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CHAPTER X

METHODS OF STABILIZING PRODUCTION AND DISTRIBUTION

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The Thompson and Lichtner Company, Engineers—Boston

I. INTRODUCTION

During the recent depression, a few manufacturing concerns in nearly all industries maintained almost normal production and employment. This exceptional position in a few cases may have been due to fortunate conditions, but in general the avoidance of appreciable losses and the maintenance of nearly constant employment can be traced to a definite policy adhered to on the rising, as well as on the falling market—a policy based on keen study of the situation and, in a few cases, on scientific analysis of production and of market and banking conditions. Coupled with this, and as an essential feature of it, we find good financial and plant and labor management making for economical production and extensive sales.

Comparatively few establishments found themselves with excessive quantities of raw materials—although there were certain widely advertised exceptions to this rule. On the other hand, the insatiable demand for merchandise late in 1919 and early in 1920, together with the congestion of business channels, especially the railroads, had produced advanced orders of extraordinary volume. These orders led manufacturers to operate at maximum capacity even when the demand suddenly dropped off, so that they had dangerously large stocks of finished products on their hands.

In merchandising the difficulties were similar to those in manufacturing, but the remedies were somewhat different. Excessive purchase orders resulted in surplus stocks and made mark-downs necessary. The saving factor was that the volume of retail sales was maintained throughout the depression with remarkable steadiness. The losses of retailers were therefore confined almost entirely to losses on inventory.

The investigation which is the basis of this chapter took the form not merely of interviewing business executives but particularly of collecting intimate statistical records of purchases, inventories, production, sales, and employment. Of 253 firms approached, confidential statistical data covering a part or all of these divisions were received from 110 concerns, while 94 contributed by correspondence or interviews. Eightyix concerns were called upon personally. Use was made of all this ıformation in study and comparison, although only a small part even f the exceptionally good material was used directly.

The data have been drawn from concerns that are skilfully managed y keen executives, and also from those concerns representing the forward ıovement in industry whose results were attained through a scientific nalysis of fundamental business conditions within the industry and ʼithin the company itself, and who recorded these facts and analyses for ıture use.

The successful company of both these types approached the decline nowingly and liquidated at the peak, thus conserving its gains from the eriod of prosperity. The less skilfully managed concerns were forced, tep by step, to liquidate and reduce prices with an accompanying estriction of activities and with substantial losses in proportion to their ıilure to recognize the trend and inaugurate concordant policies. The rogressive companies aided in shortening the period of depression by bliging the reactionary establishments to fall into line.

From an economic viewpoint the methods of stabilization resolve hemselves into clear cut rules to avoid excess purchases and other xpenditures on the rising wave and to entice sales in the trough. In ractice, however, the manufacturer must formulate guides to govern he extent of his curtailment of expenditures, must develop administrative olicies to cover all phases of the situation, must work out his sales plans ı detail for each phase of the cycle, and must control his production ʼith a view to making the right products by methods that will permit ttractive selling prices and satisfy his employees. It is necessary, there-ore, in the treatment of the subject to take notice of many minor factors hich indirectly tend toward stabilization.

II. MANUFACTURING

Essentials of Stabilization of Production.—Methods of mitigating the xtremes both of booms and depressions are considered in two divisions, ıethods of prevention and methods of relief. For prevention the attack ıust be made during the period of increasing business. Essentials are:

Knowledge by chief executives of principles of economics and of underlying inciples governing business fluctuations.

Accumulation of facts and presentation of data thoroughly analyzed to guide ısiness policies and permit planning and budgeting.

Conservation of assets in prosperity, avoiding undue increase in plant and equip-ent and in dividends.

Management of plant to (a) avoid decrease in unit production, (b) avoid increase unit overhead, and (c) maintain satisfactory labor conditions and steady employ-ent throughout the year.

Avoidance of excess of inventories of raw materials, material in process, and ıished stock.

Avoidance of purchase commitments in excess of financial resources and of reasonably quick use.

Avoidance of excessive sales which result in cancellations.

Service to customers.

To mitigate the effects of depression are needed:

Quick liquidation of inventories and adjustment of prices to replacement values.

Reduction of costs of manufacture, both direct and indirect.

Improvement of quality to enhance demand.

Adoption of selling methods based on accurate analysis of the situation of lines of product that will create demand.

Development of plant and organization for future business.

Part-time operation.

Utilization of profits gained in good times for payments to out-of-work employees.

Relation of Cyclical to Seasonal Movements.—Seasonal depressions are not treated in this report but it may be remarked that the remedies for them are in many cases similar to those applied to cyclical depressions. Among these remedies are planning production well in advance, making for stock, developing proper proportion of staples, reducing selling prices, inducing dealers to order early, developing different lines of products for different seasons, introducing new or improved lines, training operatives in several jobs, and making finished parts—especially those involving low material but high labor costs.

Preventive Measures.—The avoidance of extremes of inflation as well as the forecasting of events to come is essential for the successful manufacturer. There must be a close determination of broad policies, the recording and study of facts, and the practical application of the conclusions to purchases, manufacturing, and sales.

Use and Value of Statistics.—Internal statistics are used as a basis for formulating plans of future activities, to measure the conduct of the business, to forecast sales, production, and purchases, and to coordinate the efforts of the organization. They are generally sent to chief executives and department heads, but many establishments fail to supply these at regular intervals, and again, executives too often give them scant attention. The value of these statistics is in proportion to the amount of study given them. Some establishments give department heads only such statistics as immediately concern them, but the best managed plants give their executives charts showing the activities of the major divisions. In order to draw correct conclusions, detailed data are needed. Many executives demand condensed statistics owing to the pressure of time, but these often conceal valuable information.

The following tabulation gives the subjects analyzed and studied by successful concerns before establishing new policies. The subjects are listed in the order of the percentage of concerns using them.

Graphic charts are best for presenting data.—

Statistical subjects	Percentage of selected establishments using
Production	74
New orders	71
Costs	60
Markets of raw materials and product	21
Unfilled orders	18
Finance	18
Employment	18
Purchases	16
Departmental output	11
Stock of finished goods	9
Consumption of materials in manufacture	9
Cost of living	9
Shipments	9

On these, along with the curves, should be noted any causes of deviation from normal. Charts most commonly used are those comparing production, new orders, shipments, stocks, and unfilled orders. Cancellations should be included. Another chart commonly used compares purchases of materials used in manufacture with consumption of the same materials and inventory by months. This shows whether or not the purchases are running close to the consumption of essential materials and shows pointedly any sharp or extended increases in inventories. Another chart of the financial situation can be prepared from a record of billings, cash receipts, cash disbursements, and bank balances. It shows the trend of the financial status of the company, and helps to control credits.

Use of Statistics in Forecasting Business.—The best managed concerns consult and study continually not only internal but also external data. The character and uses of general statistics for guiding business policy, however, are treated in Chapter XX below, so that no more than this brief mention of the practice need be inserted here.

Organization Needed to Forecast and Carry Out Programs Intelligently.—The concerns which have succeeded in smoothing out the irregularities in distribution and production attribute their success for the most part to their auxiliary departments, which tend to insure the carrying out of plans, forestalling false moves, and lessening the cyclical depression. The concerns investigated, which as a whole are well organized, maintained auxiliary departments, and in many cases are improving their personnel and planning to carry their development work further. Departments were of the following classes:

Department	Percentage of selected establishments maintaining
Cost	100
Statistical	80
Employment and service or welfare	75
Time study	70
Planning and control	60
Laboratory	50

The majority of the concerns have developed methods of cost finding which are tied in with their general books. Cost departments have pointed out where economies can be effected, waste eliminated—which in turn permits reduction in selling prices—and further have enabled their companies to know whether they could profitably take business offered.

Statistical data have provided a basis for the formulation of the administrative policies and a better view of the activities of the different divisions of the organization, and have generally increased the efficiency of the organization as a whole.

The employment department and its related sections has proved valuable because of its skill in dealing with the employees on difficult problems, particularly in handling wage adjustments. Certain establishments included in this study have found it unnecessary to make any cuts in wages because of the proficiency of their operating force.

When properly handled, the time study section has provided for fair compensation to employees, and has given the management and men accurate knowledge of the skill and effort required to do a fair day's work. It effects economies in manufacture through development of improved methods and tends to maintain costs at the lowest point even through periods when labor is scarce.

The planning department furnishes material of substantial value to the statistical department in its compilation of data pertaining to the internal activities of the various organizations. Directly or indirectly because of this department, piling up of work in process, raw materials in stores, or finished goods in stock has been avoided. It has assisted in establishing and maintaining low unit costs of production through providing a constant flow of work, has maintained quality, and has made it possible to order more intelligently and closer to actual requirements. Waste and inefficiency have been immediately brought to the attention of the management.

Laboratories have insured maintenance of quality and standards in both raw materials and product.

Responsibility for Formulation of Policies.—Concerns which have been conspicuously successful in overcoming the effect of the recent depression followed the policy of charging their directors alone with responsibility for formulating policies on production, sales, and finances. The success with which policies have been carried out is in proportion to the extent to which they were formulated upon a basis of fact, without influence of mental reservation or hopes. In varying degrees department heads have been consulted, but in final decisions the directors have taken action. In no cases noted have the employees been represented. The majorities of the boards of successful establishments have been drawn from the active administrative personnel of the establishment.

In several establishments which had suffered severely, the executives criticised directorates composed of a majority of prominent or moneyed men without detailed knowledge of the business. They said that men of this type, being extremely busy, had not time to consider in detail the problems which the company had to meet. These men determine, in a few minutes, immediately before or at the meeting, the status of the company's affairs and form policies on scant or superficial information. The opinion of such men is recognized as valuable in so far as it reflects the trend in general business, provided it does not dominate the situation.

Where committees of employees have been formed to deal with the management on problems of working conditions, including hours and wages, cooperation has proved advantageous to both parties. This is especially true where facts pertaining to the problems of management have been presented to the employees and their help has been obtained in reducing costs without controversy.

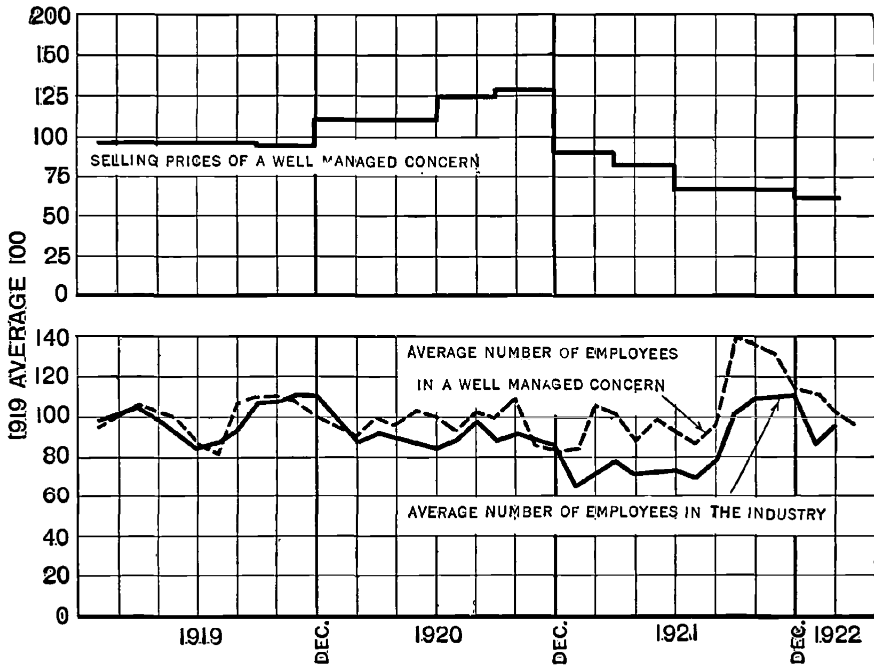
Value of Budget.—Practically every business has at least a crude plan of operations. Some establish certain anticipations as to volume of sales desired, volume of production based on estimated sales, amount of stock they will carry, departmental expenses and relation of indirect to direct expense. These are all good so far as they go. Budgets are used in many highly organized establishments, especially those which manufacture for stock. These companies are enthusiastic about this method. The budget basis of operation has coordinated the plans and efforts of the various divisions and financial policies with the resources of the business, requiring thorough analysis of all phases, and forestalling any serious financial errors and miscalculations. There are two classes of budgets, those made for the information of the financial managers, and those which serve as binding appropriations.

Budgets are usually prepared for at least a year and then broken down by months. Use of monthly figures serves to increase accuracy. The results of each month's activities are compared with the budget estimate. Actual transactions may show necessity for adjustment from time to time, but advance plans prevent a drifting policy. The budget restricts purchases and leads the entire organization to consider carefully before requisitioning an article. Advance planning, and checking results against plans, effect economies not otherwise possible.

The objection has been commonly made that sales cannot be estimated. The fallacy of this objection has been provéd in a number of establishments. Once the estimated volume to be manufactured is pro-rated, the expense necessary to handle it is comparatively easy to figure.

Production Held Close to Orders.—Concerns conspicuously successful in the recent depression are about equally divided between those making

CHART 23.—AVERAGE NUMBER OF EMPLOYEES IN CONFECTIONERY INDUSTRY AND NUMBER OF EMPLOYEES IN A WELL MANAGED CONFECTIONERY ESTABLISHMENT.



a regularly manufactured product and those which manufacture on special orders. The majority of the companies keep the volume produced in close relation to the new orders received.

Only three of the companies investigated manufactured for stock; their aim was to maintain balance in their manufacturing by making up a conservative amount of product which analyses of past sales indicated could be sold. Careful studies are made of market conditions for the sale of the product and the purchase price of essential materials, before embarking upon any extensive manufacturing campaign.

The effect on employment of producing close to orders and pursuing a conservative policy throughout the recent period of inflation is contrasted with the employment situation in the industry at large in Chart 23. This concern which makes confectionery has maintained a relatively more uniform and higher average number of employees than the industry. Even in 1921, the worst year, this establishment found it possible to maintain its standing of 1919. A run-away market had existed in the essential materials used in manufacturing, and many in the industry contracted near the top for their requirements for many months ahead. This concern bought on spot market and, whereas their paper profits were not as great as those of certain other establishments for a time, the net result of the policy has been more profitable in the end. They manufactured two classes of articles, one which they controlled to the time it reached the consumer, and another which they sold in bulk to the retailers. They made substantial reductions in the selling price of the bulk materials and increased the quantity sold for the same price on the other class when the depression started. The volume of business done in the class within their control was maintained. The volume of business in the bulk goods fell off sharply. An investigation showed that many retailers handling their bulk goods had not reduced the selling price, but were maintaining it at the peak, and consequently not selling.

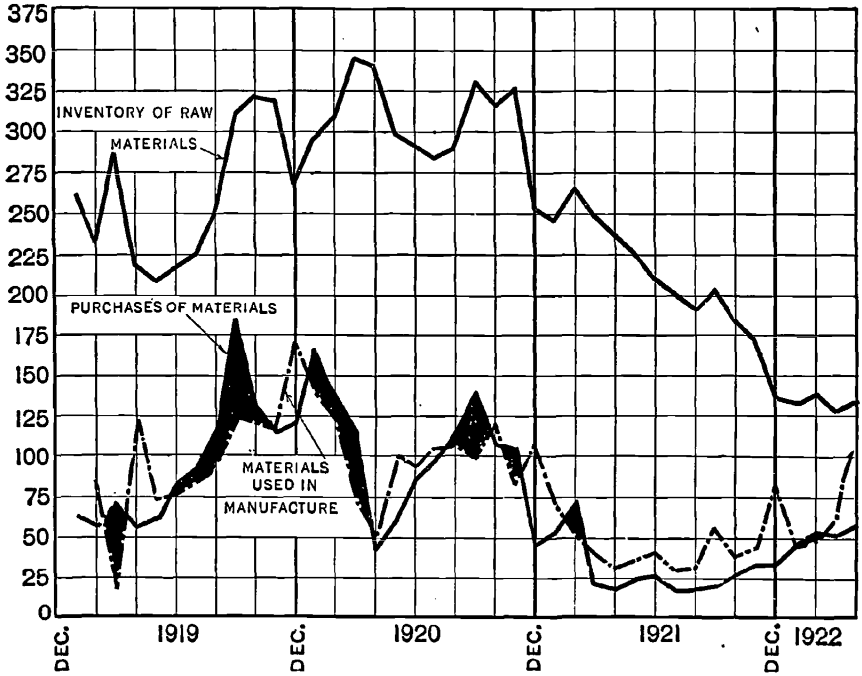
Purchasing.—Pyramiding of purchasing is generally conceded to be an important cause of the recent depression. A sudden surge of buying in 1919 was soon reflected in increased orders to the wholesalers and manufacturers. The sudden demand could not be met and buyers received only partial shipments. Buyers became panicky, bought on spot market, doubled and trebled orders, thereby causing a fictitious market. All this time prices soared. The consuming demand was soon satisfied and early in 1920 further increase of prices was accompanied by a declining volume of sales. Producers found orders falling off and cancellations started in a flood.

Many manufacturers condemned severely the practice of cancellation and blame it for most of their losses. Many have only themselves to blame, for cases have been brought to light in which manufacturers accepted orders from their customers for five times the volume ordinarily placed or accepted. Had credits been properly approved they would have had less cause for complaint. Many ordered blindly, at no time realizing fully the extent of their unfilled purchase commitments, and going far beyond what they could possibly use within a reasonable time.

Too few companies have any tangible record of the amount of money involved in their purchase commitments outstanding. Public accountants in conducting examinations in the boom period found necessary a study of unfilled purchase orders outstanding to establish the extent of contingent liabilities and profit or loss. A running balance of purchase commitments has served to put a brake on over-ordering.

The relation of purchases of raw materials to volume actually used is shown in Chart 24. A study of the fundamental conditions at the time orders were placed in 1920 and the relation of purchases to consumption would have shown the need for conservatism. A chart of this type, with purchase commitments added, will prove a valuable adjunct to the statistical department.

CHART 24.—MATERIALS USED IN MANUFACTURE, MATERIALS PURCHASED, AND INVENTORY OF RAW MATERIALS.



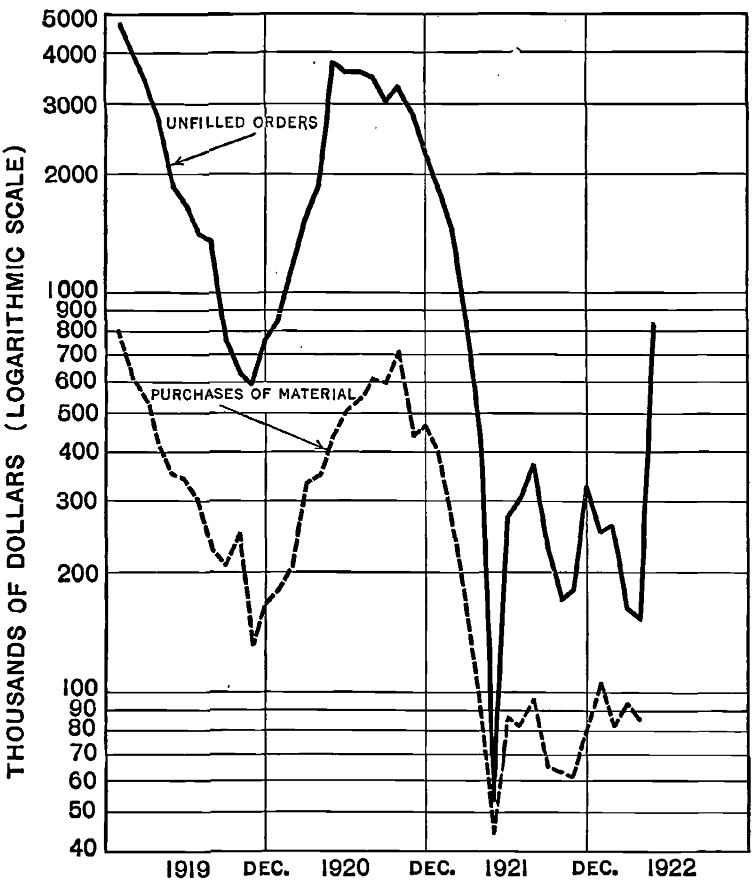
Concerns investigated have variously consulted the following indexes before making purchase commitments:

New orders
Market condition of essential materials
Previous consumption
Reported supply available
Production plans
Normal supply maintained regardless of condition
Present prices
Prices in past
Quality
Salesmen's reports

Whatever indexes have been consulted, the majority of the successful concerns have bought close to actual requirements. Many of these had opportunity to speculate, for some are required to order from four to six months ahead. They have not done so, being satisfied to make a conservative manufacturing profit rather than gamble on market fluctuations.

The purchasing policy of a conservative and conspicuously successful concern from the point of view of earnings is shown by Chart 25. This house buys on the basis of orders in hand. Four months must be allowed

CHART 25.—PURCHASES AND UNFILLED BUSINESS.



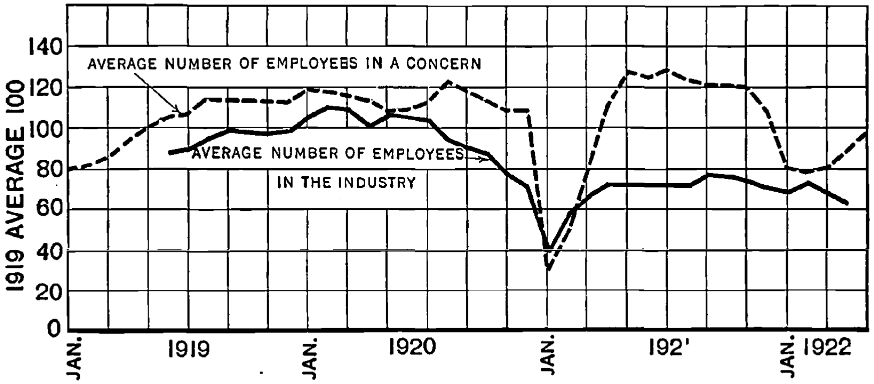
for delivery and orders are ordinarily placed for an amount to carry them approximately sixty days after receipt. Beyond extending rather liberal credits this company is handicapped in stimulating sales in a period of depression because of the nature of the product. Cautious buying in 1920 prevented serious liquidation. A normal sixty days' supply would suffice for two years on the basis of 1921 production.

Selling Prices.—Due weight given quality, nothing so affects demand as does the proper fixing of selling prices. It played its important part in the period of inflation and the following depression. The bases used in establishing prices by the concerns investigated are:

Market conditions.
Costs
Competition
Cost plus basis
Material costs
Prime costs
Labor markets

Market conditions (meaning the available supply of the commodity being priced, its existing market price, and anticipated cost of replacement) have been given first consideration in the setting of prices to maintain sales. The price situation is well within the control of the consumer-goods manufacturer, while on the other hand, the producer-goods manufacturer must prevail upon his customers to establish policies that will be in line with the economic trend.

CHART 26.—AVERAGE NUMBER OF EMPLOYEES IN AUTOMOBILE INDUSTRY AND NUMBER EMPLOYED BY A PROGRESSIVE MANUFACTURER.



The effect of establishing proper selling prices on the employment situation of an individual concern is shown in Chart 26. This manufacturer has led the way in reducing selling prices in the industry and he has fared better than the other establishments whose reductions have been made piecemeal and much slower. Every economy in the conduct of this conspicuously successful company is passed on to the consumer.

Relation of Selling Price to Cost.—A manufacturer whose name is known to almost everybody says in a recent issue of *System:*

Manufacturing is not buying low and selling high. It is the process of buying materials fairly, and by the smallest possible addition to cost, transforming those articles into a consumable product and giving it to the consumer. Gambling, speculating, and sharp dealing tend only to clog this progression. Any economy of production will result in a glut of goods if the price advantages of the economy in manufacture are retained by the producer instead of being passed on to the consumer. Every price has been a challenge to ourselves. It has always been below the lowest cost we could figure out in advance. We have then gone ahead with this new price hanging over us and have found so many new and better ways and less expensive ways of doing things, that the price which once—under the ordinary method of calculation—would have been considered impossible, became very profitable. Competition is disregarded.

The notion persists that prices should be kept up. On the contrary, good business, large consumption, depends upon their going down. The price of our product is roughly 33 per cent of what it was eighteen years ago. That price to the consumer is only 33 per cent of what it was, but we pay higher wages, higher prices for material, and have a better product than we had eighteen years ago, and in consequence, our volume of business has increased some thousands of fold. This increase is in proportion as we better serve our customers and for no other reason.

To be a leader in his industry, especially in times of prosperity, a manufacturer must think less of his competitors' prices and more of the consumer. In periods of depression, he must think in terms of replacement values.

Profit-sharing Plan for Executives.—Several cases have come to light of establishments in which officials receive comparatively low salaries, not in excess, for example of $7,000 to $10,000 per year, but which have a contingent arrangement to participate in the net earnings of the business, such that staff men may receive even greater earnings than they might reasonably expect on a straight salary basis. In a period of prosperity these corporations can well afford to compensate their executive staff from earnings more generously than can be profitably done in lean years. On the other hand, in periods when strictest economies must be effected, this low salary arrangement makes a substantial reduction in the total overhead charges and affects the unit overhead costs.

There has been in vogue for years in England an arrangement in many corporations by which "management shares" are reserved for the directors and active chief administratives. Provision is made in the by-laws for setting aside a certain proportion of the net earnings after the dividend requirements of other classes of stock issued have been provided for. The income credited to management shares is distributed at regular intervals to the holders of the management securities. This serves to attract the most competent administrators.

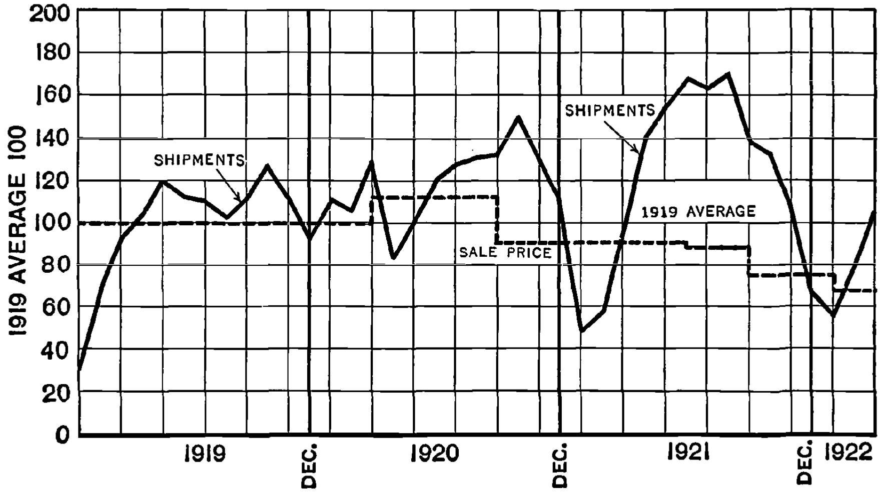
This plan is gaining favor in this country, as is witnessed by the provision for management shares in the articles of incorporation of certain of the new and large corporate enterprises.

Relief from Effect of Depressions.—Once the change from the upward trend in prices and volume is definitely recognized and the period of downward revision of prices is certain, the sooner the policies of any establishment can be changed to meet the new conditions, the better.

10

Stimulation of sales by a reduction in prices is shown in Chart 27. This automobile manufacturer led the way in reductions, making the first in September, 1920. The immediate effect was an increase in sales. The volume dropped off during the usual dull season in the industry, but in the spring of 1921 buying at the same price level substantiated the wisdom of the policy. Further reductions helped to create a volume of sales not enjoyed by any other establishment in the industry. This policy was made possible by increased production per employee and reduction in manufacturing cost.

CHART 27.—EFFECT OF SELLING PRICE ON SALE OF AUTOMOBILES.



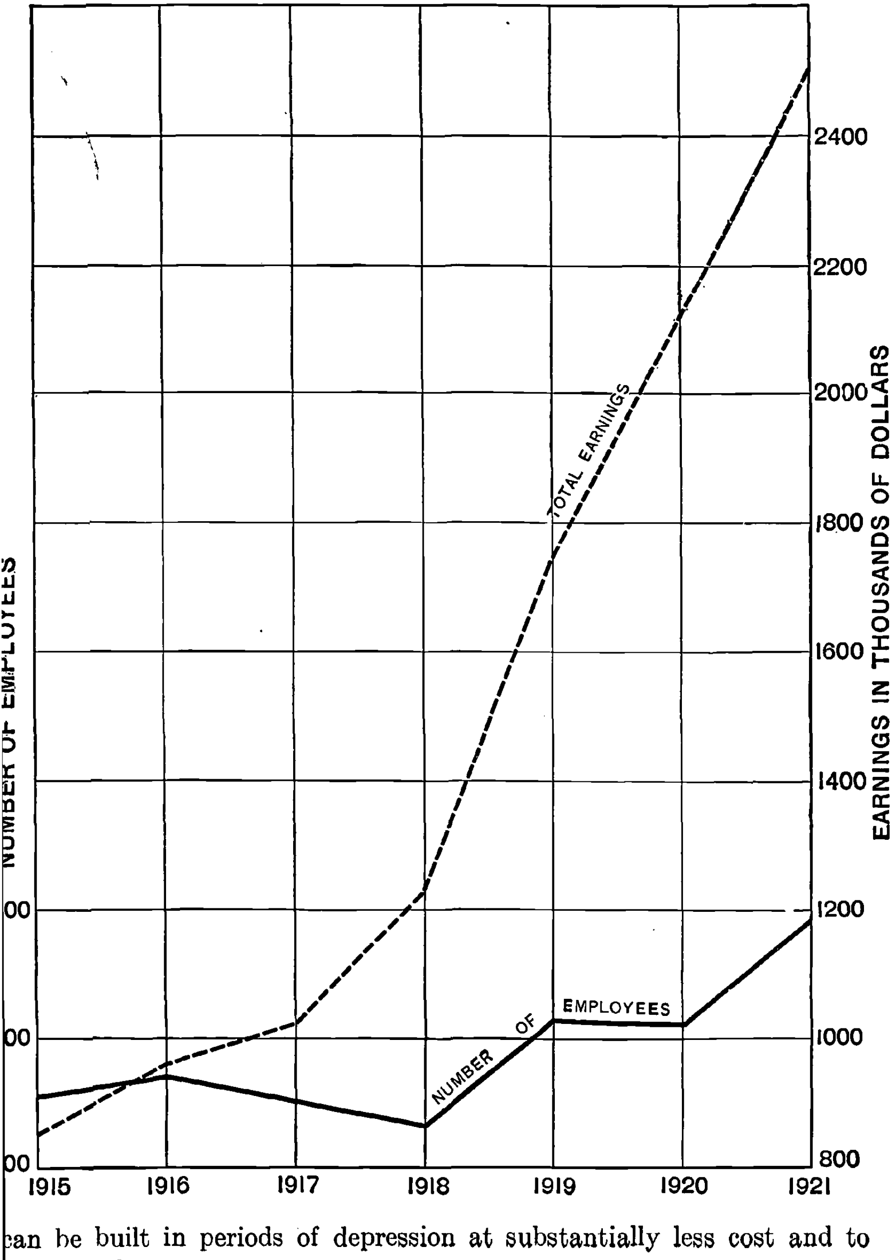
Financial Policies.—One of the most important readjustments which must be made is in financial policies. During times of prosperity, profits are easily made and credits in many instances are extended too liberally, as shown by the increased volume of orders which were placed in many cases without regard to how payment could be made. Many concerns are without any means of knowing at any time the extent of their commitments, though it behooves all establishments to maintain a close control of both credits and commitments.

The policies of finance which are effective in stabilizing business are:

Conservation of assets when prosperous
Close watching of credits
Liberal extensions of time of payments
Thorough and prompt liquidation
Marking prices down to replacement
Smaller margins of profit

Conservation of Assets.—Manufacturers have been prompted in periods of prosperity to expand their plants and commitments on the basis of seemingly unlimited demand for their product. The fixed charges which accompany the construction of increased capacity in boom periods at high cost are a factor not given proper consideration. Such additions with proper study of fundamental conditions to forecast the demand,

CHART 28.—TOTAL YEARLY EARNINGS AND NUMBER OF EMPLOYEES IN A PROGRESSIVE BOOT AND SHOE ESTABLISHMENT.

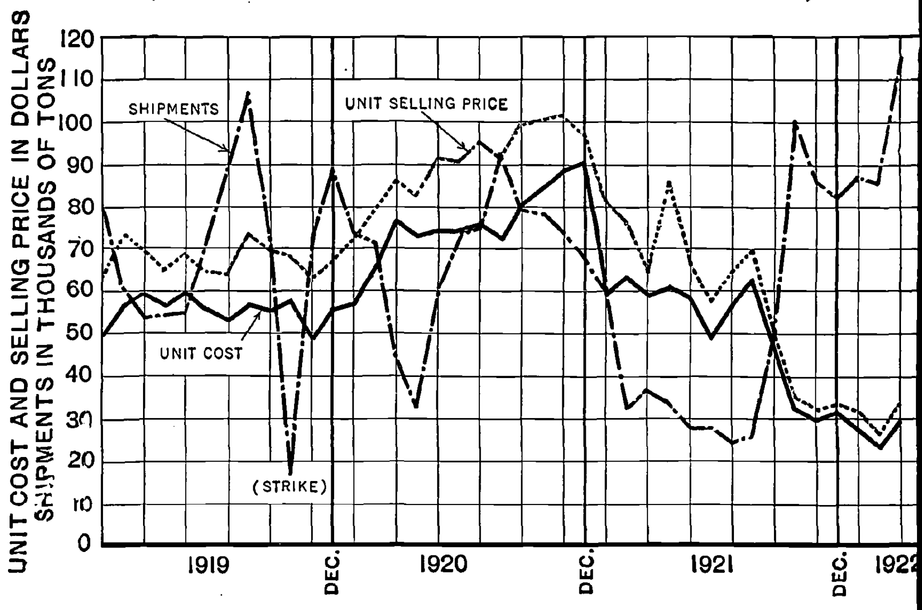


can be built in periods of depression at substantially less cost and to greater advantage.

The large profits piled up in boom times tempt many to distribute large dividends with frequent extras. Depleting current assets in this manner is as injurious to the financial status of a business as any excessive expenditures for additional plant facilities or speculative investments in essential materials.

Liquidation.—When the time of deflation comes, liquidation must be prompt and thorough. The effect of this is shown by Chart 28, giving the number of employees on the pay-roll of a boot and shoe manufacturer and their total earnings by years from 1915 to 1921 inclusive. When this

CHART 29.—COMPARISON OF UNIT COST OF MANUFACTURING, UNIT SELLING PRICE, AND SHIPMENTS.
(ILLUSTRATION FROM THE METAL TRADES INDUSTRY)



organization faced the depression, it liquidated promptly. Selling price of product was reduced not only to the basis of the liquidated market price of their basic materials at the time but to the anticipated further liquidation within a reasonable period as indicated by hide values, this latter basis of value having been determined after consultation with and getting advice from leading tanners. Their activities were confined increasingly to production and sale of staples in greater volume. Sales efforts were renewed, and when orders fell off, the company continued manufacturing for stock. This policy attracted sales in sufficient volume to permit the factories to be operated at capacity, and losses from inventory adjustment were more than offset by profits from operations.

Smaller Margin of Profit.—Chart 29 shows the relation of the unit selling price to unit cost of manufacture and the effect of selling price upon sales. This illustration drawn from the metal trades is conspicuous as it shows markedly the effect of the policy of closer margins of profits and the early recovery. Reductions in cost of manufacture have been passed on to the manufacturers using the output of this company as their basic material.

Another concern which operated overtime during the period of depression, liquidated promptly and thoroughly, brought prices to rock bottom, made reductions in their selling prices, improved the quality of their product, and substantially reduced their margin of profit. The employees were called together and informed that costs must be cut and production jammed through as orders were received. Reductions of 25 per cent were made in wages. The president of the company called upon his customers and told them that he would sell his output at substantially lower prices which he quoted definitely. He prevailed upon his customers to obtain reductions from other manufacturers whose product was necessary in manufacturing and urged them to pass on to their consumers these reductions in cost of products. The company applied the same rules to the executives as to the machine operators. All worked the same hours and operated under the same conditions. Economy is the watch-word in the plant and talks are frequently given to the force on this subject. A complete system of costs enables the executives to obtain weekly reports of departmental expenses and small items are carefully observed to see that there are no wastes.

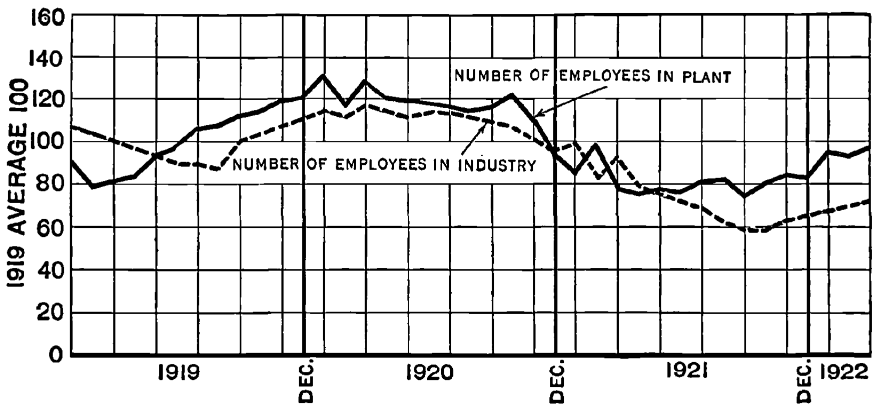
Administrative Policies.—The administrative policies which have served to smooth out the irregularities of production and sales during periods of depression are:

Introducing improved machinery
Adding new products
Reducing number of products
Giving more for money than competitors
Selling short
Increasing auxiliary departments
Increasing efficiency of individual
Improving morale of organization
Improving plant facilities
Dovetailing seasonal articles

Improved Machinery Boomed.—Manufacturers of producer-goods have found the introduction of improved machinery or introduction of new products of great value in stimulating sales and manufacture. The accomplishments of one manufacturer of producer-goods are shown in contrast to general conditions in his industry by Chart 30. This establishment retained a higher percentage of its employees than the average in the trade. Success was won through the introduction of improved machinery which they developed in periods of prosperity and used as a means of inducing new orders in periods of depression. Their customers are more disposed to try improved articles at that time. Reductions amounting to 15 to 30 per cent in selling prices have been made. They have manufactured for stock certain articles which are known to be good sellers. Their warehouse has been filled with standard lines, especially machine parts, and they have repaired machinery, jigs, and general equipment to retain their organization. The introduction of new lines has generally stimulated the sale of the regularly manufactured product.

Short Selling.—Short selling has been successfully employed by manufacturers who use crops as a basic material. This practice has also been adopted by certain producer-goods manufacturers who have an opportunity of taking long-term contracts. One concern took an order at substantially less than market, after it had made a careful study of

CHART 30.—NUMBER OF EMPLOYEES IN MACHINE MANUFACTURING INDUSTRY AND THE NUMBER OF EMPLOYEES IN A SINGLE PLANT.



the trend. The chief executives firmly believed that the trend of prices was downward, and whereas the contract as drawn up would require delivery of a certain portion of the product in the near future, and would cause a loss, they felt prices would be so much lower when the contract was terminated that the ultimate result would be a large profit. Their prediction based upon careful study was correct.[1]

Internal Development.—Many establishments, even those highly organized, have found it advisable to increase the individual proficiency of their employees through the development of improved methods which are brought about through the auxiliary departments.

[1] The method of short-selling described above is a form of speculation which may result in losses unless protected by some kind of covering contract such as that used by cotton cloth manufacturers.

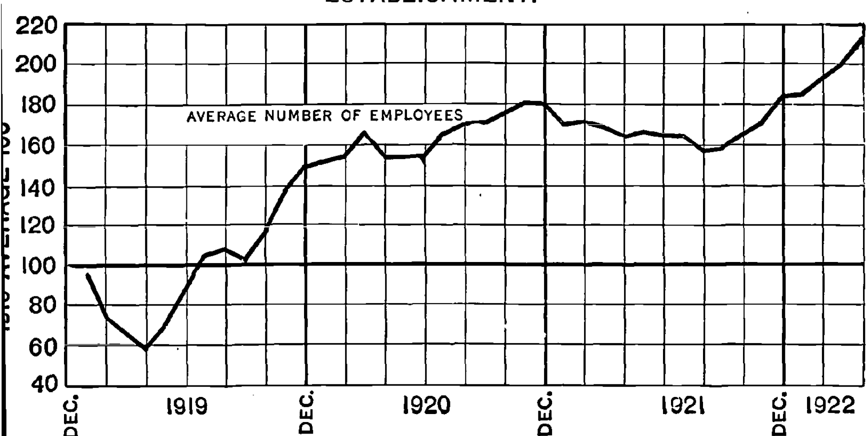
Low overhead has been over-emphasized. It is low unit cost that makes for profit. As the cases cited show, a proper increase of total overhead expenses by additions to auxiliary departments lowers direct cost at all periods and in prosperous periods actually reduces unit overhead by increasing production. But overhead expenses at all times should be confined to such things as increase the production or sales per man.

Manufacturing Policies.—One of the most substantial losses sustained by manufacturers during the recent depression arose from closing the factory. The successful manufacturers have not found it necessary to shut down their plants and have avoided the resulting impairment of liquid assets. The policies which have been pursued successfully are:

Improvements in methods of manufacture
Reductions in cost of manufacture
Manufacture of improved quality
Manufacture for stock
Assembling of parts
Best quality for price
Increasing flexibility of workmen

The staff of employees retained by a conspicuously successful manufacturer of producer-goods is shown in Chart 31. This company before the depression manufactured small lots for a few customers on a specialty

CHART 31.—AVERAGE NUMBER OF EMPLOYEES IN A GROWING ESTABLISHMENT.



asis. Everything was done to please and hold customers, but nothing o obtain new business. These policies were changed to meet the requireents of new conditions when the depression started. The introduction f improved methods has resulted in better quality, increased output er man, substantial reductions in unit costs, and increased volume of usiness.

The steps taken which contributed to the volume of business handled by this company were:

Improvement of quality of product
Introduction of automatic machinery for production of small parts
Explanation of situation to employees, who accepted a wage reduction of 28 per cent
Development of greater production per man, so that total earnings were not decreased
Introduction of: Time Study
Planning and Control
Modern System of Accounting
Perpetual Inventories
Cost System
Budget Plan of Control
Change in sales policy from narrow distribution of many products to wide distribution of products best suited for quantity production
Increase in advertising, pushing home the fact that their basic materials were a certified and guaranteed product. Samples of certificates with catalogue were sent out by registered mail. Advertising was concentrated on the dealer.
Increase in sales force
Reduction of selling prices 45 per cent
Opening an export department
Improvement of plant facilities for manufacturing
Purchasing close to requirements
Organization of Joint Conference Committee consisting of six representatives of workmen and same number of executives to decide all questions of hours, wages, and working conditions
Improvement in morale of organization.

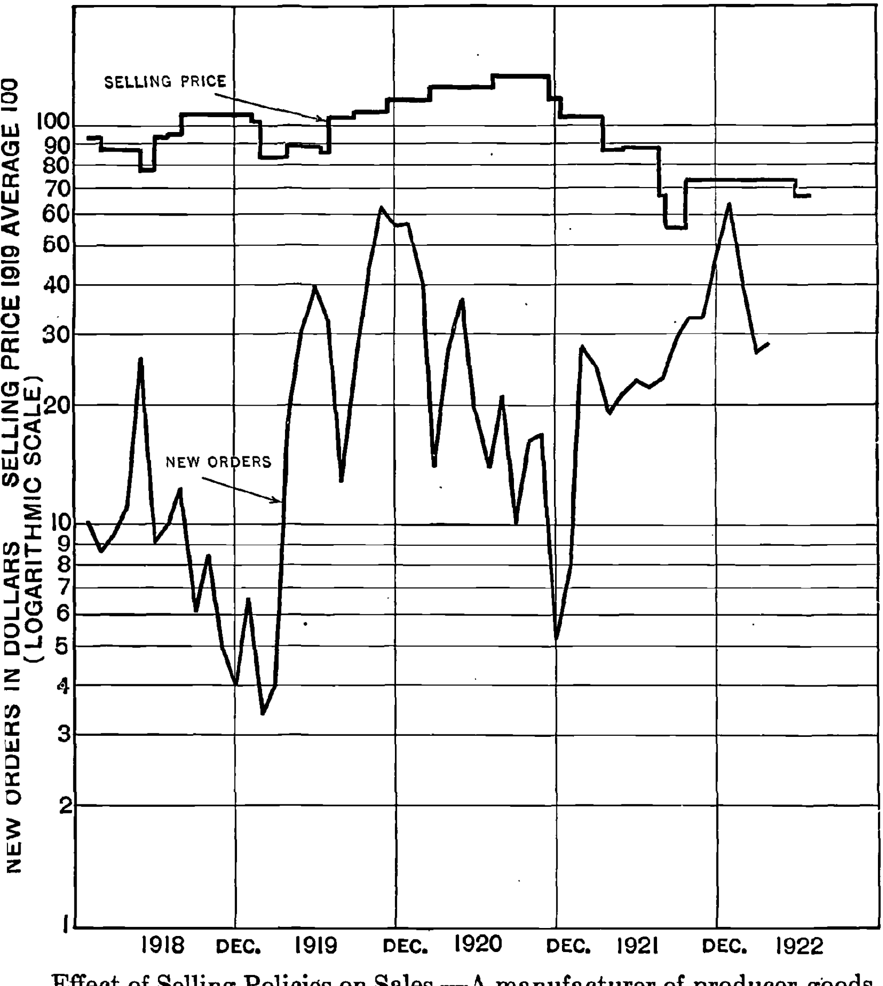
On January 15, 1922, the company had four months' unfilled orders ahead, and advanced prices about 10 per cent for future business. This increase in price represents the extent to which prices now exceed those in the trade. Despite this, orders continue to be received in large volume, substantially because of improved quality.

Manufacturing for Stock.—The most commonly used policy in overcoming depression has been to manufacture for stock. Numerous cases were found however where companies had followed this policy with success in the past, but failed during the latest depression. Data from the books of companies investigated show that manufacturing for stock is a dangerous policy to pursue. It not only means piling up inventories of high-cost materials, but also, unless most efficient methods of manufacture are used, it is likely to mean excessive costs due to high wages and waste. Only those companies were successful in their plan which made a thorough study of past performances, determined the grade and classes of product which had a stable market, and manufactured only the quantity which they knew with reasonable certainty from analysis of their records could be disposed of within a reasonable period.

Selling Policies.—Maintenance of uniform production is dependent upon continuity of sales. The sales policies that have been employed successfully are:

Price guarantee
Staples pushed
Specialties pushed
Following up inquiries
Free deals
Premiums
Concentration on best sellers
Bonus to salesmen on heavily stocked lines
Renewed sales effort
Obsolete lines pushed
Assistance to dealers
Demonstrations
Increased advertising

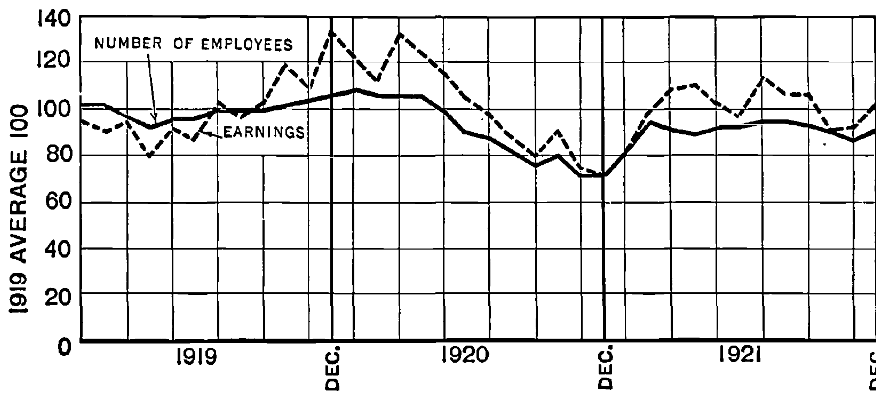
CHART 32.—INFLUENCE OF SELLING PRICE ON VOLUME OF NEW ORDERS.



Effect of Selling Policies on Sales.—A manufacturer of producer-goods by reductions in selling price of nearly 50 per cent has been able to increase his volume of business in the depression as shown in Chart 32. Advertising and development of improved methods of manufacturing which reduced cost and improved quality have contributed to this.

Chart 33 shows what one boot and shoe manufacturer has accomplished through marking down inventories and selling prices to replacement value and liquidating thoroughly. This company pushed specialties, disposed of obsolete lines, and watched credits carefully.

CHART 33.—EMPLOYEES AND EARNINGS IN A BOOT AND SHOE MANUFACTURING PLANT.



Concentration on Best Sellers.—Concentration on best sellers is in effect the same as reducing the number of products manufactured. This plan has operated successfully in numerous instances. A metal working concern has added new lines having the same distribution as the old, which can be produced with existing equipment. They have concentrated their advertising and display on fifteen best sellers of the regularly manufactured products. They have tried to advertise in a manner to reach distributors and point out the profits which can be made by handling their goods.

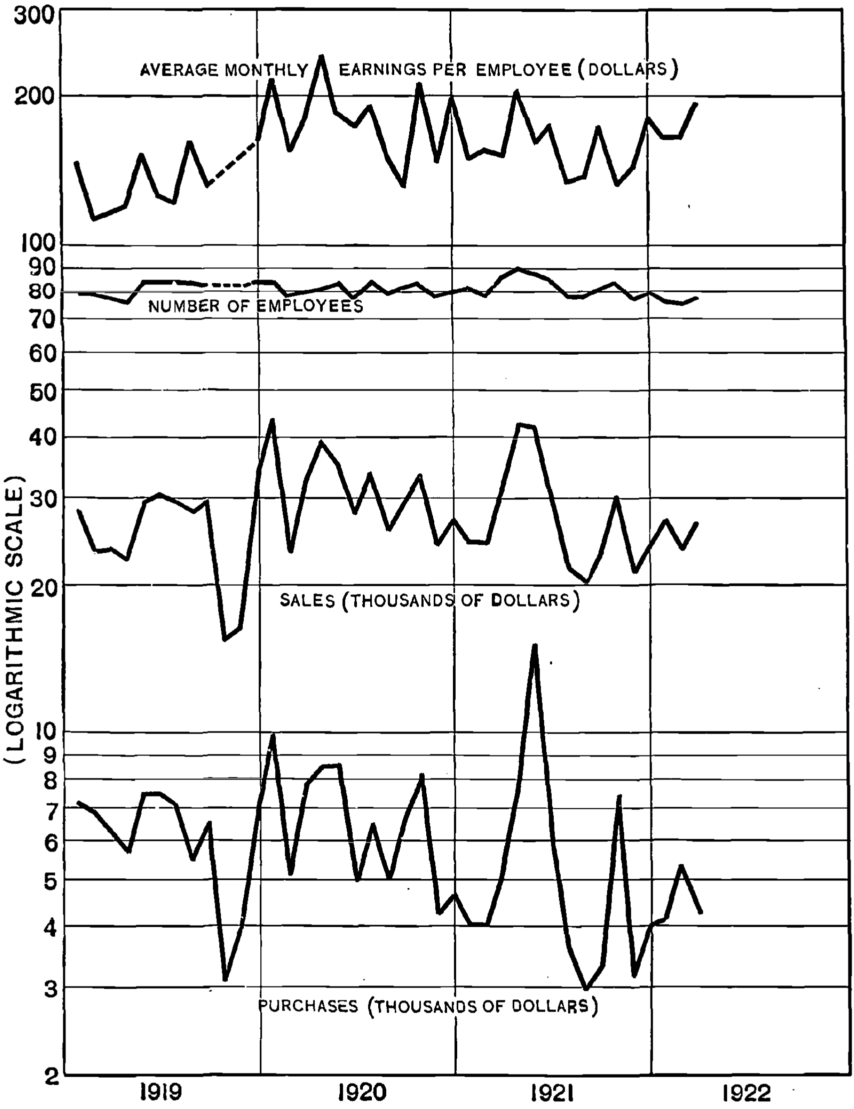
Bonuses on Heavily Stocked Lines.—A manufacturer of producer-goods whose business has been built up on earnings, has stimulated all division heads and gives bonuses to the salesmen on heavily stocked lines.

Service to Customers.—Far too many concerns adopt an independent attitude when business is booming knowing that at the time they can readily dispose of their output. Quality is frequently sacrificed to quantity in such periods. When readjustment comes, these same companies find old friends gone and must incur large expense to overcome their reputation in the trade for high-handed dealings.

One successful establishment has as its watchword "service." Its sales force and advertising were increased to stimulate sales during the depression, but it relied mostly upon the service given its customers.

Eighty per cent of the business done by this company is for special orders. Prompt deliveries are urged by customers, and the company

CHART 34.—COMPARISON OF PURCHASES, SALES, EMPLOYEES, AND EARNINGS IN A CERTAIN ESTABLISHMENT.



retains its staff of employees whether occupied or not. Chart 34 shows the effect of this company's policy upon its force of employees which has remained practically uniform throughout the years of prosperity and depression. The fluctuations in earnings are due to income from overtime in addition to their regular guaranteed weekly rate.

Reputation for Technical Knowledge.—A company manufacturing machinery ascribed its success in overcoming the depression largely to its reputation for technical knowledge of the industry in which the equipment is used. They are continually consulted on problems of manufacture and requested to furnish suggestions for means of removing certain defects in existing methods.

Additional Information Desired to Forecast Trend.—Business men have expressed a desire for additional information promptly compiled which will enable them to determine with greater accuracy the probable volume of business in the future. Listed in the order of the number of establishments requesting each item, the desired information is:

Unfilled orders in the industry
Current volume of business in the industry
Production in the industry
Information as to position in business cycle
New orders in the industry
Hours operated in the various establishments
Wages of employees in the industry
Shipments in the industry
Supply of raw materials available
Experience of other establishments in industry in periods of depression
Volume of purchases of raw material.
Prosperity of the country
Railroad construction
Data on foreign business
Proportion of indirect workers to direct.

Labor.—It is noticeable in our examination that the establishments maintaining definite standards of production with the cooperation of the workers were able to keep their manufacturing costs at a minimum even during the expansion.

Another important factor in the situation is the basic wage rate. The fluctuation in money values necessitates wage changes in both directions. While the general trend of wages through the years has been and must continue to be upward, reductions may be inevitable at times of extreme deflation in business.

Methods of Providing Relief in Depression.—Few concerns were found which provided a careful well-thought-out labor policy during the depression. There was a general tendency to make for stock as long as possible. As has been noted, however, this plan while of great value in meeting seasonal fluctuations, is of doubtful expediency in cyclical depressions. The policies followed by various firms may be summarized as follows:

Operate a few days per week
Operate part time per day
Rotate employment in alternate weeks with half the force each week

Some firms have given vacations with pay. Others have encouraged bank deposits through the company by employees. Assistance in obtaining employment elsewhere has been given, although with small results. Most companies keep in touch with their people out of work and assist in cases of illness. Few concerns, however, are yet giving attention to definite plans for stabilizing the income of the worker by remuneration during periods of forced unemployment.

Relief funds have been developed to a small extent. Under one plan the workers contribute 1 per cent of their weekly earnings for thirteen weeks, or until a sufficient amount is laid aside for estimated requirements.

Repairs and Maintenance.—Many successful companies have found it advantageous to make physical improvements and changes that will avoid shut-downs and reduce manufacturing cost when business improves. This policy provides employment to labor when other jobs are difficult to obtain.

III. MERCHANDISING

Scope of Retail Study.—Just as in the study of manufacturing activities, special attention has been paid in the examination of merchandising to methods that have proved successful in stabilizing sales and profits. As it was impossible to cover more than a small fraction of 1,000,000 or more retail shops in the United States, the search for successful methods was confined largely to the more successful stores.

In addition to specialty and department stores, several chain-store systems have been included. Their figures differ from those of individual stores in reflecting general rather than local conditions.

Essentials of Stabilizing Retail Trade.—Studies of merchandising indicate:

That, in most lines, seasonal fluctuations in volume of business are more pronounced than cyclical fluctuations.

That retail stores suffered more in the recent depression from shrinkage of inventory values than from falling off in business.

That there is a lack of effective contact and team work between the manufacturer, the wholesaler or jobber, and the retailer.

That there is a lack of appreciation of the value of external statistics in forecasting changes in conditions.

That there is a need for comprehensive information regarding the statistical position of all important commodities.

That there is a need for greater development of methods of laying out buying schedules and of coordinating the three main functions of merchandising, *i.e.*, management, buying, and selling.

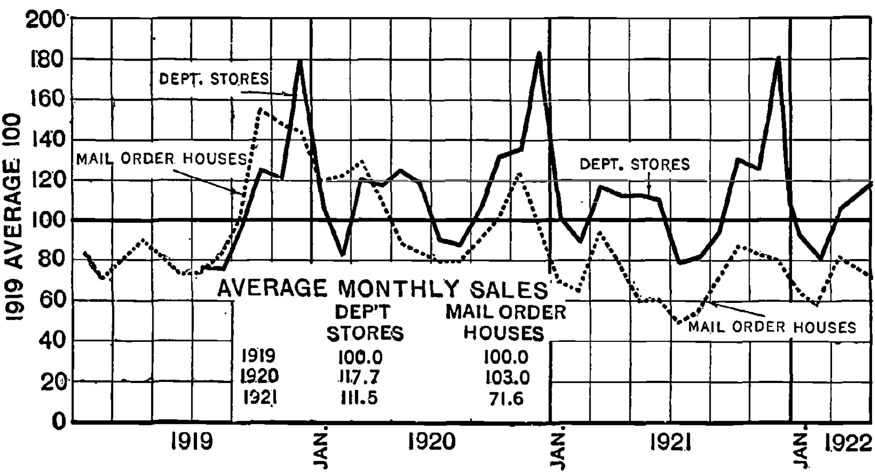
During 1918 and 1919 the retail merchant made more money than ever before. When the break came in 1920 much of this profit was in the form of large inventories bought at high prices.

It soon became apparent to the more farsighted dealers that there was small chance of disposing of these stocks except at greatly reduced prices. Some promptly accepted this way out, marked prices down, cleaned their shelves, and bought such goods as they needed at bargain prices.

It was soon demonstrated that this was the part of wisdom. Many merchants, however, failed to appreciate this fact for many months, and as a result suffered much more severely than those who acted with greater promptness.

Fluctuations in Retail Trade.—Retail stores reported a surprisingly constant volume of sales from 1919 to 1921. Whereas most factories shut down or ran short time with reduced force, retail stores reported

CHART 35.—INDEX NUMBERS OF AVERAGE MONTHLY SALES OF 159 DEPARTMENT STORES AND OF 4 LARGE MAIL ORDER HOUSES.



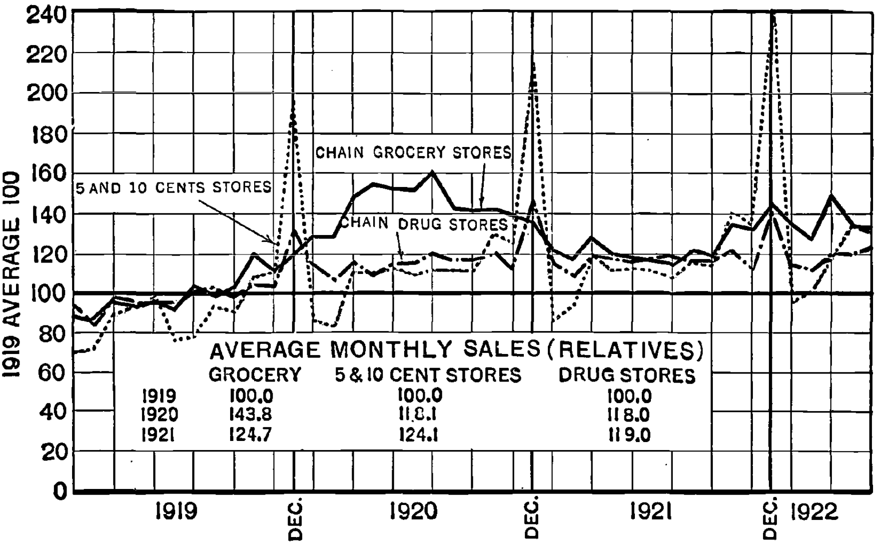
comparatively slight reductions in volume of sales or of employment. This is true in spite of the fact that sales are usually stated in terms of dollars. When prices are falling, sales in dollars will tend to decrease even though no falling off occurs in the physical volume of merchandise sold. Sales figures of retail stores are presented in Charts 35, 36, and 37. These charts bring out forcibly the surprising maintenance of retail business (excepting that of mail order houses which reflects less purchasing in farming districts) during the recent depression.

Luxury Stores Hit.—Certain lines of retail stores, however, experienced a falling off in trade. These are mainly "luxury" stores, jewelry and music stores being notable examples. Such stores also are affected severely by seasonal fluctuations.

Losses Due to Shrinkage of Inventory Values.—While the average retail store did not suffer as much as might have been expected from lack of business, most retailers did take very severe losses as a result of the shrinkage in inventory values due to the general process of deflation.

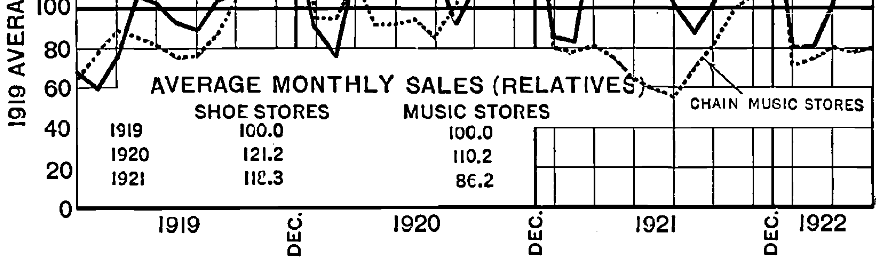
Effect of Mark-downs on Sales and Profits.—To illustrate the serious losses in 1920 caused by shrinkage in inventory values, figures covering

CHART 36.—INDEX NUMBERS OF AVERAGE MONTHLY SALES OF 16 CHAINS OF GROCERY STORES, 4 FIVE- AND TEN-CENT STORE CHAINS, AND 6 CHAINS OF DRUG STORES.



the operations of a group of thirty-six department stores are given.[1] These stores range from $250,000 to $5,000,000 total sales per year. Compara-

CHART 37.—INDEX NUMBERS OF AVERAGE MONTHLY SALES OF 5 CHAINS OF SHOE STORES AND 4 MUSIC STORES.



tive figures are exchanged by these stores and their methods are probably somewhat better than the average store of the same class. Figures taken

[1] By courtesy of Mr. James W. Eadie, Jr.

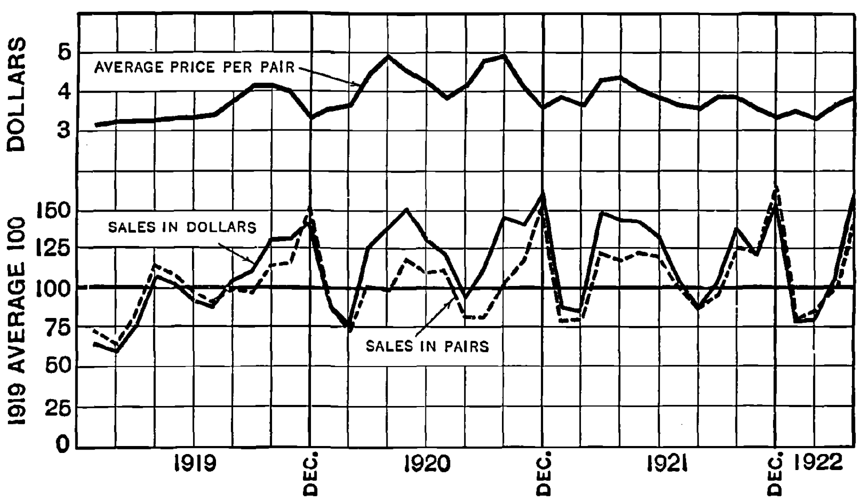
from a group of this size tend to eliminate individual peculiarities and therefore show general tendencies.

MERCHANDISE CONSUMED

	1919	1920	1921
Sales	$28,529,000	$33,381,000	$30,523,000
Mark-downs	1,768,000	4,210,000	2,462,000
Merchandise shortages	584,000	837,000	710,000
	$30,881,000	$38,428,000	$33,695,000

In 1919 these stores received 92.4 cents for every dollar's worth of goods disposed of, they marked down merchandise 5.7 cents and had merchandise shortages due to losses, theft, and waste of 1.9 cents. In 1920 they received only 86.9 cents for each dollar's worth disposed of, took mark-downs of 10.9 cents, and suffered shortages of 2.2 cents.

CHART 38.—SALES AND PRICES OF SHOES SOLD BY 202 CHAIN SHOE STORES.



Courtesy, Federal Reserve Bank, New York.

Expenditures were 86.8 cents per dollar of merchandise disposed of in 1919 and 87.1 cents in 1920, a difference of only 0.3 cents. Yet because of the shrinkage in values represented by the increase in mark-downs and the increase in merchandise shortages, these stores show a drop from a net profit of 5.6 cents per dollar of sales in 1919 (one of the highest averages of recent years) to a loss of 0.2 cents per dollar of sales in 1920.

While total expenditures rose from 86.8 cents per dollar of sales in 1919 to 87.1 in 1920, this rise was caused by an increase of 1 cent in amount paid for goods, while other expenses, such as salaries, wages, rent, light, heat, power, advertising, interest, depreciation, taxes, etc., decreased 0.7 cents per dollar of sales, leaving a net increase of 0.3 cents.

Physical Volume of Sales.—Figures showing the physical volume of shoes sold by several chains operating a total of 202 retail shoe stores are presented in Chart 38. It will be noted that sales for this large group showed an increase over 1919 in succeeding years, whether expressed in dollars or in pairs.

Effects of Seasonal Fluctuations.—In general the seasonal fluctuations have proved more important than cyclical variations as will be noted in the charts presented above. In addition to the wide differences from month to month which are indicated on the charts, there are also daily and even hourly fluctuations. These are of considerable importance; in most cases they are regular and can be predicted with considerable accuracy.

Dealers must provide stores large enough to take care of the peak loads, and in lines where trained and experienced clerks are necessary, a larger force than is required by the normal demand must be employed. Extra delivery costs are incurred and larger stocks must be maintained than would be needed if these variations could be reduced.

Methods of Minimizing Effects of Business Depressions.—Reports show three principles which form a basis for the most effective course of action for the retail store before and during periods of depression.

Study of conditions and prompt action which make it possible to anticipate and provide against the decline in values, before the actual break occurs.

Avoidance of heavy inventories at all times.

Prompt reductions of price to reflect lower replacement costs in time of falling markets.

Forecasting and Business Barometers.—Individual retail stores are affected more severely by local than by general conditions. For this reason many business barometers are less serviceable to the merchant than they are to the manufacturer who has a national field of distribution. Independent research work on the part of the retail store is needed to tie in local conditions with the general trends. Another important factor for the local merchant to consider is that all parts of the country are not affected at the same time by changes in business. He must study the geographical path followed by changing conditions.

Need of Statistics of Production and Stocks on Hand.—There is a widespread demand among retail merchants for statistical information regarding stocks of commodities on hand and for figures showing production. Many dealers feel that they were the victims of misrepresentation regarding the situation in the spring of 1920. Statements from dealers in all parts of the country agree that they were strongly advised by manufacturers to place large orders, on the ground that there was a shortage of goods, and that only those who were prompt in placing orders could expect to have them filled.[1] In certain instances, retailers say they were urged to order more than they actually needed, to allow for scaling down. The manufacturer then promptly and most unexpectedly filled orders completely, and having reduced his stocks announced price reductions. Many retailers claim that they were thus caught with large inventories and forced to take heavy losses in mark-downs based upon replacement costs.[2] In one case noted, a manufacturer who claimed inability to make deliveries on contracts was found to have his warehouses piled high with goods which he was holding back for further price increases.

Accumulation of Stocks Important Cause of Break in Prices.—In view of the maintenance of retail sales during the period of depression, the question arises: Why with the outlet running nearly full, should there be a surplus of stock in the country?

In the first place the growth of retail trade from 1919 to 1920 demanded some 17 per cent more in value of merchandise in 1920 than in 1919 while retail prices rose about 11 per cent. This demand of itself suddenly thrown on the manufacturer in the latter part of 1919 might well suffice to congest production and to speed the rise in prices. Increase in orders and transportation delays necessitated longer time for delivery and the piling up in the factories of some raw materials with shortages in others. Long-time deliveries necessitated abnormally large orders by distributors as well as manufacturers. There was also occasional speculation by manufacturers and retailers who continued to buy surplus because of the rising prices.

Stocks produced at abnormally high intrinsic costs became a drug in the market. During 1921 and the early months of 1922 there was a considerable reduction in the quantity of new materials produced and as a result much of this surplus stock was consumed.

These various facts are of great importance for both the manufacturer and the retailer, because with the continuation of the business cycle the same ill conditions will be produced unless counteracted by sound policies and economical production and distribution.

These things bring out forcibly the need for closer contact all along the line from the producer of raw materials to the seller of finished products.

[1] What is needed is a further development and extension of the excellent statistical information now published by the Federal Reserve Banks, the Department of Commerce, and a number of public and private agencies.

[2] Needless to say, this presentation of cancellation from the retailers' viewpoint is far from a complete discussion of an extremely complicated subject. Compare the discussion of cancellation from the manufacturers' viewpoint earlier in this chapter, and the discussion from the legal viewpoint in Chap. XI, below.

Practical Value of Production Statistics.—One way in which retail stores may use production statistics is illustrated by a large department store in the East. Its statistical department made arrangements to obtain regularly current figures showing production of silk goods and shoes in a number of large factories. They plotted for each of these two commodities: (*a*) normal (estimated) sales, (*b*) actual sales, (*c*) production figures from factories. Early in 1920 an inspection of these curves showed that production figures were increasing at a greater rate than normal estimated retail sales, while actual sales (retail) were falling behind. Soon they began to get reports of cancelled orders for silk; but production figures continued to climb while sales fell further behind expectations. The store then decided to liquidate its stock of silk goods and had practically completed the process before other stores had any idea of what was coming. A similar situation soon developed in the shoe department, and again the store was able to reduce its inventories without much loss. When this series of events had occurred in silk goods, closely followed by shoes, the management foresaw what was in prospect all along the line and made preparations to meet conditions in all departments. As a result comparatively slight losses were suffered. The management, in fact, was actually in a position to recoup itself, taking advantage of "distress sales," so-called, to buy cheap and offer bargains to customers, while their competitors were taking severe mark-downs on goods bought at boom prices.

Importance of Statistical Position of Commodities.—This topic has been emphasized because it brings out one of the most effective methods of stabilizing business during cyclical depressions (that is, forecasting events, and guiding policies by the statistical position of commodities), and because reports from stores, trade associations, banks, and statistical organizations show forcibly the need of more complete figures of production and sales.

Buying must necessarily be more or less in the dark without some such foundation, and close contact between manufacturer and retail dealer can be satisfactorily developed only in some such way. Figures of this kind afford a quick corrective to tendencies to over-increase productive capacities, and would do much towards eliminating periodic unemployment.

Merchandising Methods and Store Management.—In the inquiry into methods of combating and overcoming the effects of cyclical business depressions, we were often met by the statement that not much had been done by retail stores mainly because they had not felt an appreciable falling off in business.

During periods of depression when competition is most keen and when there is an increasing tendency to buy closely and to compare values, it becomes of the greatest importance to reduce the cost of merchandizing to a minimum. This means an intensification and development of efficient methods of management including methods of buying, selling, and financing as well as store management.

Methods and Policies of Purchasing.—Coordination of purchases to sales is particularly important during a time of depression as the basis for securing frequent stock turnover coupled with a sufficiently complete line to avoid loss of sales resulting from an inability to meet customers' requirements. This coordination is being effected in many of the larger stores by an executive known as the merchandise manager. Each buyer then is no longer independently responsible for his department.

One large department store in the East which is noted for its management methods reports:

> The quantity of stock carried depends on market conditions. We carry low stocks on falling market. Records are kept of calls for merchandise not in stock and sales lost. Over-buying is guarded against by departmental budget, layout plan of purchases, sales, stock on hand at beginning of the period, also mark-up, mark-down, and gross profit. For some departments we have a model stock plan, showing distribution of budget over various lines by styles, price, size, etc. This plan is complete about six months before buying season. There is a definite app opriation for each depa tment and line which limits the amount which a buye may spend. A study of sales from month to month is made in order to determine minimum stock. Normal growth is provided for in making budgets and appropriations.

Sales Analyses and Buying Schedules.—Close analysis will bring out the comparative sales of various sizes, colors, and types of articles, thus furnishing an accurate guide to purchasing. For example, an analysis of sales of shoes by sizes and widths made in one department store recently yielded figures regarding the proportion of sales among the different lengths, widths, colors, heights, and styles which differed considerably from the usual schedule. As a result of this analysis, the buyer reduced his stock and at the same time gave appreciably better service to his customers. Such analyses afford one of the best methods of reducing the cost of doing business and at the same time increasing the quality of service.

Stock Turnover.—The importance of frequent stock turnover can hardly be exaggerated. This has proved an almost unfailing gage of good management. In the early stages of a depression when falling markets are the rule this is of unusual importance. The fact already brought out that retail stores suffered far more from shrinkages in inventory values than from loss of business is vital.

An expert accountant who specializes in department store accounting states to us these advantages of low stock and frequent turnover:

> Facts prove conclusively that the securing of a proper turnover—that is, keeping the stocks at a figure where they belong—is one of the major elements of

merchandising in any period of the business cycle, whether it be in what are termed normal times or in the times we have just been experiencing. Heavy stocks mean to the merchant heavy markdowns and shortages, and the inability to catch the market on the turn and, what is of the greatest importance, in many departments, the failure to catch the customer's ever changing fancy.

A large New England department store confirms this principle in the following words:

> Periods of depression did not hurt business because we turned stock every sixty days. At the beginning of the depression we turned stock on an average of forty-three days. We had low inventories when the recent depression began.

Many stores which had low stocks and large cash reserves bought materials after the break at attractive prices and found the liquidation and depression periods of the last cycle an opportunity rather than a set-back. Several reported the best business in the history of the store at a time when others were staggering under losses.

Avoidance of heavy inventories and conservation of liquid resources also makes it possible to take advantage of purchase discounts. The importance of purchase discounts in reducing costs of doing business is very generally under-estimated. Reports received have shown case after case where the savings from this source actually exceeded the total net profits for the year. It has been found that the better stores almost invariably take their discounts, and consider this a matter of prime importance. This policy is not nearly so universal among the smaller and less progressive establishments.

Reports received show great differences in the skill with which purchases have been timed to arrive just before they are required. Many stores have increases of inventory just in time for heavy buying periods; while others have accumulation of stock several months ahead of requirements.[1]

Effect of Improved Management Methods during Depressions.—While much thought has been given to retail store problems, most of the development has been in the direction of improving selling methods. The improvements in management have been made with this object in view. Much can be done by the application to the problems of retail store management of the principles that have proved so effective in reducing factory costs.

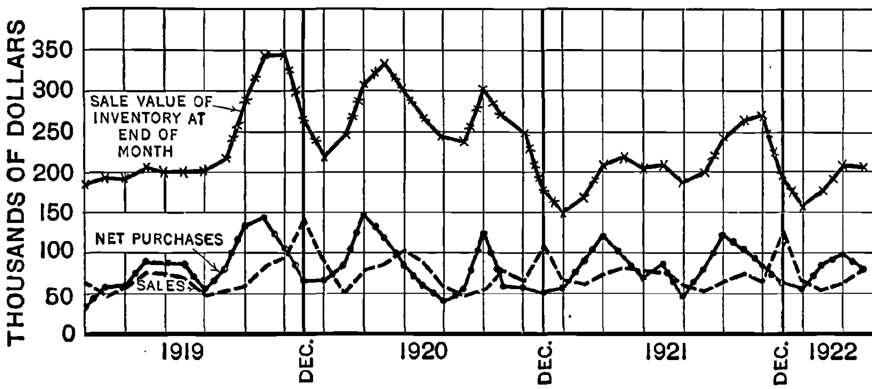
Analyses and standardization of methods of checking and handling incoming stock, of deliveries, of office management, of store upkeep, of methods of replacing stock, and of utilization of sales clerks' spare time will result in large reductions of cost.

Exchange of Statistics.—A recent development which promises much is the exchange of operating statistics and cost figures between stores.

[1] Chart 39, necessary Christmas purchases but also large purchases in March, 1920 just before the break in prices.

Each store knows exactly how its expenses for salaries, advertising, deliveries, merchandise losses, etc., agree with similar figures for the other stores in the group. To utilize this information, however, each store must set up standards of accomplishment adapted to its own conditions. This can be done only by thorough and detailed analysis. There is a large and inviting field for development through some independent agency, trade association, or special expert service. Reports received from stores which exchange statistical data show them to be considerably better managed generally than those which have not availed themselves of this service.

CHART 39.—COMPARISON BETWEEN SALES, PURCHASES, AND INVENTORIES IN A DEPARTMENT STORE.



Methods of Stabilizing Sales.—The methods used to meet falling off in sales due to cyclical business depressions may be grouped under the following heads:

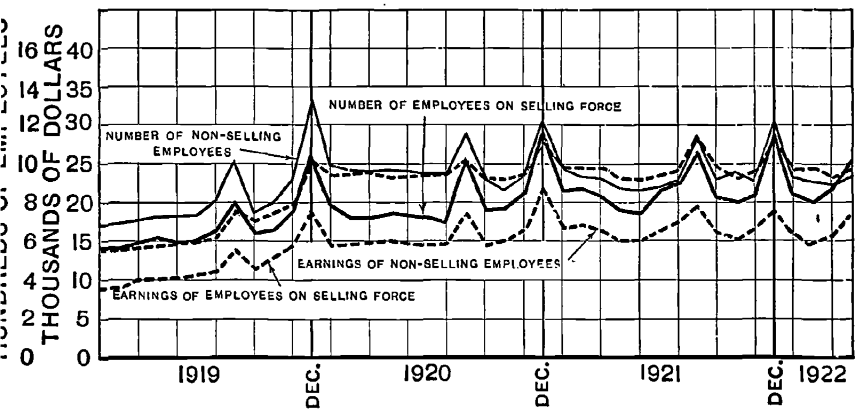
Reducing price to reflect reduced replacement costs.
Advertising.
Special sales.
Increasing sales efficiency through incentive to salesmen.
Featuring special lines adapted to prevailing conditions.

Prompt Mark-downs to Reflect Lower Replacement Values.—It has been a general belief that the retail merchant has retarded liquidation by delays in reducing prices. Reports received show that many, perhaps most, of the larger stores did begin to liquidate promptly. Evidence of this fact is the review of the group of department stores referred to near the beginning of this section, in which it is shown that during the year 1920 mark-downs of $4,210,000 were taken—almost 11 per cent of total sales. This mark-down is approximately one-third of the retailer's margin above cost to him, and appreciably greater than average profit.

In our contact with stores in various parts of the country we find is policy of prompt price reduction emphasized over and over again by e successful managers as a prime essential at the beginning of a falling arket. On the other hand, the characteristic of the majority, who were everely caught, was their failure promptly to follow this policy.

Piecemeal Reductions Not Effective.—The practice of reducing prices y degrees has been shown to defeat its own purpose, because it gives the npression that prices will be lower still. It is not until they feel that the ottom has been reached and expect prices to rise that buyers will come ıto the market. Sharp cutting and then maintaining the price stimuıtes buying, while several smaller cuts which total as much or more than he decided reduction may fail to attract business.

HART 40.—EARNINGS AND NUMBER OF EMPLOYEES ON SELLING AND NON-SELLING FORCE IN RETAIL STORES.



Advertising.—The following question was put to retail merchants in all arts of the country:

Do you increase or decrease your advertising expenditure, during business epressions?

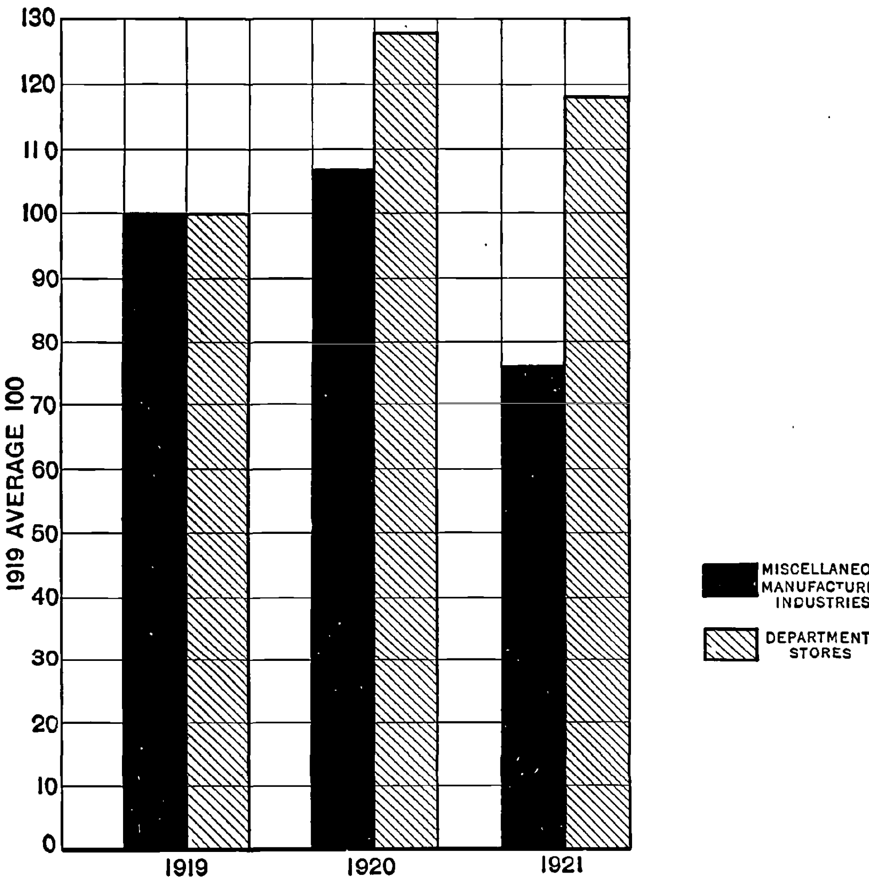
In answer to this question only 12 per cent of the stores stated that they ıcreased expenditure for advertising during business depressions, about 5 per cent reported decrease of advertising, and 62 per cent answered ıat conditions of increasing or decreasing business did not govern dvertising expenditure.

Reports and interviews brought out the fact that very few stores felt ıat they could determine at all accurately the effects of their advertising. early all believe that advertising is necessary—practically none had ıy records which prove the relative effectiveness of different mediums ıd displays.[1]

[1] Compare the fuller discussion of this topic in the preceding chapter.

Employment in Retail Stores.—The conditions of employment i retail stores are much more stable than in the manufacturing processes It is a general policy among dealers to maintain a regular force the yea round, adding temporary clerks at Christmas and other rush times Many of the smaller stores have arrangements whereby they are abl

CHART 41.—RELATIVE EMPLOYMENT IN MISCELLANEOUS MANUFAC TURING INDUSTRIES AND IN 40 DEPARTMENT STORES.



to secure extra help on Saturdays. Curves are presented (Chart 40 and 41) showing conditions of employment in typical retail stores. I will be noted that there is but slight monthly fluctuation in these figure and a rising trend in the number of employees. Advertising costs in thes stores rose from an average of $4,000 per month in 1919 to abou $8,000 in 1921.

ACKNOWLEDGMENT

Appreciation is extended to the various executives of the man manufacturing plants and retail stores who have cooperated so cordiall

by replying in person or by correspondence to questions. Particular thanks are due for the tabulations of plant statistics which were necessary to present a comprehensive view of the facts.

Valuable assistance has been rendered by the United States Labor Commissioner, Ethelbert Stewart, the United States Department of Commerce, James W. Eadie, Jr. of Boston, Harvard University Committee on Economic Research, Babson's Statistical Organization, Federal Reserve Banks, and various trade associations.

For the detail work of the investigation appreciation is expressed to our engineers, Edward H. Hansen for conducting the major part of the manufacturing investigation, and James Forrestal, Jr. in the merchandising studies. Miss C. J. Griffith also assisted in developing the merchandising analysis.