CHAPTER 47

PROFITS AND THE REGULATION OF PRODUCTION

1. DIVERSITY AND UNIFORMITY

The various statistical analyses of the preceding chapters have established certain facts which have a bearing upon economic theory and economic policy alike. To these broader implications of our data we have thus far paid but scant attention, preferring to let the several findings stand by themselves, quite apart from whatever economic and social conclusions might follow from them. But in this concluding chapter we may draw together the main threads that have been spun at rather full length throughout the preceding pages and see in what direction they seem to lead.

In this resumé, attention is first to be called to the striking corroboration that the investigation affords of the presence of uniformities amid the wide diversities of economic phenomena. This tendency has been remarked by other investigators, notably by Mills in his *The Behavior of Prices*. Our data clearly confirm the view that, while the variations in economic data are so great as to preclude the quasi-mechanical treatment or prediction of individual events, out of the observation of a sufficient number of diversities, definite and significant uniformities emerge. To the superficial observer, economic phenomena either entirely defy analysis: that is,
seem to be characterized only by diversity; or else, present a specious uniformity: that is, when biased samples are viewed, fail to disclose the wide variations that exist. But neither of these simple conclusions is in most instances valid; certainly neither is in the present instance. The two significant facts remarked by Mills in his conclusion with respect to the system of prices stand out clearly with respect to the behavior of profit rates; on the one hand, the presence of the widest diversities; and, on the other hand, the prevalence of "just those uniformities for which the scientist searches in attempting to reduce masses of facts to understandable terms".

We need not here review our findings in formal summary;¹ one or two illustrations of the presence of diversity and uniformity alike in the realm of business profits will suffice. It will be recalled that during the ten years 1919–28, the average earnings rates upon investment of our 2,046 large manufacturing corporations series varied between 2.9 and 18.3 per cent; and that in all these years a wide diversity was present in the individual earnings rates of the 2,046 companies. Yet despite these broad diversities, in every one of these ten years at least 45 per cent of the corporations earned over 10 per cent. In each of the five years 1924–28, the median corporation earned either 12 or 13 per cent (in one year, 13.6 per cent). And for the same five-year period, the earnings rate of the corporation at the upper quartile was in every year 18, 20, or 22 per cent. Similarly, in all years some large corporations earned profits at low rates and some at high rates; and in all years the smaller enterprises show a similar diversity in earning capacity. Yet consistently, year after year, the larger enterprises as a class show lower earnings rates than the smaller ones as a class.

¹ A concise summary has appeared in Ch. 1, sec. 4.
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In the parallel presence of uniformities and diversities such as these lie both our hope of understanding and our difficulties in controlling the economic system. To some of these difficulties we shall revert later in this chapter.

2. THE REWARD OF CAPITAL AND THE REGULATION OF PRODUCTION

It was indicated in Chapter 1 that from the point of view of economic principles, one of the most valuable contributions a comprehensive study of earnings and investment data could make to the understanding of profits is to determine whether 'in the long run' the rates of return upon capital approach an equality among different industries. Our findings (Ch. 3) are that whatever might happen under certain assumed conditions, actual profit rates in different industries manifest little tendency to become equal. There are, to be sure, uniformities in the distribution patterns from year to year (see the diagrams in Appendix D); but nothing like even a roughly uniform rate of return among different industries results over a period. How good are the data on which this very definite conclusion rests, and is the period considered a 'long run'?

As to the first question, the reader who has not read Chapters 43–46 must do so if he wishes to form a complete conclusion for himself. Most readers who have already done so will doubtless agree that our 2,046 large manufacturing corporations series is for the present purpose a rather representative sample of corporate activity. The fact that it is a sample of identical corporations gives it greater stability, that is, makes it less subject to erratic time fluctuations, than would otherwise be the case, and in some ways ought to aid rather than handicap an effort to disclose whatever 'tendency towards uniformity' exists in the actual world of
business. The ten-year data of these 2,046 corporations (amounting in all to 20,460 'corporation-year cases'), it is to be remembered, were tabulated according to the Marshallian precept: “from the aggregate profits of the successful [must be subtracted] the aggregate losses of those who . . . failed.” Marshall included producers who have “perhaps disappeared from the trade”, that is, withdrawn from business entirely, and the data for these corporations in each industry we could not obtain. But the scale and character of industry have changed materially since Marshall wrote. Today few very large enterprises that fail to earn profits for several years really go out of business entirely; they merge, reorganize or continue an independent existence but alter the character of their production, that is, shift to new products and activities (Ch. 3). All losses incurred by any of our 2,046 going concerns—and in time of depression, the amount of such losses was substantial—were subtracted from the net gains of the companies earning profits, and the resulting net income figure was then related to the combined aggregate capital of the several corporations. When so treated, the earnings rates for the 73 manufacturing industries, as represented by our samples, show no equality whatever for the ten-year period as a whole.

As to the question, is a ten-year period long enough, something has already been said in Chapter 3. It may be pointed out that the period 1919–28 includes several cycles. But an even longer period is available in the data of our 71 manufacturing companies. These cover a thirteen-year stretch, 1919–31. This series, it will be recalled, is a tested set of data closely representative of the larger series during the first ten of these 13 years (Ch. 6). We are unable to

divide it into minor industrial groups, but we may be certain that if it could be so divided the discrepancies between minor groups would be even more marked than those between major groups; for our experience with averages in general and profit rate figures in particular indicates that the more purely homogeneous each group of items becomes, the greater becomes the average deviation of the several sets of items from the mean or median value of all the items taken together.

And among major groups, this thirteen-year series evidences no uniformity of earnings rates. A thirteen-year period, however, affords much opportunity for the exhaustion and withdrawal of fixed capital, and for the investment of new funds in this, that or the other direction. If it be contended that more than a ten- or thirteen-year period is essential for the tendency of profits towards an equality to work itself out in practice, then the ‘long run’ becomes, to say the least, a somewhat unrealistic concept as applied to the problems of modern industry. Economic theory is fast losing its character as a study of ‘economic statics’; but it can scarcely afford to limit its consideration of ‘dynamics’ to phenomena that take place only over twenty-, thirty- or

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See, in this connection, the report on depreciation rates, *Depreciation Studies*, published by the Bureau of Internal Revenue (January 1931), in which normal depreciation rates on various types of new industrial equipment are shown to run in many instances as high as 10 per cent annually, thus providing for the replacement of the equipment in ten years’ time. There are, of course, many variations from this figure, some types of equipment carrying rates of only 5.0, 6.6 or 8.0 per cent, others carrying rates of 12.5, 16.6 or even 33.3 per cent; but in most industries much machinery and equipment require replacement in ten years' time or less. Furthermore it may be noted that not all of the capital of the industries of our samples (either the larger ten-year series or the smaller 13-year one) was new in 1919; and that much of their capital, therefore, could have been withdrawn (i.e., not replaced as it wore out) in far less than ten years following 1919. Replacing many units of equipment, in other words, becomes (at the time of replacement) a variable, not a fixed, expense as of the year in which the replacement is contemplated.
fifty-year periods. This is not to say that it would not be desirable to have a twenty-year series of profit rates in different industries. But none seems necessary to justify our present conclusions, which, as we have remarked elsewhere, are in some respects the more firmly established just because they are for a more limited period. The reader who seriously questions these general statements should, if he has not done so, read footnote 3 just preceding, and also examine the discussion in Chapter 3.

If we accept the conclusion that no equalization of profit rates between industries takes place, what does this then signify with respect to the functioning of the industrial system? Inevitably, it means that competition, as a regulator of the flow of productive resources, is a less efficient instrument than we have traditionally believed. It means that the mechanism of price and profit, which is supposed spontaneously and automatically to increase production here and decrease it there, works haltingly; that is, that long 'lags' and many 'maladjustments' occur. These lags and maladjustments are apparently present even in prosperous years. Then, however, they are not so remarked because they are less striking than in periods of severe depression.

Thus the goods which society wants, it gets, in normal years of prosperity, at least after a fashion; but competition between industries in no sense brings the rewards of the groups of producers who supply these different commodities to anything like a common level. These diverse earnings rates of different industries cannot be regarded as differentials due to the 'rent' of superior business abilities, or we should have to assume either that all the producers in some industries possessed greater managerial skill than all the producers in others; or, that the average degree of business

*Cf. Ch. 3 and 46, on the difficulties of classification that would attend the analysis and use of any such extended series.
ability is markedly greater in the industries of higher earnings rates. The first assumption we know to be unfounded because of diversities in the earning power of different enterprises, and the second assumption seems very unlikely. Nor can the element of difference in either 'risks' or 'uncertainties' in various industries account for the persistent differentials in earnings rates; but this matter we have discussed sufficiently in Chapter 3.

3. FAILURE OF INVESTMENT TO FOLLOW MARKET DEMAND

Just as profit rates fail to approximate equality over periods of ten or thirteen years, so do they often fail to shut off the investment of new capital in fields already overcrowded. In more than one-sixth of the 73 manufacturing industries in which we analyzed the absolute course of sales, investment and income over the period 1922–28, it will be recalled, capital investment increased faster than did the volume of sales, in spite of the concurrent decline in profit rates in these industries.

We need not here discuss the changed character and definition of the entrepreneur as a productive factor in modern large-scale industry; but it is clear that Francis A. Walker's concept of the rent of individual talents has slight applicability to the problem of the profit rates earned upon the present invested capital of industries that include such enterprises as the United States Steel Corporation or the General Electric Company, not to mention hosts of smaller but still almost entirely publicly-owned concerns. The common stockholders, numbering hundreds of thousands in some industries, supply the bulk of the capital used; and no question of direct personal talents exercised by 'owner-managers' enters, except where the tantième (or bonus system) for the payment of the bulk of an executive's remuneration is employed. In this country, even in the cases of General Motors and Bethlehem Steel, bonuses of this sort constitute but a very small fraction of corporate net income. To speak, on the other hand, of the mass of common stockholders as exercising 'managerial judgment' in 'delegating' the direction of their capitals to others is a mere sophism, or at best, a legal explanation of the corporate phenomenon. Whoever has disposed of a proxy, whether he has returned it to the corporation or thrown it in the waste-basket, is aware of the correctness of this statement.
Several explanations of this condition present themselves. First, undoubtedly the decline in the general rate of return was not known to the entrepreneurs in every industry where it was taking place. Second, in several industries even the lowered rates of profit prevailing at the end of the period were far above the cost of new capital, either in the sense of borrowed capital or of an imputed interest rate upon the capital reinvested out of earnings. Of course, these fields of investment still seemed not to be overcrowded according to current standards of profitableness.

Two observations on this situation, however, are to be made. That the rate of earnings declined in several industries in which the investment of capital took place too rapidly (‘too rapidly’ in that it greatly outran the growth of sales volume) indicates that some competitive mechanism did automatically function. That is to say, a certain amount of ‘unconscious control’, in F. M. Taylor’s phrase, was exercised upon profit rates. This, however, by no means arrested the investment of new funds which, in many instances at least, were not at all needed in these industries. But neither the actual cost of new capital (both long-term and increased short-term borrowings) nor the imputed interest rate upon the funds ‘ploughed back’ into these industries, when deducted from the declining profit rates in question, left as large a yield upon the shareholders’ equities in these several industries as could have been received upon the reinvested funds had they been diverted to other industries in which the profit rates were either actually higher or increasing. In this sense, it must be repeated, the flow of investment funds by no means followed the competitive channels indicated by economic speculations about what would happen if business men knew the conditions prevailing in every trade, if investment encountered no obstacles
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and if capital could be withdrawn readily from relatively unprofitable trades.

A third reason for the failure of these declining profit rates to check the flow of capital into the industries in question is found in the diversity of the earnings rates of individual enterprises. Even where some entrepreneurs do know that the trends of general sales and general profit rates are tapering off, or are actually declining, the willingness to make new commitments exists just because it is also well known that in any given industry individual fortunes vary widely. Any particular corporation may see that the sales curve is tapering off, yet, confident that it can not only maintain but actually increase its proportion of the total business done, it erects new plants or extends old ones. Thus what would be a desirable policy of expansion from the social point of view (assuming that no markedly improved or unique product that could not be manufactured by other producers results) is ignored; social and individual objectives here part company. Whether an expansion policy thus decided upon is desirable even from the individual point of view, of course, becomes clear only later. It may prove desirable or not; but because there is a possibility that it may, the uncertainty is chanced. The several sales and investment figures of the various industries presented in Chapter 7 and in the various chapters of Book II afford ample evidence of reckless policies of plant expansion on the part of many corporations in a number of industries.

To return to the relation between our findings and the traditional doctrine of the tendency of profits towards an equality: no doubt investors prefer a higher rate of return upon their capital to a lower rate, 'other things being equal'. In this very general sense there exists a 'tendency' towards an equalization of profit rates—not only among the different enterprises belonging to an industry but also among
all the business enterprises in which investors might place their capital. But this 'tendency' cannot equalize profit rates in practice unless investors know what earnings their capital would realize in the near future if put into different enterprises. No economic theorist supposes that investors possess such knowledge in definite form. Hence no theorist supposes that profit rates are really equalized in fact. The serious matter is that no theorist can say how much or how little investors know about differences in profit rates. Hence no theorist knows how effective is the 'tendency' towards the equalization of these rates. On that important issue no one can say anything definite until he resorts to empirical investigation. What the present study of American corpo-

6 Note, for example, how cautiously John Stuart Mill states the 'tendency' in question: "On an average (whatever may be the occasional fluctuations) the various employments of capital are on such a footing as to hold out, not equal profits, but equal expectations of profit, to persons of average abilities and advantages." Principles of Political Economy, Book II, Ch. XV, p. 412 of Ashley's edition.

Needless to say, we can get no statistics of "expectations of profit". Nor can we segregate among investors "persons of average abilities and advantages". Presumably Mill's statements are valid under the conditions which he had in mind. But the fact remains that, under actual conditions, wide differences in the average rates of profits received by enterprises engaged in different branches of trade maintain themselves with little change for periods covering a decade or more.

The present findings do not conflict with those of Professor Horace Secrist's recent book, The Triumph of Mediocrity in Business (Ann Arbor, 1933). Using data for individual enterprises, Secrist arrays their profit rates on the basis of average size in initial periods of two or three years, follows the average rates for groups at given positions in his arrays through successively widening spans of years, compares these average ratios with those for the entire frequency distributions in successive periods, and finds (1) that the ratios which were initially low or high relatively to the mean tend to remain low or high relatively to the later means, but (2) that the ratios tend to diverge from the means by relatively smaller margins as longer and longer periods are brought under observation. Could the data underlying the present investigation be subjected to an elaborate analysis of Secrist's type, they might well show a tendency towards 'regression' in his sense. But that finding would not diminish the significance attaching to the demonstration offered above that the dispersion of the average profit rates in different industries maintains itself with slight change over periods.
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Ration earnings data contributes a series of measurements showing how wide and how enduring are the discrepancies among the profit rates actually realized over a decade or more by thousands of business enterprises engaged in a wide variety of money-making ventures. On the basis of this showing, the 'tendency' towards equalization of profit rates is not sufficiently strong to prevent differences exceeding 100 per cent between the average profit rates earned by considerable groups of corporations from appearing and maintaining themselves over a full decade.

4. 'BUSINESS PLANNING' AS A STATISTICAL PROBLEM

What has been said concerning diversity and uniformity, together with what has been remarked concerning the fundamental weakness of competition as a regulator of production and productive capacity, indicates both the need for and the manifold difficulties of attempts deliberately to control the apportionment of capital and the rate of profit in competitive industry. It cannot be too strongly emphasized that the problem of control is not one of 'industry' but of 'industries'. Any agency that attempted to supplement the existing defective, lagging mechanism of unconscious competitive regulation with a completely conscious scheme of control would have to deal with at least one or two hundred separate industries. Our data for Manufacturing, Trade, Mining and Finance were divided into 106 fields; as long as the available data cover. It is important practically and interesting theoretically to know that the profit rates both of fortunate and unfortunate enterprises drift towards mean rates in the long run rather than away from them. It is even more important practically and quite as interesting theoretically to know that despite this 'triumph of mediocrity in business', wide differences in actual profit rates remain substantially stable year after year.

1This section was written before the passage of the National Industrial Recovery Act in June 1933, but the writer sees no occasion to alter the text.
and the wide diversities between them were noted. Doubtless many of these 106 fields—for purposes of this kind—would need to be subdivided still further; and as before remarked, all of our analyses have indicated that after the subdivision of larger groups into smaller groups, the ranges of variation never diminish but always increase. Even assuming that adequate data were available in time to be of use during a cyclical upswing in general business, the problem of deciding in which industries the expansion was going too far, and what the repercussions of a damper applied to some industries would be on each of the various other industries involved, would be extraordinarily difficult. Even in any one industry, the diversities of earning capacity, productive capacity and productive activities between different enterprises would present problems of accounting, cost accounting and production control of a varied and difficult character. Yet if competition alone does not regulate the economic machine as adequately even in normal years as we have been accustomed to believe—and it seems clear that it does not—then some attack upon these problems may be undertaken in the not distant future.

But one of the most important results of our findings is to suggest, let it be reiterated, that in any such attack no general average figures will suffice. The many diversities and uniformities alike must be marshalled and measured, both recognized as related and essential parts of any true industrial picture. If, for example, the comparative growths of sales and investment in all 73 manufacturing groups combined are examined, no appreciable discrepancy between

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This is not to say that no attempts at central planning or control should be made. The writer, in fact, has elsewhere urged that partial experiments in this direction be undertaken. The purpose here is not, however, to undertake any full discussion of business planning, but merely to indicate how complex is the situation that any comprehensive national efforts at such planning would have to face.
them appears. One might say that "supply of capital and demand for products over the period 1923–28 approximately kept pace"; or, that "no undue expansion of manufacturing facilities is discernible". But entrepreneurs do not invest capital in manufacturing as a whole, nor are laborers employed by, or unemployed in, 'industry in general'. Business decisions are made, commitments are undertaken, poor adjustments occur, between specific industrial groups, enterprises and commodities. General averages at best give only a notion of 'general drift', and the 'general drift' of all industries averaged together may in some respects be not the drift of the most important industries at all—important, that is, in their potential power to contribute to an upsetting of the economic equilibrium. Whether the question of industrial stabilization is approached from the point of view of the control of credit or of the allocation of physical production facilities, the need for more than merely average figures is exactly the same.

9 The increase in the 1928 figure for sales in our 2,046 large manufacturing corporations over the 1923 figure is 25.2 per cent, and that in investment is 25.9 per cent.

10 Recent discussions of monetary and business cycle theory are beginning to stress this point of view. Cf. Hayek, who aptly remarks: "If monetary theory . . . still attempts to establish causal relations between aggregates or general averages, this means that monetary theory lags behind the development of economics in general . . . I would even go so far as to assert that, from the very nature of economic theory, averages can never form a link in its reasoning" (Prices and Production, pp. 4–5; London 1931). The latter statement may be too sweeping, but the first sentence is significant without question. Diversities of the sort that the present investigation has sought to measure, as well as of the kind that Hayek emphasizes, have been also stressed by Wesley C. Mitchell, in both the original edition of Business Cycles (1913) and in his later writings; likewise, F. W. Taussig, J. M. Clark, W. L. Crum and Horace Secrist, as well as other scholars, have called attention to the matter, while F. C. Mills, in his work on prices, has reviewed in that connection the entire question. The expression 'general drift' as applied to the utility of index numbers is employed by Taussig.
5. THE PUBLICITY OF CORPORATE ACCOUNTS

Whatever the prospects for an improved control of industrial activities, it is at least clear that a primary essential is currently available information about the sales, investments and earnings of our various industries. The business world does not have adequate information of this kind now. And unless the Government should annually assemble and release, either through the Department of Commerce or the Treasury, sets of data at least as elaborate as those on which the present investigation is based (preferably more so), or unless all businesses suddenly become willing periodically to divulge in detail the results of their operations, we shall not have any such information during the next cyclical upswing.

The person who has not worked in the field of corporate earnings does not realize the paucity of published financial data. In hardly an industry are complete data released upon production, earnings, investment and the like by more than a very few companies. Even some of the leading corporations do not publish sales figures. Relatively few give with frankness their annual charges to both depreciation and obsolescence accounts. And probably not more than a dozen have released regularly, since 1919, their figures upon all of the items just enumerated. These statements, of course, have no reference to the railroad and public utility fields, in

"The writer, in a study carried out for him by Miss Lillian Epstein at the National Bureau of Economic Research, endeavored to check various results of his Government study by smaller samples of the same industrial groups taken from published corporation reports. Fifty leading companies, in various manufacturing and trading industries, were studied. For only 15 out of these 50 corporations could continuous series for sales and capitalization figures be had over the period 1919-28, while the number furnishing depreciation charges and related data together with sales figures was even smaller."
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which state or Federal authority compels the full publicity of accounts.

Why such publicity should not be forthcoming it is difficult to see. It would cost the corporations nothing, nor would it injure them. The advent of the modern trade association has done much to free the business world from the fear that trade secrets will be obtained by competitors. Several trade associations now collect confidential data from their members. As to why this practice could not be extended, and the data made available not only to all members of the associations but to the members of all other industries and to the general public as well, it is again difficult to give any convincing answer. Our concept of what constitutes an industry 'affected with a public interest', is constantly widening, and it would surely be a small price for the competitive system of private unregulated enterprise to pay for the privilege of continuing its existence. The country to require of it a full publicity of industrial accounts, rendered either in semi-standardized manner or with such completeness of detail as to enable adjustments that would permit one set of data to be assembled or compared with others.

For it is to be noted, in conclusion, that a competitive system of corporate enterprise would not be so wasteful as is often assumed, were it possible to keep industry operating approximately at capacity. While the mortality in certain fields, notably retail trading, is high, the loss of social capital occasioned by business ineptitude is doubtless not nearly so great as the misleading statement that "half the corporations lose money" would imply. To begin with, a money loss to the individual business unit may not always mean an economic loss to society; but even assuming that it does, there is no reason to believe that a large fraction of corporate enterprises really earn either no profits or profits
at such low rates that they can scarcely manage to get along. Many close corporations, as we have earlier indicated, are really partnerships in all but a legal sense; and their owners often earn good livings out of them and efficiently produce goods and services upon a small scale, even though they report no net income for income tax purposes. The larger corporations, on the other hand, carry on the great bulk of their activities at a profit—in most years, 90 per cent or more of their invested capital earns a net income. To be sure, the receipt of a profit is not always synonymous with efficient production; but in the absence of purely predatory activities, it may be assumed that the ability to market goods without loss indicates that the producer is at least successfully satisfying the demand of some portion of the community.

In other words, the “great numbers of enterprises which are dragging along with a very low rate of return on their property”, as Crum has put it, by no means constitute the bulk of manufacturing or trading companies, especially if allowance is made for variation between the accounting practices of the close corporations and those not closely owned. It is only fair to note that Crum was thinking of averages derived from the total data published in the Treasury Department’s volumes, Statistics of Income, which contain no frequency distributions of the earnings rates of individual corporations. And these averages, like so many others, prove to be misleading. Our distributions of individual earnings rates indicate that most fairly large corporations in both manufacture and trade, far from dragging along, in normal years earn over 10 per cent upon their

12 See Ch. 1 and 43.
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investments; and even in years of depression such as 1921, some 70 per cent of such companies earn the equivalent of an interest rate upon free capital. For the enterprises that succeed in remaining in business, Adam Smith's 'double interest' as a customary or satisfactory rate of profit is not at all exceptional. Concerning the earnings rates of the smaller and the 'close' corporations, we have, as has already been indicated, no good figures that are really comparable with those for the larger corporations; but it may perhaps be doubted if most of those which remain in business really earn less than normal interest upon their capital. It has never been supposed that all corporations would earn 'satisfactory' rates of return; for it is through their losses that inefficient enterprises are eliminated from a competitive economic system.

But even from the point of view of a competitive economy, losses of capital that are due mainly to inefficiency of management are one thing, and those caused by lack of correct information are another. Could current data concerning earnings rates, sales, investments and other operating results be made available to all entrepreneurs, whether in one industry or another, whether contemplating new ventures in different fields or the extension of already established ventures in old, many losses might be avoided. To be sure, such information would help only those not too blind to take heed or too confident of their own competitive survival. But fuller publicity of accounts would be a partial step towards better individual business planning at least; and it is one which could be taken by industry itself, were a sentiment for it sufficiently developed. Should the more difficult task of supplanting the competitive system with any type of centrally controlled economy ever be attempted—the many complexities which all such proposals involve,
whether their sponsors are aware of them or not, have been indicated—complete statistical information of the kind mentioned, while not ensuring success, would be the first prerequisite.