have suggested annual or anything more than periodical adjustment of the balances on property accounts to conform with so-called valuations. The Interstate Commerce Commission, while insisting on the need for valuation as a basis for a revision of the property accounts of the carriers, has indicated quite clearly that once the revision had been effected it contemplated cost as the basis for all subsequent accounting, and it has treated as axiomatic the proposition that charges against income for property exhaustion should be based on cost.

The question may no doubt fairly be raised whether even if value is eliminated as a possible basis for arriving at the figures at which capital assets shall be carried (due allowance being made for exhaustion of useful life) there is any other basis which is preferable to cost. The alternative most favored is estimated cost of replacement; but while the usefulness of computations of cost of replacement for a wide variety of administrative purposes may be admitted, the regular use thereof as the basis for the restatement of the book figures is not, I think, one of them.

Any adequate discussion of this question would involve consideration of all the manifold purposes for which accounts are used and go far beyond the scope of such an article as this. In my judgment, however, it will as a rule be wiser to retain the virtues of continuity and reality in the book records which the cost basis affords and, in appropriate cases, to furnish to stockholders a supplementary statement based on replacement cost (which must in any event be hypothetical and ephemeral). Whatever course is followed, it is necessary to relinquish the hope that balance-sheets can be made to reflect the value of capital assets, if that word is to be used without any qualifying phrase that destroys the substance and leaves only the shadow of its meaning.

Cases will arise—as, for instance, that presented by a devaluation such as occurred in Germany—in which cost figures lose their significance to such an extent as to make some different treatment necessary, but such cases are exceptional and their existence merely emphasizes the fundamental importance of honest and competent judgment in accounting.

This does not mean that the balance-sheet is valueless, but only that it is a highly technical production the significance of which is severely limited and has in the past often been greatly overrated. In origin, the balance-sheet is an account; in England, it still commonly bears the headings "Dr" and "Cr" instead of the "assets" and "liabilities" to which we have become accustomed. These facts were recognized by the committee on coöperation with stock exchanges of the American Institute of Accountants in its report to the New York Exchange of September 28, 1932, in which it included as among the objects which the Exchange ought to pursue:

1. To bring about a better recognition by the investing public of the fact that the balance-sheet of a large modern corporation does not and should not be expected to represent an attempt to show present values of the assets and liabilities of the corporation.
2. To emphasize the fact that balance-sheets are necessarily to a large extent historical and conventional in character, and to encourage the adoption of revised forms of balance-sheets which will disclose more clearly than at present on what basis assets of various kinds are stated. . .
3. To emphasize the cardinal importance of the income account, such importance being explained by the fact that the value of a business is dependent mainly on its earning capacity.

In recent years it has become increasingly apparent that for the large modern corporation, at least, the balance-sheet is not in itself an adequate supplement to the income and surplus accounts, and it is not surprising that the regulations of the Securities and Exchange Commission have called for additional statements. The schedules filed under those regulations, and the explanations which are commonly given in connection therewith, should do much to create a juster appreciation of both the significance and the limitations of a balance-sheet. There will still be those who will clamor for an unattainable combination of completeness, precision and simplicity and for a uniformity which would be superficial and illusory. The demand for predigested preparations which will meet all needs, without any exercise of selective judgment or intelligence, is encountered in the fields of accounting and finance as elsewhere.