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INDUSTRIAL PROFITS IN THE UNITED STATES

THE PROBLEM OF MEASURING PROFITS

A Preliminary Note by Wesley C. Mitchell[1]

THIS book is one of the series which has resulted from the cooperation of the Committee on Recent Economic Changes and the National Bureau of Economic Research. The publication of the two volumes on *Recent Economic Changes* carried the study of a major business cycle through its upward phase. This report provided a point of departure for the investigation of the complex and remarkable economic processes which the next phase, the ensuing depression, revealed. The opportunity thus afforded and the urgent need to interpret the phenomena of the depression decided the Committee to continue its explorations. It wished to examine, against the background of the research presented in *Recent Economic Changes*, the perplexing inter-acting factors of the depression itself, and to develop a rationale for the comprehension and appraisal of these factors. The comparative aspects of the situation, the contrast of post-War and pre-War changes, were illuminated by F. C. Mills in *Economic Tendencies in the United States*. In *Strategic Factors in Business Cycles* J. M. Clark provided an analysis of the broad relationships of the various causal factors. The present study is directed to the dynamic factor the varia-

[1] Three Directors of the National Bureau, Messrs. George O. May, George E. Roberts and Malcolm C. Rorty have given generous help to the writer of this note. He is heavily indebted also to Professors Ralph C. Epstein, Frederick C. Mills and Horace Secrist as well as to Mr. Solomon Fabricant.

tions of which dominate the direction and extent of business enterprise, viz., profits.

Like other studies in the series, this one was made possible through funds contributed by the Rockefeller Foundation, the Economic Club of Chicago, the Carnegie Corporation and a group of socially-minded citizens. To these and specifically to the members of the Committee on Recent Economic Changes: Arch W. Shaw, *Chairman;* Renick W. Dunlap; William Green; Julius. Klein; John S. Lawrence; Dr. Max Mason; Honorable A. C. Miller; Lewis E. Pierson; John J. Raskob; Samuel W. Reyburn; Louis J. Taber; Daniel Willard; Clarence M. Woolley; Owen D. Young; E. E. Hunt, *Secretary;* grateful appreciation is expressed.

Business profits are one of the hardest kinds of income to measure. Any business enterprise should be able to state accurately the sums that it has paid out in the course of a year as wages, interest and rents; it should be able to state also what income it has paid out to its owners. But the profits of the enterprise itself are not definite sums fixed by past transactions. On the contrary, they are appraisals of net changes in the position and prospects of the business as a whole—appraisals that look forward to the uncertain future as well as back to the irrevocable past. Like all mixtures of past history and future anticipations, statements of profits are necessarily subject to variable margins of uncertainty.

Besides ascertaining the difference between actual receipts for whatever the business has sold and actual payments for whatever commodities and services the business has bought, the accountant who is estimating income must put values upon all the property belonging to the business. What will the raw materials, goods in process and finished products realize when sold? What part of the accounts receivable

will prove uncollectable? What will the holdings of shares in other business enterprises be worth? If the enterprise owns franchises, patents or other income-bearing rights, what allowances should be made for their approaching termination? At what rate is the physical plant depreciating? Is it becoming obsolete faster than it is wearing out? Are there wasting assets for which a depletion charge should be made? Has the business other properties, such as lands or long-term contracts, that are growing more valuable or less valuable? What part of the profits flows from current operations such as will probably be continued and what part from 'capital gains and losses', such as the sales of securities owned by an enterprise, or the redemption of its own obligations at less than face value? Is the profits estimate to be made on the assumption that the enterprise will continue in business, or on the assumption that it will liquidate its affairs?

Questions like these call not only for technical skill but also for good judgment. Hence statements of profits are affected both by accounting methods and by the optimistic or pessimistic light in which the future is viewed at the time when the accounts are made up. So important a matter as making allowance for depreciation was often neglected by American corporations in the pre-War days and some inadequacy in this respect may still persist.[2] The

[2] In testifying before the Federal Trade Commission, March 22, 1918, Mr. George O. May, who had practiced accounting in this country a little over twenty years, said: ". . . in the early days of my experience here I lost a great deal of work because I refused to sign accounts as being correct unless they provided for depreciation." He thought the development of proper practice in this respect had been "more or less general . . . during the last ten or twelve years." This development he attributed to the influence of public accountants, to the Federal Trade Commission and even more to the Federal tax upon corporation profits adopted in 1909. See *Testimony before the Federal Trade Commission to Determine the Maximum Selling Price of Newsprint Paper,* Price, Waterhouse and Co., New York (no date), pp. 2, 25, 26.

influence exercised by business 'sentiment' upon profit statements is harder to gauge; but no one who compares the reports issued by corporations to their stockholders in January 1929 and January 1933 can doubt that this factor also affects the figures, though its influence may be hidden among the data used by the accountants in making valuations.

It follows that a statistician who is trying to measure profits must be critical of his basic data. It is risky to compare income statements from American companies in pre-War years with statements drawn up since public accountants and the Federal income tax have done their educational work. Even in dealing with recent statements, the statistician cannot take it for granted without inquiry that the figures are proper. The basis on which the valuations in the income statement (as contrasted with the records of actual transactions) have been made may be open to question. Another question concerns the line between profits and other types of income. Sometimes the partners in a firm or the executives of a corporation draw salaries less than they might command on a strictly commercial basis, and the 'profits' reported contain part of the 'wages of superintendence'. Sometimes the executives get compensation larger than they could obtain from corporations in which their stock holdings were relatively small, so that the 'profits' are understated. If an attempt is made to discriminate between pure profits and interest, the investigator must ask what amount of capital has been invested in the business and what is a proper rate of interest to allow. Even when no such line is drawn, the amount of the investment must be ascertained if rates of return are to be found. Finally since profits as figured in practice depend partly on accruals and deferred items, a competent income statement drawn up at the end of a year may turn out to be seriously in error.

Unforeseen changes in collections, in prices, in competitive conditions, in market demand, in replacement costs may raise or lower the values set upon the receivables, the inventory of stock on hand, the securities owned and even the physical plant. No doubt these changes will affect the next year's accounts, but new errors of forecast may vitiate this statement in its turn. A minutely accurate record of profits cannot be made up until the last transaction in the life of a business has been completed, and by that time the earlier records are likely to have disappeared!

How grave the inaccuracies of business income statements really are no one can say. Probably they are subject to a secular decline and to cyclical fluctuations; at a given time they must vary widely from enterprise to enterprise and may vary somewhat from industry to industry. The relative size of the items upon which an accounting valuation has to be placed and of the items that are matters of record is a crucial point. Often the valuation items are relatively few and susceptible of fairly accurate estimate, so that the margin of error in the profits reported for a given year can be kept narrow. Moreover, a statistician may claim that in a large sample of income statements there will be more or less offsetting of unduly liberal against unduly conservative figures.

It is pedantic, however, to treat profit statements as if their significance depended wholly upon their accuracy. To take that view would be to misconceive the role that profit statements play in modern life. They are made primarily as guides to future action. However difficult the task and uncertain the result, every business man who wishes to plan intelligently must make periodical attempts to ascertain whether his past policies have been successful, where they have left him at the moment, and what his prospects seem to be. Perfect accuracy is not attainable, but for working

purposes it is not required—a fair approximation serves most practical needs. Anyone who wishes to get some insight into modern economic life must accept this situation as it is. The profits reported by business enterprises influence directly the policies of the enterprises themselves, of bankers and of investors; indirectly they influence the fortunes of the whole community. These influences are not diminished by the possibility that the reports of profits may turn out later to have been decidedly over-optimistic on the whole or over-pessimistic. Hence the uncertainties attendant upon all statements of profits do not lessen the practical importance or the theoretical interest of collecting and analyzing whatever sample statements can be had.

A second difficulty in the way of measuring business profits is that they are the most variable of the income streams. An individual's income from wages cannot fall more than 100 per cent; the profits of a business enterprise may, and often do, turn into losses. The National Bureau's latest estimates of national income paid to individuals show a fall of 40 per cent between 1929 and 1932; wage disbursements in the industries for which proper data are obtainable fell 60 per cent.[3] But according to another National Bureau study, based upon the figures of the Internal Revenue, the aggregate net income of all corporations in the United States, except tax-exempt and life insurance companies, suffered an even more catastrophic fall in the same period. Net profits of nearly eight billion dollars in 1929 were succeeded by net losses of over three billion in 1931 and of nearly five billion in 1932.[4]

[3] See Simon Kuznets, National Income, 1929–32; *Bulletin 49* (National Bureau of Economic Research, January 26, 1934), Table 2.

[4] See Solomon Fabricant, Recent Corporate Profits in the United States, *Bulletin 50* (National Bureau of Economic Research, March 1934), Table 1.

In dealing with certain problems—for example, business cycles—it is necessary to stress these violent fluctuations of profits from one year to the next. But in dealing with other problems it is necessary to work through the short-period oscillations to representative averages covering a longer run. That is clearly the case if one seeks to ascertain what return business enterprises realize over a period upon their investment, or if one asks what price society as a whole pays for the capital employed in supplying its needs.

Questions of the latter sort are so often asked that it is well to show in some detail why it is so difficult to answer them. An investigator who attempted to find out what is the average long-run return upon capital invested in American business would need a vast array of data. (1) His sample of profits should cover a considerable term of years, and this term should include average proportions of business-cycle expansions and business-cycle contractions, both of average intensity. (2) Even in the worst years some enterprises make good profits, and even in the best years some enterprises suffer heavy losses. To yield reliable results the sample should contain a fair representation of the successful and of the unsuccessful concerns. Furthermore, the losses which result when businesses conclude particular or final chapters of their life histories by liquidation, sale, or drastic reorganization, are only in small part borne by other going concerns and thus reflected in reduced averages of business profits. The major portion of these losses falls upon individuals and has its effect—substantial, but not readily determinable on the basis of available figures—in reducing the broad average of returns to investors.[5]

The net income referred to is that left after payment of income taxes, but before payment of dividends.

[6] Colonel M. C. Rorty adds this comment: The distinction between the average rate of return of going businesses on their capital investment and the corresponding average returns to investors on the money they supply is,

(3) If the business enterprises included in the sample change materially from year to year, the investigator cannot tell whether a given alteration in profits results from an alteration in the earnings of business at large or from the shifting character of his data. This ambiguity in the results is reduced if it is possible to secure returns from an unchanging list of enterprises. But the ambiguity cannot be wholly eliminated in this way; for business enterprises are most unstable units. Identity of name does not guarantee identity of products, management, or ownership. (4) As the present volume demonstrates more conclusively than any other investigation known to me, profits in certain industries may remain relatively high for years at a time, while profits in other industries remain relatively low. Hence the sample should cover a wide industrial range. Indeed, the sample should cover all important lines of investment if conclusions are to be drawn concerning average rates of profits in the country. (5) While statements of profit in millions of dollars have much importance, they do not show what rate of return a business enterprise gets, or what price society pays for capital, unless the amount of profits is related to the amount of the investment. Therefore, the sample should contain statements concerning the capital used by every enterprise every year, and these statements should separate the capital belonging to the enterprise from capital borrowed. The difficulties of getting reliable figures concerning actual investments need not be enlarged upon. (6) After

perhaps, necessary, owing to the almost insuperable difficulties in the way of determining the magnitude of unreported liquidation and reorganization losses. However, it is important to note that, with this distinction made, an adequate supply of capital for social needs can be assured only if the average of business profits of going concerns is substantially higher than the rate of net return, whatever that may be, which is required to maintain a continuing flow of new money from private investors. The social cost of private capital is determined by the necessary net return to such investors, rather than in terms of the current earnings of going concerns.

what was said above concerning the difficulty of estimating profits, it is scarcely necessary to add that the investigator would need to assure himself that the methods of accounting used in preparing his original data were sound at the outset of the period covered and that they did not change greatly in later years.

This formidable list of requirements for ascertaining 'the' average long-run rate of profits in all trades does not mean that it is impossible to learn anything valuable about business profits unless carefully audited income statements can be had for an unchanging sample including tens of thousands of successful and unsuccessful enterprises, fairly distributed among all of the industries of a country, continued for decades and supported by reliable records of capital invested. But what can be learned is obviously conditioned by the scope and character of the samples of profit statements that can be collected. The paucity and the indefiniteness of our knowledge of business profits is due to the narrow range or the defective quality of the data that have been available for analysis.

It has been hard enough to secure representative quotations of commodity prices at wholesale over considerable periods. Even today we have few price series for highly fabricated products. In view of the vastly greater difficulties of ascertaining what profits are realized, and the common reluctance to make income statements public, it is not surprising that the volume of properly authenticated data has not been sufficient to establish broad conclusions. But some samples have been available for years.

Governmental supervision led to the compilation and publication of statements concerning the profits of National Banks, later of interstate railroads, and later still of certain other public utilities. Dependence upon the general market

for capital has led a growing list of corporations to publish condensed statements of income; but there has been little assurance that the accounting methods followed were sufficiently uniform to guarantee the comparability of these materials. Similar doubts have limited the usefulness of the data concerning profits in Great Britain that have been compiled for many years by the London *Economist.* A promising step was taken by Mr. J. E. Sterrett when he published carefully audited reports from 158 industrial companies, largely small manufacturing concerns, for the calendar years 1912 and 1913, or for the fiscal years covering substantially that period. "During this time," Mr. Sterrett held, "business conditions have been generally unfavorable . . . . It may, therefore, be assumed that the profits earned . . . have not been more than a fair average . . . ." The average annual net profits shown by this sample were 13.67 per cent upon the capital invested.[6] Unfortunately, the example set by Mr. Sterrett has not been widely imitated. It is true that numerous studies have been made of profits in particular industries; but the periods of time covered, the methods of stating profits, and the adequacy of the samples used have varied so much that it is impossible to make an adequate composite photograph by assembling these individual sketches.[7]

[6] The Comparative Yield on Trade and Public Service Investment, *American Economic Review,* March 1916. Compare the critique of the representative character of Mr. Sterrett's average by M. C. Rorty in *Some Problems in Current Economics* (Chicago, 1922), pp. 108–10. Many practical business men, says Colonel Rorty, refuse to accept such figures. "They claim that a study of 'going' concerns is meaningless and misleading, and that, if all the legitimate ventures in any competitive industry were followed through from birth to death, with full account taken of all gains and losses, the average earnings on the invested money would very slightly, if at all, exceed the going rate of interest."

[7] As examples of the literature, see the following books, reports and bulletins:

Horace Secrist, *The Triumph of Mediocrity in Business* (Northwestern University, 1933)

A far more comprehensive sample of American data was started when the Federal government incorporated an excise tax upon corporations having net incomes in excess of $5,000 per annum in the tariff act of August 5, 1909. The exemption of small incomes was dropped when the excise provision was superseded by the income tax law of 1913. The compilations of income statements required by these laws and by numerous amending statutes have grown into a formally continuous record of the net incomes of all business corporations in the United States during a quarter of a century.

Comprehensive as the income tax data are, they fall short of what is desirable in several important respects. (1) Those types of business which are carried on mainly by individuals or partnerships are under-represented, or even misrepresented by the inclusion of a few non-typical corporations; for example, farming, most of all, repair work, the professions and in considerable degree retail trade. (2) The returns are regularly divided into two groups—corporations reporting net incomes and corporations reporting no

Keith Powlison, *Profits of the National Banks* (Richard G. Badger, 1931)
Ralph C. Epstein, *The Automobile Industry* (A. W. Shaw, 1928)
Laurence H. Seltzer, *A Financial History of the American Automobile Industry* (Houghton Mifflin, 1928)
Melvin T. Copeland, *The Cotton Manufacturing Industry of the United States* (Harvard Economic Studies, Vol. viii, 1912)
Herbert Müller, *Kosten- und Rentabilitätsprobleme im deutschen und amerikanischen Buchdruckereibetrieb* (Betrieb und Unternehmung, Band 8, Leipzig, 1930)
Cecil E. Fraser and Georges F. Doriot, *Analyzing Our Industries* (McGraw-Hill, 1932)
Bureau of Business Research, University of Illinois, *The Earning Power Ratios of Public Utility Companies* (Bulletin No. 15, 1927)
Federal Trade Commission, *A Report on Prices, Profits, and Competition in the Petroleum Industry* (70th Cong., 1st Sess., Sen. Doc. No. 61, 1928)
Department of Finance and Accounting, United Typothetae of America, *1932 Ratios for Printing Management* (1933, annual)
Bureau of Business Research, Harvard University, *Operating Results of Department and Specialty Stores in 1930* (Bulletin No. 85, 1931)

net income. It is not possible to ascertain accurately the aggregate net income of all corporations by subtracting the deficits of the second group from the profits of the first group. For, as has been pointed out by George O. May, there is a certain duplication of losses in the income tax returns which is not offset by a similar duplication of income—this for the reason that the net income figures exclude dividends received from other corporations; but if one corporation loses money and fails, it will report its loss directly, and other corporations which are its creditors or stockholders will also report what they have lost by its failure.[8] Of course this duplication of losses in the returns varies from year to year, being a much more serious matter in 1921 and 1932, for example, than in 1919 and 1929. (3) Changes in the law and in administrative rulings have affected the amount of profits reported in successive years.

During the period of the excess-profits tax (1917–21) profits were affected by several unusual factors. For example, war contracts were let in many cases on highly profitable terms, with the thought in mind that a major fraction of the profits would be recouped through the tax. On the other hand, large sums were spent upon advertising or other plans for future expansion and charged as current expenses.

One of the chief reasons why the profits reported in 1917 were so much larger than in 1918 is that in the former year the tax was retroactive. Hence there was less opportunity in 1917 than in 1918 to enter into transactions which would reduce taxable income. In comparing 1917 with later years, it should be noted also that the law has been made more liberal to the taxpayer in important respects; for instance, by allowing discovery depletion and by increasing depletion

[8] See the footnote in *Recent Economic Changes in the United States* (National Bureau of Economic Research, 1929), II, 854–5.

allowance at large.[9] (4) The classification of the returns is inadequate. For example, the classification by size of net income has varied from year to year, it is not available for 1919 and 1924, and is not crossed upon the classification by industrial groups. The latter classification is not carried out in sufficient detail to answer many important questions. There is no classification by total assets (except in 1931), capital, gross income, net income (except in 1926), or any other criterion indicating the size of the corporations. (5) The taxable net income reported excludes certain items that an accountant or an economist would include in profits; particularly, dividends received from other corporations and interest upon tax-exempt bonds. In one of the following chapters, an attempt to ascertain the relative magnitude of these items is made. They appear to run on the average about one-ninth of the taxable net income reported to the government. (6) While the official reports show by 'major industrial divisions' the assets and liabilities of most corporations, a considerable number do not submit balance sheets, and no attempt is made in the reports preceding 1931 to relate the amount of the net incomes to the amount of capital invested. (7) The corporations included in the tables change from year to year. Corporations that have been wound up by bankruptcy or amalgamation disappear from the list; newly-formed corporations appear. A corporation that one year appears in the group reporting net income may shift next year to the group reporting deficits, and the year after may reappear in the first group. A student of the returns has no means of knowing what part of the fluctuations in profits is due to these changes in the corporations reporting and in the way they are classified.

[9] The same. Compare the official statement of 'Changes in the revenue acts affecting the comparability of statistical data from income tax returns of corporations'; *Statistics of Income for 1929*, pp. 404–7.

As part of its work upon national income, the National Bureau of Economic Research has had to estimate the profits withdrawn by individuals from business enterprises of which they are sole owners or partners, and the dividends received by stockholders. In some of its estimates it has ventured to include rough figures for corporate surpluses. To attempt a systematic study of business profits is a natural sequel of these earlier efforts. But the difficulty of securing adequate samples of data has delayed that undertaking.

Despite these difficulties, the National Bureau has been able to secure the use of two bodies of sample data upon profits, which, though they fall far short of what is desirable, merit study. One is a small collection of audited statements secured through public-spirited action by the American Institute of Accountants. Income statements and balance sheets covering the years 1927–29 were obtained from 714 corporations. Of these returns the greater part, but not all, were available in full detail for all of the corporations in the list for each of the three years covered. Though no very large corporations were included, the average book assets of the concerns in the sample were between three and four times the average net assets of all corporations submitting balance sheets to the Internal Revenue in the years covered ($2,244,000 as compared with $643,000). The average rate of earnings upon the equity of the stockholders during the three years was 9.2 per cent.[10]

The second sample, analyzed in this volume, consists of materials made public by the United States Department of Commerce in 1932, when it published in rotoprinted form a *Source-Book for the Study of Profits* by Ralph C. Epstein in collaboration with Florence M. Clark. While this official report made available to specialists a relatively large collec-

[10] This collection of profits data may be published at a later date.

tion of data concerning corporate earnings and investments in the fields of manufacturing, trading and finance, it contained no averages and no text aside from a brief preface and list of definitions. To work up these materials into a form useful to many people was a task requiring much additional thought and labor, which Professor Epstein undertook at the National Bureau's request.

The basic data underlying the first half of this report include statements for the ten years 1919–28 concerning the incomes and investments of 2,046 manufacturing corporations, 664 trading corporations, 88 mining corporations and 346 financial corporations. In all four groups, the same corporations are represented in each of the ten years cover[illegible] This use of strictly identical lists of corporations fo[illegible] lecade gives the present body of materials a [illegible]tage over the official *Statistics of Income* and [illegible]nentioned collection of audit reports. In ad[illegible] Epstein has three sets of data concerning [illegible]ely small corporations which vary in [illegible]om year to year. One of these sets [illegible]e other two cover 1924–28. The [illegible]ions in the 'non-identical' lists [illegible] in one case, from 406 to 1,118 in [illegible],337 to 1,350 in a third.

A[illegible], the best authenticated and largest collection [illegible]concerning the profits of American business enterpris[illegible] numerous non-regulated industries that has been made. Its scope and representativeness are impressive when subjected to detailed examination.

(1) In respect to the time covered, ten years is long enough to permit considerable shifts among investments—though of course, a longer series of records would be better. According to the National Bureau's chronology of business cycles, the decade 1919–28 contains 68 months of general

business expansion and 52 months of general business contraction. The durations of expansions and contractions work out 57 and 43 per cent. During the full period covered by our American chronology (1855–1933), the corresponding figures are 53 per cent for expansion and 47 per cent for contraction. Of the three contractions in 1919–28, that of 1920–21 was very severe, that of 1923–24 was of average intensity, and that of 1926–27 was decidedly mild. The expansion of 1919 was feverishly rapid; that of 1921–23 was of more than average vigor; that of 1924–26 was quieter, and that which began in 1928 did not run to grave extremes by the end of the year, except in stock-exchange and urban real-estate operations.[11] On the whole, I think the character of the period gives the sample a slight bias in the direction of over-average profits; but it might be difficult to select any other decade that is more representative of 'long-run' conditions.

(2) A second question concerning the character of the period concerns, not the volume of current earnings, but the ratio of profits to book capital. Doubtless some of the corporations in the sample were in existence before the War. If these corporations did not 'write up' the value of their fixed investments when prices rose in 1915–20, then profits in 1919–28, expressed as percentages of capital invested, would tend to run on high levels. On the other hand, the sample doubtless contains corporations that were established or reorganized with a changed capitalization at various times in 1916–18, when the general level of prices was high. It may contain other corporations that 'wrote up' their fixed investments in 1919–20 to match the advance of prices and earnings. If these corporations did not 'write down' their fixed investments after prices fell in 1920–21,

[11] These judgments are based upon the National Bureau's as yet unpublished studies of a large number of economic time series.

then profits in 1921–28 would form relatively low percentages of the capital invested. How important these two distortions of the percentages are we do not know. That they tend to offset each other is clear, but there may remain a net bias towards high profit ratios or towards low profit ratios.

(3) The lists of identical corporations contain both enterprises having net incomes and enterprises having deficits. But Professor Epstein points out that the proportion of corporations having deficits in most if not all of his lists is substantially lower than the proportion among the corporations reporting to the Internal Revenue. If the latter vastly larger body of returns is fairly representative of average experience, then the present sample tends to over-state profits.[12] Further, the supplemental lists of non-identical corporations contain only enterprises having net incomes and tend to over-state profits for that reason.

(4) The use of reports from the same corporations year after year reduces one grave doubt concerning the meaning of the variations in profits as reported in the official *Statistics of Income*. It is true, as said above, that the continuing life of an enterprise is not incompatible with very consider-

[12] See Professor Epstein's critique of his materials in Ch. 43. Colonel M. C. Rorty points out that the use of lists of identical corporations over a series of years has a bias towards exaggerating profits, because it excludes all corporations that go bankrupt within the period covered. When the period extends over a decade, this factor becomes of considerable moment, particularly in the field of trade where, as Professor Epstein remarks, the average life of corporations is relatively short. On the other hand, where fixed investments are large, corporations of considerable size are seldom abandoned, though often reorganized. It may be, however, that large corporations which suffer very heavy losses are more likely to be reorganized under new names and so not to appear in a list of 'identical' concerns.

Of course Professor Epstein's sample excludes concerns coming into existence during his period as well as concerns going out of existence. This exclusion may tend to depress the average profit rates. Compare the remarks of Frederick C. Mills concerning the probable bias in a smaller sample of identical corporations used in his *Economic Tendencies in the United States* (National Bureau of Economic Research, 1932), footnote pp. 144–5.

able shifts in the nature of the business carried on. But only those changes in industrial activities which go so far as to call for the shifting of corporations from one group in the classifications used to another group can affect seriously the conclusions drawn. In Chapter 46 Professor Epstein shows that there is no reason to fear grave distortion on this count.

(5) The industries covered include a wide variety of manufacturing; ten branches of retail and eight of wholesale trade; mining and quarrying of coal, oil, metals, stone, salt, clay, sand and gravel; banking of several types and other financial business, except life insurance. No data are presented for farming, construction work, transportation and other public utilities, the practice of professions, commercial amusements, hotels and restaurants. Considerable as is the range of the data, they cannot, of course, be made to reveal the average rate of return upon capital in the United States, except upon the assumption that this average is nearly the same whether the investment is made in one industry or in another. That is an assumption which Professor Epstein shows to be even more untenable than has been supposed.

(6) How high a standard of accounting prevailed among the corporations preparing the returns utilized by the Department of Commerce in its *Source-Book for the Study of Profits* there is no way of telling. Probably the larger concerns employed skilled auditors; many of the smaller ones may have relied upon their own rather simple bookkeeping. But the earliest of the returns included cover 1919. By that time the Federal income tax upon corporations had been in operation for several years and had brought the advantages of proper depreciation allowances home to all but the most careless of business men. As compared with the data contained in the *Statistics of Income*, Professor Epstein's results are better in that he includes

two substantial items of non-taxable income—dividends of other corporations and tax-exempt bonds. As said above, careful analysis of a portion of the sample indicates that these items increase net corporate incomes by about one-ninth.[13]

(7) Another feature of the sample that bears upon its representative character is pointed out by Professor Epstein. All four of his lists of 'identical' corporations show an average size larger than that of the corresponding groups shown by *Statistics of Income.* For example, the 2,046 corporations in his manufacturing list make up only 2 or 3 per cent of the manufacturing corporations reporting to the Internal Revenue in 1919–28, but they receive from 57 to 66 per cent of the total income. Similarly, the list for trade represents less than 1 per cent of the number of reporting corporations, but about 30 per cent of the income reported in the official income-tax document. The supplementary use of 'non-identical' lists of small corporations engaged in manufacturing and trading redresses the balance in a degree. But Professor Epstein makes clear that his sample represents the earnings of large-scale business more fully than it represents those of small-scale business.

[13] If the sample included all corporations much double counting of income would result from the inclusion of inter-corporate dividends, just as double counting in the opposite direction would result from the subtraction of the deficits of corporations that lost money in any year from the profits of corporations that made money. Since the whole sample includes only 3,114 corporations in the 'identical lists', plus at most three or four thousand a year in the 'non-identical' lists, and since 300,000 to 500,000 corporations have reported to the Internal Revenue in successive years from 1919–28, it may seem that double counting of income and losses cannot give rise to serious error. But the proportion of corporations that both receive and pay dividends is probably far higher among the 3,114 corporations of the 'identical lists' than among the three to five hundred thousand that report, and an appreciable sum of profits may appear twice in the sample. Whatever double counting there is does not affect profit rates; for the value of stocks owned by the corporations in the sample are included in the investments upon which the profit rates are figured.

(8) It may not be superfluous to add that data concerning the profits of business corporations as going concerns do not show what returns individuals receive upon their investments in corporate shares. To establish upon a statistical basis any conclusions concerning investors' profits would call for data different from those utilized here and a different method of analysis.[14]

[14] This distinction, mentioned in an earlier footnote, between the profits of investors in a business and the profits of the business itself seems to be overlooked so often that it requires elaboration.

In good years, the dividends paid to stockholders are likely to be smaller than the current profits of the business; in bad years dividends are likely to be larger than profits; sometimes a corporation pays dividends while it is incurring losses. Besides his dividends, a stockholder may receive 'rights' to subscribe to new issues of stock upon favorable terms—'rights' that he can exercise or sell as he thinks fit. On the other hand, the stockholder may be assessed upon the value of his shares, and so have a negative income from them. Further, the stockholder may make profits for himself, or suffer losses, from the purchase and sale of shares. He may have the value of his shares wiped out wholly or largely by the liquidation of the company or the sale of its assets; on the other hand he may have the value of his shares much enhanced by an amalgamation on favorable terms. Thus the sums received by the stockholders from their investments in a corporation's shares differ from the profits of the corporation and cannot be ascertained from the corporation's books. Likewise the amount invested by the stockholders in their shares differs from the amount invested by the corporation in its business, except perhaps when the corporation is launched or when there is no buying and selling of shares.

Since neither the investments nor the net gains of the stockholders equal the investments or the net profits of the corporation, it is only by accident that the rate of profits made by any investor equals the rate of profits made by the corporation. Suppose that a corporation starts with a cash capital of $100,000, makes profits of $20,000, distributes $10,000 in dividends, and that its shares rise from par to 200. If one of the original stockholders sells at that price, he receives 10 per cent upon his investment plus a capital gain of 100 per cent; but if conditions remain unchanged the new holder will get only 5 per cent upon *his* investment. Suppose instead that our corporation makes profits of 2 per cent, pays dividends of 1 per cent and that its shares fall from par to 20. Then the original stockholder who sells gets a meager dividend and suffers a heavy capital loss; but the new stockholder who buys at 20 may get 5 per cent upon his investment, like the man who pays 200 for shares in a highly profitable business. Of course the profits and losses of individual investors in business enterprises are related to the profits and losses of the business enterprises in question; but this relation is far from simple.

What, then, can be learned from this notable collection of data covering the profits of business enterprises?

Though the data do not suffice to show the average long-time earnings of capital in the United States, they throw some light upon that question which many ask and no one can answer with full confidence. Professor Epstein shows conclusively that, within the period and the industrial field covered, his sample is biased in the direction of over-stating

Colonel Rorty offers the following observations:

"The question of the average earnings from diversified investments in the common shares of legitimate business ventures is one that has been debated at great length by investment experts. The majority opinion among such experts is that, even with somewhat more than average skill in selection, a diversified list of investments at 'par' in new ventures will tend to earn less, rather than more, than an equal investment at average market prices in the shares of seasoned companies—or, in other words, that the premium usually paid, above book values, for seasoned shares is no more than an offset to the reduced risk. With respect to seasoned shares, there is also a similar majority opinion, supported by statistical studies, to the effect that the high rates of earnings on common share investments, so extensively advertised during the 'new era', were based on the fallacy of choosing the especially successful companies of a given date and calculating the results from prior investments in such shares. Selections made (as in practice they must be made) of the promising and popular issues of prior dates, when carried forward for a term of years, have shown radically lower rates of return. Long-term studies, covering periods of from 30 to 50 years prior to 1930, indicate that common shares in the United States could be bought, at normal average market levels, to *promise* returns in cash and stock dividends, rights, etc., averaging between 6 and 7 per cent, before allowance for losses through failures, reorganization and other major adverse developments. Opinions and experience as to the latter losses vary widely. Barring purely speculative profits, or profits due to extraordinary skill in selection, there are, however, few qualified observers who would count on a net return in excess of 6 per cent, and there are many who would set the net figure at 5, or even 4 per cent. These reduced figures correspond to estimates of from 1 to 3 per cent per annum for major losses which are generally unreported in income tax returns and current corporation accounts.

So far as skilled estimates may be relied upon, the preceding figures seem to indicate the range within which the true long-term return on investments in corporation equities may lie, whether such investments be made at 'par' in new ventures, or at a normal average market in seasoned issues. And with very minor adjustments, if any, they would seem to represent, also, the true long-term earnings on the actual investment in corporation equities, after allowance has been made for all reported and unreported losses."

average profits. As said above, the years 1919–28 appear to have been on the whole slightly more favorable to profit making than an average decade drawn from the last eighty years of American experience. More important is the fact that corporations having deficits are not included in the supplemental lists of small 'non-identical' corporations and are under-represented in the lists of large 'identical' corporations; for corporations that survive for ten years or more represent successful, or at any rate large-scale, business rather than average business. Another factor that lifts Professor Epstein's figures for profits above the official returns is the inclusion of dividends from other corporations and interest on tax-exempt bonds. Of course this inclusion is a merit in the sample; but it may well be that large corporations receive a larger percentage of their gross income from such sources than do the under-represented small corporations. If so, that fact does not affect profit ratios; for security holdings make part of the base upon which these ratios are computed.

Unfortunately, we have no means of determining just how much the averages yielded by the sample over-state profit rates. Of course that could be told definitely only if we knew the average long-run rate of earnings upon capital for all enterprises. Comparisons with other samples do not settle the point, but they are interesting. The grand average rate of return which Professor Epstein gets for his 3,144 'identical' corporations in 1919–28 is 9.2 per cent after Federal taxes are deducted. This figure is substantially lower than the average derived by Mr. Sterrett from his small but interesting pre-War sample, namely 13.67 per cent. It happens to be just the same as the average derived from the National Bureau's collection of audit reports for about 700 corporations in 1927–29. It is substantially higher than the average which Professor Epstein himself gets from

the official income tax data for all corporations engaged in manufacturing, trade, finance and mining in 1924–28, namely 6.2 per cent after the deduction of Federal taxes.[15] But even this comparison with the average earnings of over 300,000 corporations for five years does not show how far 9 per cent is above the 'true' average earnings of business enterprises. The five years 1924–28 were a relatively favorable period for profit making—slightly more favorable than the full ten years covered by Professor Epstein's study. The corporations engaged in manufacturing, trade, finance and mining that reported to the Internal Revenue are a changing list varying in number from 315,340 in 1924 to 359,992 in 1928. Of these changing corporations the vast majority are small concerns. In small corporations the accounting is often defective. On the one hand, allowances for depreciation may be inadequate; on the other hand, part of what should be reckoned as profits may be paid out in salaries. The capital on which the rate of earnings is reckoned excludes capital represented by funded debt. If funded debt be added to capital and interest payments to income, the average returns are reduced a trifle. This new figure for Epstein's 3,144 'identical' corporations after Federal taxes are paid comes out 9.0 per cent in 1924–28, while the corresponding figure for the changing list of corporations reporting to the Internal Revenue comes out 6.1 per cent. And there we must leave the problem.

However, too much stress can be laid upon the search for the 'true' average rate of business profits. If we knew that missing figure, we should have to say that it gives a most inadequate representation of the facts of greatest significance to business men and to the community as a whole.

[15] See Table 1 in Ch. 2. The corresponding figure for Professor Epstein's 3,144 'identical' corporations is 9.4 per cent.

More important than the precise arithmetic or geometric mean of earning rates over a long period of time are the facts that the profits earned by business enterprises as a whole fluctuate violently from year to year, that in every year the returns to different enterprises cover a range running from very high profits to very heavy losses, that certain industries remain relatively profitable and others relatively unprofitable for years at a stretch, and finally that business enterprises stabilize the disbursement of income to individuals in some degree by paying out dividends substantially greater than current profits in bad years.

In a vague and general way these facts have been surmised. But if we are to have the type of knowledge that is most useful to investors, to business executives, to bankers, to public commissions and courts concerned with regulating rates of different types, to accountants, to economists, to legislators and to government officials, we must replace our vague and general impressions as rapidly as may be by definite measurements. This volume makes a significant advance from the realm of personal opinion towards the realm of established fact. The materials here analyzed constitute the largest collection that has been published of well-authenticated data concerning the profits of the same business enterprises over a considerable period of years. Within their field, the figures show definitely the wide differences in the average profits made by numerous branches of business, the persistence of these differences over a period sufficiently long to admit of large shiftings of investments, the range covered by the profits of individual enterprises in numerous industries, the comparative profits of large, middle-size and small enterprises, the violent fluctuations of profits from phase to phase of business cycles, the differences between profits on the stockholders' equities and the

returns upon this equity plus funded debt, and the differences in profits before and after the payment of Federal taxes.

The findings presented here can be put to many different uses and construed in various ways. One of their merits is that they raise as many questions as they answer and indicate what further work needs to be done in the field. The publication of Professor Epstein's inquiry should stimulate and guide the collection of larger samples of data concerning profits and the more thorough analysis of existing data.