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**NATIONAL ASSOCIATION
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COST ACCOUNTANTS**

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Vol. V September 1, 1923 No. 1

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Common Among Cost
Accountants**

**BUSH TERMINAL BUILDING
130 WEST 42nd STREET, NEW YORK**

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Some Economic Fallacies Common Among Cost Accountants

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BUSH TERMINAL BUILDING
130 WEST 42nd STREET, NEW YORK CITY

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National Association of Cost Accountants

SOME ECONOMIC FALLACIES COMMON AMONG COST ACCOUNTANTS

There are a few aspects of social life about which most men consider themselves competent to speak with authority. Among these are politics and economics. Many of us think we know just what Congress ought to do and just what the executive departments and especially the State Department ought to do in the field of politics. Furthermore, many of us think we know all about prices, tariffs, monopolies and distribution of income in the field of economics. It is very natural that we should feel qualified to speak with authority in these fields. Our country is a democracy in which suffrage is universal, so politics is a part of our business whether we are actively engaged in it or not. We are also all engaged in the making of a livelihood and vitally concerned about the distribution of income. We are all interested in prices as they determine the amount our incomes will buy.

While it is natural that men are interested in the field of economics, it may not be amiss to suggest that interest in this science as in others is not always accompanied by knowledge of the laws of the science. We may be interested in radio and know nothing of the laws of physics involved in radio broadcasting and receiving. We may be interested in politics and yet it is possible that our knowledge of politics may be as limited as is that of some of our "soap box" or "curbstone" philosophers. Some of our economic thinking may even be as loose and unsound as some curbstone politics.

Accountants are dealing with *value facts*, the stuff of which economic science is made. It might be supposed, therefore, that accountants, at least, have a real understanding of economic laws. This supposition is strengthened by the fact that in our colleges and schools of commerce economics and accounting are so closely allied, and by the fact that accountants so frequently refer to economic laws to support accounting procedure.

Without any desire to disparage the accounting profession, of which the writer is proud to be a member, he wishes to state that too often our knowledge of economics is of the popular or curbstone variety. The old adage that "a little knowledge is a dangerous thing" is still true, and as accountants we would find ourselves less often on dangerous ground if our knowledge of economic laws were more thorough.

This article will be devoted to pointing out some accounting problems involving economic doctrines about which accountants often reason fallaciously.

INTEREST

The first problem to be presented is the thread-worn one, "Is interest a cost?" "Should interest on invested capital be included in overhead?" It is not the writer's desire to open this entire question at this time, but only to examine into its economic implications. At the annual meeting of our association, held in Cleveland September 14, 15 and 16, 1921, the entire afternoon session of the first day was devoted to this question. Those of you who, like myself, were so unfortunate as not to have attended the conference have doubtless read the debate and discussion in the proceedings of the meeting. You will recall that the argument which was played up most strongly by those favoring the inclusion of interest in costs was the so-called economic reason. Economists, including Hobson, Alfred Marshall, Segar, Seligman, Taussig and Taylor, were quoted to establish the fact that interest is a cost.

There is no denying the fact that from the time Adam Smith wrote his "Wealth of Nations" in 1776 economists have held that interest is a cost of production. Before accepting the position taken by the economists as a proper guide for accountants, examine other items economists have included among the necessary costs of production. The earlier economists stated that three factors were essential for production, namely, land, labor and capital. By the time of John Stuart Mill (1848) a fourth factor had been added. It was the risk taking or entrepreneur function. The values produced by the aid of the four factors are distributed among the factors as follows: Wages to the laborer, and wages include salaries or payment for any services which can be hired; interest to the capitalist; profits to the entrepreneur for the risks he assumes; and rent to the landlord for the use of land. Rent, as used by economists, means land rent only and does not mean rent as we commonly use the word.

Of these shares wages, interest and profits are considered as costs and rent is excluded from costs. The reason for considering three of these items as cost and excluding the fourth is as follows: People do not work from choice. Labor is irksome and involves an expenditure of effort as well as a sacrifice of time which could be more pleasantly spent. Capital can be created only through saving and most people do not like to save. It is more pleasant to satisfy present wants than to postpone the satisfaction of wants until a future time. Risks are common to business. If there is any doubt on this point, witness the great number of business failures each month. People do not enjoy assuming the risks of business, the risk of seeing their savings dissipated through unfortunate ventures. All three of these functions can be made available for production only by personal sacrifices of individual members of society. Land, on the other hand, exists through a creative force other than man's and in its elemental state costs society nothing.

If, then, we decide to include interest as a cost because economists say interest is a cost of production, must we not also admit

that profits are a cost for the same reason? And if economic costs are to be our guide in this matter, must we not exclude ground rent if it happens that we lease the land on which our plant is built?

There is much to be said about the inclusion of interest as an item of cost both pro and con. The writer believes he can well stop at this point, however, if he has established the one point, namely, that any justification for the inclusion of interest in costs must be based upon arguments other than the one which to date has been given greatest prominence, *i.e.*, the basis of economic authority.

A slight diversion may be pardoned at this point to comment on the seeming difference between the two sciences, economics and accounting. The point of view in the two fields is quite different. *Economic cost of production* and accounting *expenses* are not synonymous. The economist is looking at costs from the viewpoint of the sacrifices which must be made by society as a whole if production is to be carried on. Accountants are concerned only with the expenditures made by a particular business enterprise.

DEPRECIATION

A second case in which accountants have erred through lack of a thorough knowledge of economic principles occurs in connection with the depreciation problem. Among the methods of computing depreciation there are the straight line method, the sinking fund method, the fixed per cent of declining value method, the present value of future income method, and others. It is the group of accountants who advocate the general use of the present value of future income method of computing depreciation that ignore certain economic principles.

The present value of a leasehold is the present value of future rentals. The present value of a franchise is the discounted value of future earnings due to monopoly advantage. The present value of a piece of land approximates the estimated present value of future rentals. In the first two of these cases, the value of the asset decreases or depreciation occurs as the life of the lease or franchise is shortened. In the third case a value decline does not normally occur, as the existence of land is perpetual. The accountants who advocate the general use of the present value of future income method of computing depreciation place all goods in a class with leaseholds and franchises. Their position is in effect that all asset values are determined from what they can earn in the future discounted to present worth.

Economists do not admit that all values and prices are so determined. For the purposes of price determination they classify goods as fixed supply goods and variable supply goods. The variable supply goods are further divided into, first, those goods the supply of which can be increased at nearly a constant cost per unit; second, those the supply of which can be increased at a lower cost per unit; and, third, those the supply of which can be in-

creased, but only at an increased cost per unit. Many manufactured goods fall within the constant cost class. Services of railroads and some of the other public utilities are placed in the decreasing cost class, while products of the forests, farms and mines are placed in the third group, the supply of which is contingent upon an increased cost per unit.

The price of fixed supply goods is determined by what people are willing to pay. Demand is the big element in price fixing, as supply cannot be varied. If the fixed supply good is an income bearer, the price which people will be willing to pay will be the capitalized value of estimated income. Land, leaseholds, etc., fall in this group.

Of the variable supply goods those of the constant cost group have their price determined by the cost of production to representative producers. The goods the supply of which can be increased at a decreasing cost per unit have their price determined by the cost to the largest efficient producer who is able to produce at the least cost. The price of the increasing cost goods is determined largely by the cost of the least efficient producer who must be kept in the business in order that a sufficient supply will be forthcoming.

With these economic principles of price determination in mind, the proposal to determine depreciation or value expiration by the present value of future income method seems inadequate. It appears that this method may be logically applied in measuring value expiration of terminable, fixed supply income bearers such as leaseholds, since their value is a function of capitalized income. It will not be applicable in the case of constant cost goods, which are in the variable supply class, as their value is a function of cost and not of income. To put the matter more concretely, suppose the market rate of interest is 5 per cent, and we wish to place a value on a piece of land earning \$1,000 per year in excess of taxes, with all likelihood of doing so indefinitely in the future. We could divide \$1,000 by five one-hundredths and arrive at the figure \$20,000, which would be a reasonable value for the property. Now try to apply the same method of valuation to the assets of a taxicab business which has been recently established in a new territory where no competition exists. The company owns three cabs. The market rate of interest is 5 per cent and the net earnings, after deducting all wages, salaries, garage rentals, depreciation, etc., amounts to \$1,000 per year. Are the assets of this company worth \$20,000? If you were considering the purchase of this business, you would not proceed with a valuation of assets in this manner. You would ascertain what it would cost you to purchase new cars from the makers. If they could be bought for \$2,000 apiece, you would probably not give more than \$6,000 for the business. You could also be sure that as soon as competition opened the income would adjust itself to a reasonable return on this investment. While the fixed supply income bearer had its value determined by the capitalization of income, the assets of this

business would have their value determined by costs, and income would adjust itself to cost figures.

It seems, therefore, that this method of handling depreciation, while satisfactory in some cases, does not have any general applicability to all cases. A thorough understanding of the economics involved should discourage those of our profession who recommend this method.

ESTABLISHING SELLING PRICES

The third fallacy to be presented comes nearer home to the great number of cost accountants. The cases already mentioned are cases in which only certain groups of accountants are intimately concerned. The third case is not presented without realization that many will take issue with me in regard to my statements.

It has been stated frequently that one of the chief functions of a cost system is to enable us to establish selling prices. We have seen this statement so often in print and have heard it so often that we believe it true. Almost every text book in the field of cost accounting devotes some paragraphs in the beginning chapter to support the view and give illustrations of how it has been done.

The writer wishes to take the position that we can very seldom fix selling prices on the basis of our cost figures, except when we are working on a cost-plus contract or enjoy a monopoly situation. The writer is willing to go even further and suggest that costs are made to reflect selling prices almost as often as selling prices are made to reflect costs.

Economists say that constant cost goods, the continued production of which is demanded, in the long run will tend to cause prices to be determined by the cost of production to representative producers. One can subscribe to this principle without concluding that the selling price of the products of a particular producer are determined by the cost figures of that particular enterprise. The economist is speaking of a long run tendency where the particular enterprise is selling goods in a day to day market and meeting the day to day competition in a particular market situation. Moreover, the economist is speaking of cost to the representative producer, and there is no assurance that a particular enterprise is representative of the industry in the matter of costs.

As an extreme case of failure of costs to establish selling prices, consider the case of a small Pennsylvania farmer who has in twenty acres of wheat. Suppose the season in this state is bad and labor costs are high. Suppose further that the wheat harvested by this farmer cost him \$2 per bushel. At the same time assume that the wheat crop of the Northwest and of Australia has been abundant and that the general carry over of wheat from the preceding season has been large. Probably none of us would insist that the Pennsylvania farmer would sell his wheat on the basis of his costs.

Whenever we have a fixed plant with accompanying fixed

charges and overhead, the unit cost of producing a product in that plant is a function of the quantity produced. Large production results in low unit costs and low production in high unit costs. Now if selling prices were fixed by cost in periods of low production, we would sell our product at higher prices. That is exactly what we do not do, because in periods of low production there is little or no demand for our product, and we must sell at a low price or not at all. When this situation occurred in 1921, what did we do? We adjusted our cost figures as nearly as possible to selling prices by adopting, if we did not already have them, *normal* or standard predetermined burden rates, and wrote off our unabsorbed burden into profit and loss. This put us in exactly the opposite position to the merchant who said he lost a little on every sale, but made a profit through the volume of business he did. We were showing a profit on every sale and still operating under a considerable deficit.

Eggleston and Robinson, in their book "Business Costs," mention the case of a wholesale millinery company which bought ostrich plumes ungraded, in bulk, by weight and sorted them. The total cost of the plumes was distributed over the different grades on the basis of selling prices of the various grades. What is this practice but basing costs on selling prices?

A certain glass factory was making, among other products, fresnels for railroads. The cost of fresnels was running so high that competition could not be met at a profit. The company did not raise their selling price to cover costs and show a profit. Instead the production manager asked that a change be made in the method of distributing burden so as to lighten the load on light ware and throw more of the burden on heavy pieces. The writer was not convinced of the wisdom of this move and suggested to the production manager that he find out what his competitors were doing in the way of production. It developed that they were making about 120 fresnels per shop per turn, while the plant in question was making only 90. The costs were evidently accurate, but told a story the production department did not wish to hear.

We would not be far wrong if instead of insisting that the function of our cost system is not to determine selling prices, but to establish the lower limit below which there is no profit on sales. Even when such a lower limit is found it is well to keep in mind that at times it might be wise to sell goods below cost temporarily, provided the selling price be high enough to cover out-of-pocket costs and absorb some portion of the fixed charges. While a loss would be sustained on such sales, it would be less than would result from a shut down. It might even be wise to permanently sell some by-products below cost, if the by-products are inevitable and the selling price will exceed the cost of the by-product from the point of separation.

We have all been told of late years what an accountant ought to know. We have been informed that he should be a lawyer, an engineer and innumerable other things. While a knowledge of law

might be very helpful, especially to the public accountant or comptroller, and while an engineering training might be of great value to a cost accountant, it is obvious that very few men would be able to qualify in all these fields and in accounting as well. You may very well question anyone who suggests still further qualifications for accountants.

Realizing this situation, the writer still believes there is no divorcing economics and accounting. It is wise that these two subjects are closely allied in schools and colleges of commerce, where a course in economics is usually made prerequisite to accounting courses. Accounting may very properly be looked upon as a branch of applied economics. Either field contributes to the understanding of the other, but economics is the broader. In the matter of value and distribution, the accountant should know his economics.

It is not the intention to suggest that every accountant should be a trained economist, but it would do us all good to get out our text books in economics occasionally and read them sympathetically. We would be reminded of the differences in the two fields and know when an economic argument is not a proper guide to accounting procedure; but, more important, we would know wherein the problems in the two fields are identical and would be far less likely to make claims and statements not in accord with accepted economic doctrines.

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