Accounting Historians Notebook

Volume 9
Number 1 *Spring 1986*

Article 10

Spring 1986

American Thought to 1921 concerning accounting for changing prices

Walker Eugene Fesmire

Follow this and additional works at: https://egrove.olemiss.edu/aah_notebook

Part of the Accounting Commons, and the Taxation Commons

Recommended Citation

Fesmire, Walker Eugene (1986) "American Thought to 1921 concerning accounting for changing prices," *Accounting Historians Notebook*: Vol. 9 : No. 1 , Article 10.
Available at: https://egrove.olemiss.edu/aah_notebook/vol9/iss1/10

This Article is brought to you for free and open access by the Archival Digital Accounting Collection at eGrove. It has been accepted for inclusion in Accounting Historians Notebook by an authorized editor of eGrove. For more information, please contact egrove@olemiss.edu.

AMERICAN THOUGHT TO 1921 CONCERNING ACCOUNTING FOR CHANGING PRICES

Walker Fesmire
University of Michigan-Flint

Early papers and articles on accounting subjects are often relevant to contemporary accounting problems and their solutions. It was suggested by Richard Brief that early accounting thought and methods were more advanced than most people realized. In "A Note on 'Rediscovery' and the Rule of 69," Brief pointed out that early American accountants were thoughtful and conscientious in their efforts to develop theory and to understand the nature of broad accounting issues. He pointed out that a review of their work revealed that many of the basic ideas were repeated again and again as if they were new ideas.[1]

Would a review of the earlier writings by accountants on inflation reveal that many ideas which we now view as new or recent are actually restatement of earlier ideas or concepts? This article will review the ideas of those that considered the problem between 1918 and 1921. Included in the review will be the problems identified by those early writers and the obstacles that they found to the implementation of solutions.

Basic Concepts of Price-Level Thought Between 1918 and 1921

In the decade after World War I, the problems of accounting for inflation attracted the interest of only a few accountants.[2] Their major areas of concern were with long-term assets and the recognition of depreciation. These writers, through supplementary discussion, identified several of the related problem areas caused by inflation.

In 1918, Middleditch recognized many of the problems caused by inflation.[3] Between 1918 and 1921, others added to Middleditch's list. These individuals charted points of inquiry into accounting for changing prices. The points included:

1. The effects of the instability of the monetary units on the preparation of financial reports and in the management of the firms were noted.
2. Distortions in data resulting from shifts in purchasing power, which led to doubts about the usefulness of the information, were also considered.
3. Methods of adjusting the accounting data were proposed and evaluated.
4. The advantages, limitations, and weaknesses of indexes were reviewed.
5. Accounting for fixed assets during inflation was recognized as being a critical element of price-level accounting. The early authors recognized that the depreciation method chosen was influenced by the decisions as to whether the objective was to maintain the physical plant or the investment in dollars. Most of the group supported the concept that the physical plant be maintained.
6. Early authors recognized that ignoring inflationary price changes resulted in overstatement of profits as well as in unjustified payment of taxes, dividends, and wages.
7. Despite the general beliefs, a few of the group held the view that the price increases occurring were not temporary.
8. Some noted that inflation had a disrupting effect. The amount of the disruption depended upon the ability or inability of the business or the individual to adjust prices or bring about wage increases before the fact, after the fact, or not at all.
9. The influence of governmental agencies, such as the Interstate Commerce Commission and the Internal Revenue Service, on the development of accounting was reviewed. In this

Published by eGrove, 1986

respect, writers considered the influence of depreciation upon utility earnings and whether depreciation should be based on historic cost, on renewal cost, or on replacement cost.

Of the above listed items, only selected ones will be considered in detail.

Stability of the Monetary Unit

The rapid changes in the purchasing power of the dollar during the 1970's brought forth the recognition of the instability of the monetary unit. Was this instability only a recent occurrence?

Middleditch, in 1918, first considered the question of the stability of the dollar when he noted that:

> In view of the conditions in recent years the fixity of the unit with which accountants deal most may well be questioned. Is the dollar a definite and invariable unit of measure?[4]

He noted that the average working individual understands the effects of inflation. He described the worker's understanding of inflation thus:

> We need not seek far for an answer. The statistician with charts and tables and the economist with his theories cannot tell us half so well as the average man of limited means and a relatively fixed salary. His knowledge that the dollar is at present rapidly shrinking is based on first-hand contact and cannot safely be disputed. The economist and the statistician merely confirm in more precise terms what the average man has already realized in a rough and practical way.[5]

Bauer also recognized the effects of inflation when he stated that rising prices and wages gave the recipient a sense of prosperity that was deceptive and unreal. As inflation occurred, many costs were hidden and thus were not recognized as they occurred. Eventually, these hidden costs must be borne, at which time their detrimental effects were recognized:

> People fool themselves with the greater number of dollars that they receive, while they do not count the full costs that ultimately must be paid and they actually become poorer in the meanwhile.[6]

Paton was concerned about the questionable ability of the dollar, during periods of inflation, to represent business transactions accurately. Unadjusted accounting data resulted in misinterpretation and misunderstanding. He expressed his doubts about the dollar as follows:

> Accountants deal with an unstable, untrustworthy index; and accordingly, comparison of unadjusted accounting statements prepared at different periods are always more or less unsatisfactory and often positively misleading.[7]

Paton noted that Congress had established an unchanging legal definition of the dollar but that, in spite of whatever Congress has to say about the matter, the quantity of goods and services that the dollar would purchase constantly fluctuates. The purchasing power of the dollar was undefined:

> The significance of the dollar—the accountant's yardstick—is consistently changing. We know that the 1920 dollar is a very different unit from the 1910 dollar, . . .[8]

Paton's description of the unstable dollar in 1920 could very well apply to that of the 1980's. It should come as no surprise, then, that problems faced by an individual living in 1920 were similar to those experienced by one in 1985. Here Paton described the effects of inflation:

> The apparent economic gain measured in dollars is often largely or entirely nominal because of the lessening value of the dollar. Many a taxpayer has felt the injustice of being obligated to pay large sums in income and profits taxes from net earnings . . . which were ficticious as a measure of the true improvement in economic conditions.[9]

The effects of income tax bracket creep—usually regarded as a recent phenomenon—was also a concern to the individual of the 1920's. Total income increased but, because of higher prices and higher taxes, economic status diminished. Paton noted that the 1920 wage earner was probably

having difficulty improving or maintaining his economic status:

> No doubt certain wage-earners in recent years have found all their nominal increases in compensation more than offset by advancing prices of the things which they . . . purchase.[10]

With this comment, Paton, in 1920, joined other early accountants in their recognition of the fact that the individual was aware of and realized the effects of changing prices.

Middleditch recognized this relative character of the dollar's strength. "If money were an end rather than a means," he says, "the dollar would be perfectly stable. The true value of the dollar was measured not by what it was, but by what it will get."[11] Chinoweth was also concerned about the use of the dollar as a medium of exchange when he noted that "the real value of the dollar is its purchasing power, which changes as prices rise and fall.[12]

Thus, early accountants recognized the instability of the dollar as a medium of exchange. To counter this state of affairs, they proposed several solutions to the problem. The next section will look at some of these early solutions.

Proposals for the Recognition of Purchasing Power Changes

In the physical sciences, the unit of measure was always the same or was adjustable for the differences in physical conditions. This stability of units made the comparison and interpretation of events occurring at different times acceptable. Also, the stable unit permitted precise prediction of future events by the physical scientist. However, the businessman and the accountant, who did not deal with conditions subject to controls as precise as those of the physical scientist, found it more difficult to compare, to interpret, and to predict the results of financial data. Thus, because of the combining of entries which represented different dollars, unadjusted statements were unsatisfactory and often misleading.

The rapidly changing purchasing power of the dollar after World War I justified the adjustment of accounts and financial statements to reveal the purchasing power invested in each firm. Some of the early writers held the view that the accounts should be adjusted to show comparative economic conditions between balance sheet dates and for operating periods.

Middleditch recognized the need for comparability but was unable to persuade the businessman to adjust the books. Nonetheless, he tackled the problem of how adjustments should "be made in the accounts to reflect the changing value of the dollar?"[13] Middleditch initiated his discussion of how he would account for the changing value of the dollar with a consideration of index numbers. He noted that although prices of individual items may fluctuate without an interrelationship, prices in general follow a definite trend. The index number traced the general level of prices as well as variations in the price level.

Middleditch noted that several index numbers were being computed and that the different index methods yielded results that were generally in agreement. Of the various index methods, he preferred the Bradstreet index since it was not computed using a base year. As a result, comparison could be made directly between any two years rather than indirectly from each year to the base year.

Having selected a price index for use, Middleditch then dealt with how the varying unit would be handled in the books of account. The problem was how to make adjustment to all open accounts using the current dollar while not impairing the usefulness of the information in the accounts. In an effort to minimize the

work involved in adjustment, all accounts were restated in current dollars at the statement date. If a gain or loss was recognized during the adjustment process, it was allocated to or charged against the period in which it occurred.[14]

After recognizing the effects of the changes in purchasing power, three of the early accountants proposed techniques which they believed would handle the adjustments. Middleditch proposed to adjust all accounts to current dollars applicable at the statement dates. Paton suggested that the accounts be adjusted to replacement cost based on the specific prices applicable to the firm. Chinoweth recommended the use of historical cost if the asset was the only item which had undergone an index shift, while the replacement cost would be used if the general price index had undergone a shift.

Middleditch claimed his method was acceptable because with the use of index numbers it was "a means of comparing the value of the dollar at one time with its value at another time, and by the addition of a few adjusting accounts a means of incorporating these values in the books without detracting from the information they already contain."[15]

Middleditch left two topics out of his consideration and hence unexplained. First, he did not explain how he would adjust the income statement during periods of changing prices. His discussion of current assets leads one to assume that he would hold that revenue and expenses occurred frequently and so close to each other in time that price changes would not affect the matching of revenues and expenses. Second, he did not indicate the entire entry to be made when assets or liabilities with a related "monetary fluctuation" account were disposed of or liquidated. It appeared that the adjusting entry to "monetary fluctuation" and "reserve for monetary fluctuation," and the amount of the realized gain or loss, would be the difference between the selling or liquidation price and its original amount.

Paton was also attracted to the problems of price changes. When prices were shifting, Paton held that the accounts and their related financial statements did not reveal the changes in the economic well-being of the firm. This failure to consider the changes in purchasing power resulted in financial statements that lack comparability. His suggested solution was that price-level adjusted supplementary accounts should be established and reported in conjunction with historical cost financial statements.

As to the price index to be used, Paton rejected the general price index for supplementary accounts. He preferred the price index for the specific items because:

> . . . the particular business does not deal with goods in general but with special classes of commodities, rights, and services. Accordingly, it is the function of accounting to follow the investment of the specific business and to register the effect upon the assets and equities of the business.[16]

Paton stated that he believed the soluion to the comparability problem lies not in the revision of orthodox accounting methods but in a shift to closing valuations. He chose the accounting for plant and equipment at the close of a period to illustrate his view. His illustration showed that if these assets were valued at replacement cost (effective current cost) during a period of rising prices, then depreciation would be increased. This increased depreciation would provide funds for the firm as they became part of proprietorship.[17]

Chinoweth also looked at fixed assets and the effects of increasing prices upon them. He did not, however, attempt to develop or to illustrate a procedure for handling adjustments for price level changes. The increased cost of replace-

ment of fixed assets over their original cost was of concern. He believed that depreciation should be charged on the basis of replacement cost.

In summary, these early accountants, writing at a time when price level changes were not a widely discussed topic and with few related materials for review, made major contributions to early thought on the topic of accounting for purchasing power changes. Paton recognized the need for adjusted financial statements but warned that new methods should be adopted only as adequate technical methods were developed.[18] Middleditch also worried about the continued usefulness of accounts adjusted for price changes. His concern was with the accountant's ability to adjust the accounts and maintain the usefulness of information contained in them.[19] Chinoweth stressed the use of the dollar as a medium of exchange. His concern was with the recognition of depreciation under price changes and identifying a better basis for calculation of depreciation.

Long-Term Assets and Depreciation

The writings of most of the early accountants reviewed either slightly referred to or considered at length the problem of valuation of both long-term assets and the amount of depreciation. Middleditch's ideas on depreciation and long-term assets have already been reviewed in "Proposals for Recognizing Purchasing Power Changes." His ideas concerning both long-term assets and depreciation were presented in this earlier section as a result of his intertwining presentation—the one could not be sensibly discussed without the other. Thus, his ideas on depreciation and long-term assets will not be repeated at this point.

Bauer placed major emphasis upon long-term assets, the effects of depreciation, and its possible consequences. He was concerned by the manner in which business and society in 1919 had overlooked depreciation as a provision involved in the recovery and renewal of industrial plants. Before that time, depreciation had been haphazardly handled, and it was his opinion that these faulty methods had contributed to many business failures. He felt that even those firms recognizing depreciation were in extraordinary danger if they were not prudent in their depreciation policies. If the firm based its depreciation on original cost, it could find it difficult to replace long-term assets if prices had increased significantly.

Although other methods may have been used, Bauer pointed out that methods for recovering of plant investments were generally handled either by charging to operating costs a systematic allowance for depreciation or by charging to operation the original cost of property retired as renewals were made.[20] Both methods attempted to ensure that when the long-term assets were retired, their original cost would have been recovered out of earnings. It was clear that both methods charged only the original cost of the retired property to operations. If upward price trends continued, this policy would be inadequate. Since replacement would cost more than the retired property, the depreciation should be based upon the higher replacement costs.

Bauer then asked what the objectives of management were when it recognized depreciation. Was it to maintain the investment in terms of dollars, or was it to maintain the physical productivity of the property?[21] For a mature firm, the objective was the maintenance of the physical plant without the investment of additional capital funds or additional debt. Thus, as the price level increased, the depreciation charge should be based upon the cost of replacement property

which had a similar function and capacity.[22]

Rastall also stated that the objective of depreciation was to maintain the physical capacity of the long-term assets. He also noted that when depreciation was based on original cost, apparent or false profits occurred since profits feel the stimulating effects of rising prices before they feel the effects of increasing costs.[23]

Chinoweth also noted the importance of maintaining physical capacity with the statement that the purpose of depreciation was not to return the same number of dollars invested to the investor but to return the original invested purchasing power.[24]

Paton also looked at the objective of depreciation. He noted that in order to base depreciation on replacement cost, the conventional method of valuation must be abandoned. Then separate charges and credits were made to assets and proprietorship accounts so that the balance sheet reflected any changes resulting from replacement cost utilization. He believed that a change from historical to replacement cost could be made without distorting financial statements. Thus, it appeared as though Paton would find the basing of depreciation on replacement cost acceptable as a method for the maintenance of the physical plant.

In summary, these early accountants realized the possible misconceptions that might be conveyed by financial statements based upon historic cost. Most of them recognized that the maintenance of the physical plant was most critical and therefore recommended that depreciation be computed under the replacement cost method. They were concerned that the public would not understand replacement cost and thus be confused by its use. They were also concerned as to whether or not the profession had the skills to develop a workable replacement cost method and the ability to implement the method.

Effects of Overstatement of Profits

It was recognized that, during a period of rising prices, profits were overstated if sales were reported at present prices while expenses were calculated at historic costs. Of the early accountants, Bauer was the only one to have looked in depth at the effects of overstatement of profits when he looked at the effects of this overstatement on business and society.

During inflationary periods, revenues were more quickly adjusted to current levels than were costs. This resulted in an inflation-induced overstatement of profits which in turn required increased tax payments and unjustified payment of dividends. The overall effect was a hidden deletion of capital and reduction in physical plant. People were deceived by the larger number of dollars received when payment for all costs were not required at the time of receipt. This prosperity of rising prices was unreal since the people became poorer as a result of the decline in the quantity of goods and services they were able to purchase.[25]

Paton scanned the effects of rising prices on income. He noted that the apparent economic gain measured in dollars was often largely or entirely nominal because of the reduced value of the dollar. Many taxpayers were required to pay larger sums for taxes on inflated income, income which measured a fictitious improvement in their economic conditions.[26]

Around 1920, practicing accountants were stating that the concern about the overstatement of profits from inflation was unwarranted. They held that the then high prices were only temporary and that prices would return to the lower pre-World War I levels. That prices could return to pre-World War I levels was recognized by Bauer, but he countered with the view

that prices may go much higher and stay there. He noted that if higher prices occurred, either the business community or the public would be compelled to make renewals at higher dollar costs.

Bauer recommended that the overstatement of profits and its potential devastating effects be recognized as a serious problem:

> The public should provide now for complete renewals of property, together with all other costs, whether in strictly private business or public utilities. If it does not make adequate provisions, it will overstate its present prosperity, will indulge in extravagant personal expenditures and in the end will find itself poor because of the present showing of unearned profits.[27]

Thus, not knowing what the future would bring, Bauer suggested that the sensible policy was to accept inflated prices as permanent and to begin to recognize all costs accordingly.

Conclusions:

In summary, the accountants of the 1920's showed a remarkable understanding of the effects of price increases. They also were concerned about the proper allocation and matching of costs. These early accountants recognized the problems caused by the instability of the monetary unit and its effects upon the comparability of financial statements. Accounting for long-term assets was one of their major areas of concern for which they suggested possible methods that would adjust original costs for inflationary effects. Whether maintenance of investment or of physical plant should be advocated was considered the key to providing useful information on the financial statements.

FOOTNOTES

[1]Brief, Richard P., "A Note on 'Rediscovery' and the Rule of 69," *The Accounting Review*, October, 1977, p. 811.

[2]Among the early accountants dealing with the subject were: John Bauer; J. M. Chinoweth; J. Hugh Jackson; Livingston Middleditch, Jr.; William A. Paton; Ernest S. Rastall and Henry W. Sweeney.

[3]Middleditch, Livingston, Jr., "Should Accounts Reflect the Changing Value of the Dollar?" *The Journal of Accountancy*, February, 1918, pp. 114-20.

[4]Ibid., p. 114.

[5]Ibid.

[6]Bauer, John, "Renewal Costs and Business Profits in Relation to Rising Prices," *The Journal of Accountancy*, December, 1919, p. 413.

[7]Paton, William A., "Depreciation, Appreciation and Productivity Capacity," *The Journal of Accountancy*, July, 1920, p. 3.

[8]Ibid., p. 2.

[9]Ibid., p. 3.

[10]Ibid.

[11]Middleditch, p. 114.

[12]Chinoweth, J. M., "Depreciation and the Dollar," *The Journal of Accountancy*, June, 1921, p. 471.

[13]Middleditch, p. 115.

[14]Ibid., p. 116-17.

[15]Ibid.

[16]Paton, p. 4.

[17]Ibid., p. 6-9.

[18]Ibid., p. 2.

[19]Middleditch, p. 116-17.

[20]Bauer, p. 413.

[21]Ibid.

[22]Ibid.

[23]Rastall, Ernest S., "Depreciation Reserves and Rising Prices," *The Journal of Accountancy*, February, 1920, p. 123.

[24]Chinoweth, p. 472.

[25]Bauer, p. 413.

[26]Paton, p. 3.

[27]Bauer, p. 419.

MANAGEMENT ACCOUNTING . . .

(Continued from Page 4)

trustee and past-president of the Academy of Accounting Historians, and as a member of the Harvard Business School 75th Anniversary Colloquium on Field Research in Management Accounting and Control.

A packet of course readings and outlines will be mailed on August 1st to persons registering for the course before the July 10, 1986, deadline. The course will be held on Wednesday, August 20 and the tuition fee is $100. Those interested should sign up when they send in their AAA annual meeting registration form.

Published by eGrove, 1986