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BUSINESS CONDITIONS

A REVIEW BY THE FEDERAL RESERVE BANK OF CHICAGO

Agricultural Outlook for 1949

Strong Demand for Farm Products to Continue¹

A strong demand for most farm products is expected in 1949. Increasing Federal expenditures for defense and substantial amounts of foreign aid, continuing backlogs of private demand for capital goods, a high level of expenditures by state and local governments for construction of schools, streets, and highways, and the high level of bank deposits and other liquid assets readily available for spending give considerable assurance of high levels of employment, income payments, and demand, at least for the first half of the next year.

Prices received by farmers in 1949 probably will average about as high as in 1948. Of course, there may be significant variations for individual products, due largely to changes in supply. Cash receipts from farm marketings may be about as high as the 30 billion dollars estimated for 1948. Production expenses will continue high. Net income of farmers may decline to about 15 billion dollars, eight per cent below the 16.3 billion estimated for 1948. The total volume of farm products marketed probably will be about the same as in the current year, assuming some decline in crop production.

It is recognized that prices might rise appreciably if international tension should increase and the volume of military and foreign aid expenditures were stepped up from the levels now scheduled. But it is expected that such further price advances would be principally in *nonagricultural* commodities. On the other hand, if international tension should ease sufficiently, substantial cutbacks might be made in the rearmament and foreign aid programs. This could result in an appreciable weakening of the demand for farm products in the second half of 1949. But even under such a situation, it is thought unlikely that cash receipts from farm marketings for 1949 as a whole would be more than 10 per cent below the 30 billion dollars estimated for 1948.

If the European Recovery Program is extended in line with the size originally authorized, the volume of United States agricultural exports in 1949 may be about the same as for the current year. Foreign requirements remain large despite marked improvement in European crop production this year. Even with further improvement in 1949, it is expected that any easing in shipment of food grains probably would be offset by increased shipments of cotton and tobacco, and of feed grains to rebuild livestock numbers.

Even if crop production in 1949 is large, only minor declines in prices of corn, wheat, cotton, tobacco, rice, and peanuts could occur, assuming the price support program is effective. Support prices for some other crops, such as potatoes and flaxseed, probably will be reduced in 1949 and, even though fully effective, would permit substantial price declines for these crops. Increased supplies of livestock and livestock products may appear in

the second half of 1949, reflecting the record production of feed crops in 1948, with somewhat lower prices resulting, unless offset by increased demand.

LIVESTOCK: HIGH PRICES MAINTAINED

Increased production of pork but reduced supplies of beef, veal, and lamb are expected in 1949 with total meat production only slightly above the 1948 level. A continued high level of personal incomes probably would hold prices of meats and meat animals at about their 1948 levels. This would assure favorable incomes for most Seventh District farmers in 1949. Sharply reduced feed prices indicate very favorable feeding ratios and profitable livestock production for 1949 markets.

The large supply of corn available from the 1948 crop is expected to result in increased hog production with the 1949 spring pig crop increasing, possibly 15 to 20 per cent over 1948. Slaughter of cattle and calves in 1948 apparently will exceed the number added to herds for the fourth consecutive year and result in a further decline in the number on farms January 1, 1949. Even though total beef production may be lower in 1949, more of the supply is expected to be of high quality as a result of large feed supplies and expanded grain feeding.

Livestock prices are expected to fluctuate seasonally during the year but less erratically than in 1948. The outlook is for a smaller summer rise in prices next year, but a more than usual decline in the late fall as marketings increase sharply in the fourth quarter of the year as a result of the anticipated large spring pig crop. This would result in a large increase in meat supplies at that time. Beef and beef cattle prices are expected to average above their usual relationship to pork and hog prices since less beef and more pork are expected to be produced.

DAIRY: INCREASED NET INCOME

The net income to farmers from dairy products in 1949 may increase slightly from the current year. Decreases in outlays for feed probably will more than offset any increase in expenditures for other production items.

If the high level of consumer incomes indicated above is realized in 1949, prices of dairy products probably will average about the same as this year. Milk production is expected to exceed the 117 billion pounds in prospect for 1948, largely as a result of increased feed supplies. The number of cows milked probably will be smaller than in the current year, but heavier feeding is expected

¹This article largely summarizes the discussions presented at the U. S. Department of Agriculture's 26th Annual Agricultural Outlook Conference held in Washington, D.C., October 11-15, 1948.

(Continued on Inside Back Cover)

Economic Pattern of the Chicago Area

Diversity Still Highlights Industry in 1948

Probably the greatest single distinguishing economic characteristic of the Chicago industrial area¹ in comparison with other great centers of industry is its unparalleled diversity. This diversity not only characterizes the broad economic pattern, but is found within most industry subgroups both in manufacturing and nonmanufacturing as well. As a result of the war, manufacturing employment is centered to a somewhat larger degree in durable goods production, but the diversification within this broad field nevertheless is greater than in other durable goods centers in the nation.

INDUSTRIAL STRUCTURE

Chicago is a primary producer of basic steel, but employment in the very numerous fabrication plants is larger in total than that in the blast furnaces and rolling mills. Machinery production runs the entire gamut of industry classification; radio and communication equipment is made up very importantly of parts manufacture rather than being concentrated in the production of home receiving sets. Likewise meat packing, for which Chicago has long been famous and in which it still holds leadership, comprises only about one-third of the food industry, which in turn accounts for less than five per cent of all employed persons.

Chicago appears to provide a better cross-section of the nation's industrial pattern in miniature than can be found in any other area, and hence, business trends here commonly are observed with great care for their national as well as local significance.

Manufacturing constitutes the most important base of employment in Chicago, but the area is not as highly dependent upon manufacturing for jobs as such other large centers as Pittsburgh, Detroit, or Cleveland. Total employees in nonagricultural establishments in Chicago at present divide as follows: manufacturing, 43 per cent; wholesale and retail trade, 21; service, 12; transportation and public utilities, 9; finance, 5; and all other, 10. These major employment divisions indicate that most of the area's workers, 57 per cent, earn their living outside of manufacturing plants.

Approximately 107,000 establishments provide the working space for Chicago's employment. About 12,000 of these are in manufacturing, 88 per cent of which employ less than 100 persons. However, the 2.3 per cent of the firms which employ more than 500 persons account for about 48 per cent of total employment.

The 95,000 establishments providing the base for Chicago's nonmanufacturing employment conform to the size pattern generally applicable to the nation's major

industrial areas. These are distributed as follows: 41,000 in wholesale and retail trade; 22,000 in services; 20,000 in finance, insurance, and real estate; and 12,000 in all other groups including numerous general and special trade construction contractors.

PLANT EXPANSION AND JOBS

Since 1940 the Chicago industrial area has had the largest expansion in value of new plant and equipment among all industrial areas in the nation. While the bulk of the 1.3 billion dollars spent in Chicago during the past eight years has been for new industrial facilities to manufacture war products, about 17 per cent of these aggregate expenditures have occurred since the end of the war.

Chicago's aggregate industrial facilities currently provide employment for about one million persons. Virtually all are residents of the area. Nearly 600,000 workers are employed in the durable goods industries, 450,000, or three-fourths, of whom are engaged in making machinery, electrical goods, and iron and steel products. The industries producing transportation equipment; non-ferrous metals; lumber and furniture; and stone, clay, and glass products employ in total about 144,000 persons, or the remaining one-fourth of the durable goods group.

Among the 414,000 workers in nondurable goods manufacturing industries, 197,000 or nearly half, are found in food and printing. Textiles and apparel, miscellaneous industries, chemicals, paper, petroleum, and leather follow in that order and make up the balance of the "soft goods" group. The large employment in miscellaneous industries, comprising mostly photographic equipment, scientific instruments, barber and beauty shop equipment, advertising specialties, fabricated plastics, and sporting goods, is characteristic of the nation's larger industrial areas, e.g., Chicago and New York. Since the output of these industries is so highly specialized, their location is largely confined to areas with established distribution facilities, and in which a large number of prospective buyers are concentrated.

As would be expected, the plant expansion during the war years was concentrated largely in metals and machinery. Postwar expansion, however, has been more

This article summarizes a more complete study entitled "Employment, Production, and Income in the Chicago Industrial Area," just released. The report seeks to fill in some of the more important gaps in economic information about the Chicago area and is the result of close cooperation with numerous other interested private and public organizations.

Copies of the full publication may be obtained upon request to the Research Department, Federal Reserve Bank of Chicago, Box 834, Chicago 90, Illinois.

¹The Chicago industrial area includes Cook, Du Page, Kane, Lake, and Will counties in Illinois, and Lake County, Indiana.

than half in the nondurable goods industries, with food and printing leading. Growth of facilities in durable goods manufacturing since the war's end has been heaviest in plants for the manufacture of iron and steel products and electrical machinery.

Chicago's million manufacturing workers, using the vast local factory facilities, now turn out products valued at an estimated annual rate of 12 billion dollars. This total is approximately equal to the wartime peak of 1944 and is roughly three times as great as in 1939. It represents about seven per cent of total national industrial production, the nondurable goods as a group providing nearly half of the dollar total of all manufactured products.

TRADE AND FINANCE

Although the number of persons employed in the Chicago area's wholesale and retail trade activities—currently at about 490,000—declined both relatively and absolutely during the war years, the postwar period has brought about a marked expansion. The wartime drop was but a local manifestation of a nationwide trend. The number of employees in trade is still below its prewar position relative to other employment, but there seems reason to expect that the relative position of this group will improve as emphasis turns from production to distribution.

Personal income in the Chicago area is estimated to have reached a current annual rate of about 10.3 billion dollars, and constitutes about five per cent of the national total. The extent of postwar local inflation can best be seen by the 15 per cent increase in price level since 1946, as compared with a 12 per cent rise for the nation as a whole. The cost of living as measured by the Consumer's Price Index of the U. S. Bureau of Labor Statistics increased more in Chicago than in any other major city during this period, and the present Chicago level is the highest on record. There is little doubt that the unusually large local growth in employment and income account in considerable degree for this large general price increase.

Chicago's role as a financial center has increased appreciably since the outset of the war, but the area remains well behind New York City in volume of most types of financial transactions. The combined commercial banking resources of the area now exceed seven billion dollars compared with less than four billion dollars in 1939. The Federal Reserve Bank of Chicago has now grown to be an eight billion dollar institution from 2.6 billion in 1939. Within the Chicago area are about four per cent of the nation's total commercial banking resources, and about five per cent of all those outside New York.

In some measures of wartime and postwar expansion, however, the Chicago area has not kept fully abreast with the growth taking place in certain other sections of the country. The 165 per cent increase in bank debits in Chicago since 1939 has been exceeded, for example, by the 235 per cent gain in Detroit, and 185 per cent advance in the Seventh Federal Reserve District and

among all reporting centers generally in the nation. The New York increase, however, has been limited to about 150 per cent over the same period.

BUSINESS PROSPECTS

In the fall of 1948 two broad forces dominate business trends in the Chicago area as elsewhere. On the one hand, new inflationary pressures are evident as a result of recently stepped-up foreign aid and defense programs, tax reduction, widespread third-round wage increases, and liberalization of mortgage credit terms through Congressional action. On the other hand, a leveling-to-slightly downward tendency is appearing among the many business lines which are experiencing consumer resistance arising from consumer financial stringencies and a "catching up" with certain backlogs of war-deferred demand. In addition, some tightening of credit conditions seems probable in light of credit restraining legislation enacted by the recent special session of Congress.

When attention is directed to the magnitude of the general problems to be faced during whatever eventual transition may occur from the prevailing inflationary trend, prospects for business and employment in the Chicago area appear somewhat more favorable than for many other sections of the nation. While the close relationship between economic trends in Chicago and the nation precludes any marked difference in future developments, the local business structure seems likely to enable this area to retain somewhat longer than average the economic "carryover" from the war, and to benefit as rapidly as most other areas from future improvements in general business conditions.

Given any extended period of general prosperity, a not unlikely prospect over coming years, diversification of industry, coupled with the area's many natural advantages, may well prove to be the most important factor in Chicago's future growth. With the center of population moving westward, an industrial area which combines skilled labor in practically every industry, industrial "know-how," proximity to market, and unexcelled facilities for shipping goods and assembling raw materials seems certain of future development in a growing national economy.

The long-run directional lines of industrial growth also seem to be reasonably clear. Chicago is likely to continue to be heavily engaged in the production of a wide range of capital goods for the nation's industries and farms. At the same time, it will continue to produce a large line of consumer goods both of the durable and nondurable kinds. The area's financial, trading, and other service activities should continue to expand with the manufacturing development. Spectacular growth periods, however, such as have occurred in Chicago's past history are not likely to be repeated. Industrial areas like nations, tend to slow down in growth rate as they mature, but the record of the war and postwar years speaks well for Chicago's long-run future industrial and commercial position in the national economy.

District Maintains Record Employment

Tight Labor Market Expected to Continue into 1949

For nearly 18 months nonagricultural employment in the Seventh Federal Reserve District, comprising most of Illinois, Indiana, Michigan, and Wisconsin, and all of Iowa, has been maintained at a record level of about 7.3 million persons, roughly 200,000 more than at the peak of war production and two and one-half million higher than in 1939 (see Table 1). While some spotty unemployment exists, and seasonal changes are reappearing, prospects for continuation of the present over-all employment level well into 1949 now seem quite favorable. Further scattered business adjustments affecting employment, however, are foreseen as a result of catching up with war deferred backlogs of demand and consumer resistance to high priced, less essential goods and services. Because no appreciable net change in the size of the labor force is anticipated, tight labor market conditions also are expected to persist for many specific types of workers.

EARLY POSTWAR LAG BEHIND NATION

The Seventh District did not exceed its wartime non-agricultural employment peak until midway in 1947, although the nation generally had regained its wartime level by late 1946. Causes for the initial postwar lag in employment in this District can be traced primarily to conditions in the many industrial areas specializing in heavy goods production where problems of plant re-conversion and expansion, industrial disputes, and shortages of raw materials and manpower were particularly acute.

Many of these latter problems persist because the District's leading manufactures include virtually all of the products currently in heaviest demand for both domestic and overseas markets. Furthermore, relatively higher production and employment in the months ahead

can be expected in this District than in other sections of the country having less industrial output in iron and steel, automobiles, heavy electrical equipment, agricultural and construction machinery, railroad equipment, and many key building materials.

Although nonagricultural employment gains generally have been small during the current year, it appears quite evident that the Seventh District will show a greater proportionate increase in 1948 than the nation. Moreover, the District very likely will experience a larger net increment in employment in 1948 than last year, while the nation is not expected this year to equal its 1947 increase.

Since 1939, nonagricultural employment has expanded about 50 per cent in both the United States and the Seventh District. Such an increase in an already heavily industrialized area is noteworthy in view of the striking war and postwar industrialization of the Far West and the South which greatly influenced the national employment total. Explanation is to be found in the strong postwar resurgence of growth in the service industries and in the continued strength of durable manufactures.

CHANGES IN EMPLOYMENT STRUCTURE

Since 1939, manufacturing, wholesale and retail trade, transportation, and government, including Federal, state, and local, all have increased in importance as sources of Seventh District employment. Principally because of postwar gains, employment in the service industries is well above the prewar level, but the rate of increase is slightly below that for all nonagricultural employment. Employment by government is 35 per cent larger than in 1939, with most of that gain attributable to expansion during the war years, a trend which has not been reversed subsequently.

Manufacturing and trade combined now employ over 60 per cent more people than in 1939. Seventh District construction employment has almost doubled since the slack year of 1944, by which time most war projects were completed, and now stands about two-thirds above the 1939 level. However, employment in the group classified as finance, real estate, and insurance has risen by only 25 per cent.

The considerable difference in rates of increase among the various major industry divisions during the past decade suggests some possible permanent change in the basic structure of nonagricultural employment in the Seventh District (see Table 2). However, there is little reason to expect that much of the shift in the broad industrial pattern of employment is of an enduring nature. All-out war production and full employment based largely upon filling a backlog of demand arising from war short-

TABLE 1
ESTIMATED EMPLOYMENT IN SEVENTH DISTRICT
NONAGRICULTURAL ESTABLISHMENTS, BY MAJOR
INDUSTRY DIVISION, SELECTED YEARS 1939-48

(In thousands)

Group	1939	1943	1944	1945	1946	1947	1948 ¹
Manufacturing.....	1,785	3,450	3,455	3,030	2,940	3,205	3,145
Mining.....	40	40	40	40	40	40	40
Contract construction..	160	185	135	155	220	260	260
Transportation and public utilities.....	520	570	575	585	625	660	645
Trade.....	1,025	1,215	1,200	1,220	1,355	1,420	1,460
Finance, insurance, and real estate.....	220	240	230	235	260	270	280
Service.....	495	575	575	590	640	675	705
Government.....	565	740	735	735	730	735	760
Total nonagri- cultural.....	4,810	7,015	6,945	6,590	6,810	7,265	7,295

¹Preliminary estimates.

ages and unprecedented Government peacetime expenditures clearly distort the pattern of employment toward heavy goods industries and others with relatively higher rates of pay. Already there are some indications of a return shift toward a more normal peacetime, though not necessarily prewar, labor force distribution.

Manufacturing employment which constituted 37 per cent of Seventh District nonagricultural employment in 1939, and rose to 49 per cent in 1943, since has dropped back to 43 per cent. In the United States generally, manufacturing expanded from 33 to 41 per cent of total employment during the war and currently accounts for 36 per cent. It thus appears that the nation as a whole is nearer its prewar employment relationship in manufacturing than is the Seventh District, a not unexpected development considering the continuing record demand for Seventh District manufactures.

Seventh District trade employment has followed about the same war and postwar pattern as in the United States, that is, increasing about one-fifth during the war and another fifth by the end of 1947. Most of the fluctuation has occurred in retail trade, but wholesale trade employment has shown a fairly steady gain, except for a leveling during the later war years.

Contract construction at present is a slightly smaller component of nonagricultural employment in the Seventh District, 3.6 per cent, than in the nation, 4.3 per cent, reflecting in part the noticeable postwar lag in residential construction activity in the Midwest.

Federal, state, and local government agencies now include on their payrolls about 11 of every 100 nonagricultural workers who are employed in the Seventh District. This is a slightly smaller proportion than before the war, when it was 11.7 per cent, and still less than in the nation as a whole, where it is 12.5 per cent compared with 13 per cent in 1939.

MANUFACTURING EMPLOYMENT LEADS

Since manufacturing three years after the war's end still represents 43 per cent of total District employment in nonagricultural industries, it is not to be expected that this proportion will fall sharply as long as current

TABLE 3
PERCENTAGE DISTRIBUTION OF MANUFACTURING
EMPLOYMENT BY MAJOR INDUSTRY GROUP
SEVENTH DISTRICT STATES
SELECTED YEARS 1939-47

Group	1939	1943	1947
Manufacturing.....	100.0	100.0	100.0
Durable.....	61.7	70.7	67.3
Nondurable.....	38.3	29.3	32.7
Iron and steel.....	13.9	15.5	13.8
Electrical machinery.....	4.6	6.6	7.1
Machinery except electrical.....	11.8	15.3	16.1
Transportation equipment.....	20.1	24.0	19.2
Nonferrous metals.....	2.7	3.5	3.7
Lumber and finished lumber products.....	6.1	4.1	5.0
Stone, clay, and glass.....	2.5	1.7	2.4
Textile mill products.....	1.8	1.1	1.2
Apparel and finished textile products.....	3.6	3.0	3.0
Leather.....	2.5	1.7	1.8
Food.....	11.6	9.4	10.8
Paper.....	3.2	2.4	2.8
Printing and publishing.....	6.1	3.3	4.4
Chemicals.....	2.9	4.0	3.5
Petroleum and coal.....	1.2	.7	.9
Miscellaneous.....	5.4	3.7	4.3

high levels of production, employment, and income persist. Moreover, it is quite possible that manufacturing will emerge from the war with permanently larger demand for labor than in prewar years. Should such a secular trend develop, it seems likely to be accompanied by a relative decline in employment in agriculture, the service industries, and perhaps trade.

Within Seventh District manufactures, wartime demands obviously caused a change in the balance between durable and nondurable goods employment (see Table 3). In 1939 less than 62 per cent of manufacturing workers were engaged in durable goods industries. This proportion rose to more than 70 per cent in 1943, but by 1947 had fallen slightly to 67 per cent.

The extent to which "capital" goods production brought about this changed relationship can be seen from a review of the specific component industries which shared the gain. Machinery manufacture, both of electrical and nonelectrical products, has had by far the greatest employment gains, numerically and proportionally throughout the war and postwar years. Nonferrous metals also showed some relative improvement among all manufacturing. Factories in these and many other "heavy" product lines which closed wartime contracts with full quotas of workers frequently were ready, after only minor reconversion tasks, to turn out machinery and tools for the accumulated demand in the capital goods market. In addition, newly developed products to meet specialized business and consumer needs commonly have required substantial plant and equipment expenditures by certain of the heavy goods producers themselves. Among nondurable goods industries, all except chemicals have shown moderate but clear-cut declines in their shares of total employment since the outbreak of war.

SEASONAL PATTERNS REAPPEAR

Although seasonal employment fluctuations in many nonagricultural industries have been obscured during the war and postwar years by the continuous record

TABLE 2

PERCENTAGE DISTRIBUTION OF EMPLOYEES IN
NONAGRICULTURAL ESTABLISHMENTS BY MAJOR
INDUSTRY DIVISION, UNITED STATES AND
SEVENTH DISTRICT, SELECTED YEARS 1939-48

Group	1939		1943		1948	
	United States	Seventh District	United States	Seventh District	United States	Seventh District
Total nonagricultural.....	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing.....	33.2	37.2	41.3	49.2	36.2	43.1
Mining.....	2.8	.8	2.2	.6	2.0	.5
Contract construction.....	3.8	3.3	3.7	2.6	4.3	3.6
Transportation and public utilities.....	9.6	10.8	8.6	8.1	9.0	8.8
Trade.....	22.1	21.3	17.4	17.3	21.6	20.0
Finance.....	4.6	4.6	3.3	3.4	3.8	3.8
Service.....	10.7	10.3	9.1	8.2	10.6	9.7
Government.....	13.2	11.7	14.4	10.6	12.5	10.5

demands for goods, recently they have begun to reappear on a spotty basis. It is not yet clear, however, whether the seasonal variations will follow closely their prewar patterns.

Indications are that the summertime dip in manufacturing employment and peak in construction employment are already re-established, although still less pronounced in 1948 than before the war. In 1939 construction employment varied from a January low of 75 per cent of the yearly average to 115 per cent of the same average in August. Though August remains the peak month for construction employment, this year it was only about six per cent above the projected average, and January, the low month, was only about five per cent below. April through October continue as the months during which construction employment is above the annual average. Such "flattening" of the seasonal pattern indicates both the high demand for building tradesmen and some lessened dependence upon weather conditions for building operations.

The 52 per cent increase in nonagricultural employment since 1939 in the Seventh District, as would be expected, has not been uniformly distributed over the region because of the considerable local differences in labor market conditions (see Table 4). The Seventh District portions of Wisconsin, Michigan, and Indiana have had slightly greater-than-average rates of increase, 53-57 per cent; Illinois has approximately equaled the gain for the District as a whole; and Iowa has experienced only a 40 per cent increase during the period.

Many of the wartime employment gains in durable goods manufactures in Indiana have been maintained, and the general declines noted elsewhere in some of the nondurables lines have been slight. Indiana and Wisconsin, in particular developed new and expanded metalworking industries during the war, which now appear to be well rooted as permanent peacetime additions to their respective employment structures.

CURRENT LABOR DEMAND

At the present time there are several localities with spotty unemployment in the District, and particularly in smaller- and medium-sized cities adversely affected by the partial or full shutdown of one or a few large

Area	1943	1947	1948
Illinois ¹	142	150	151
Indiana ¹	154	154	155
Iowa.....	122	136	140
Michigan ¹	157	154	153
Wisconsin ¹	143	155	157
Seventh District.....	146	151	152
United States.....	139	145	147

¹Estimate is for Seventh District portion of the state.

plants because of reduced orders, metal or other material shortages, or other work stoppages. Recent, but rather persistent, sales declines have meant fewer jobs in textiles, shoes, rubber, and scientific instruments. It now seems that about one manufacturing employee in 10 in this District is employed in an industry which is showing signs of contraction. At least seven out of every 10, however, appear to be in industries which as yet have given little or no indication of basic weakness in demand.

Defense orders to date have had no noticeable effect upon District employment. This is not only because of their typically small scale and rather scattered nature, but also their incidence thus far has been primarily in the manufacturing fields still experiencing record civilian demand and capacity operations.

How much of the current record employment is still based upon meeting accumulated demand from the war period in durables is not easily determined. A substantial war backlog, however, is now commonly held to persist in relatively few manufacturing fields, e.g., heavy electrical equipment, automobiles, and certain building materials. New demands arising from the present record level of general business activity, plus stepped-up Government buying, appear to give continuing support to many manufactures.

The basic demand for iron and steel seems exceptionally strong in this District as a broad sustaining force for much employment in coming months, even aside from new defense orders. In Illinois, Indiana, Michigan, and Wisconsin the level of manufacturing activity can be expected to be linked closely to the progress and prospects for metalworking industries. The comparatively small increases recently, as well as some declines now apparent, in primary metalworking manufacturing employment are largely due to the general steel shortage rather than to declining markets.

NEAR TERM OUTLOOK

Continuation of the present employment trend, plus expected seasonal changes during the remainder of 1948, will raise the Seventh District total employment in non-agricultural establishments to more than 7.4 million persons. December was the peak month of 1947.

The United States Employment Service has estimated that the additional employment demand attributable now to defense contracts and the armed services will equal nearly one million during the next year. The Seventh District's share of this total in all probability will approach 200,000 persons. Since there now are fewer workers unemployed in this region than in most other sections of the country, more difficulty may be encountered in filling future manpower needs in the Seventh District than elsewhere. Nevertheless, continuing readjustments in particular lines of business, further exodus of veterans from postwar training schools and colleges, and some additional return of women, youths, and older people to the labor force to supplement family incomes promise to minimize further tightening of labor market conditions in this District.

Measurement and Trends in Productivity

Output Per Man-Hour in Manufacturing Improves

Reports from business executives in leading manufacturing industries in the Seventh Federal Reserve District in recent weeks indicate that man-hour productivity in manufacturing typically is still below postwar expectations, but that nevertheless a distinct improvement over two years ago is evident. Results of a survey published earlier this year by the United States Bureau of Labor Statistics (BLS) tend to confirm this general impression, although in several industries the recent trend of productivity has been found to be downward as indicated by these objective BLS studies. While improved efficiency is everywhere welcomed in business, it is particularly important now as a badly needed general anti-inflationary force.

Contrary to some viewpoints, over-all productivity of American manufacturing in terms of man-hours of direct production worker labor did not decline during the war and postwar years below the level of the prewar year of 1939. In fact, according to the rough general measures available to trace productivity changes, based in part on opinions of business leaders and in part on statistical analysis, some gain appears to have taken place during the war years, and at least part of this gain has been retained in the postwar period. However, the long-run upward trend in productivity per man-hour of about three per cent per year, which was observed prior to the war, was interrupted during the later war and early postwar years and to date does not appear to have been fully resumed.

PROBLEMS OF MEASUREMENT

Attempts to measure and analyze trends in productivity pose many problems, both in concept (see *Business Conditions*, March 1947) and in statistical procedures. Ideally, productivity should be measured in terms of each of the separate factors of input—direct productive labor, raw materials, plant, machinery, power, and managerial ability—rather than in terms of labor only. Analysis would then ascertain which factors of input were accountable for observed changes in production. However, the non-labor factors are so difficult to ascertain in specific and comparable quantitative terms that they are commonly neglected when measurement of the productiveness of total manufacturing industry is attempted. The natural, but frequently unjustified, consequence is to infer that declines or increases in productivity are due entirely or primarily to worker effort—only one aspect of the matter.

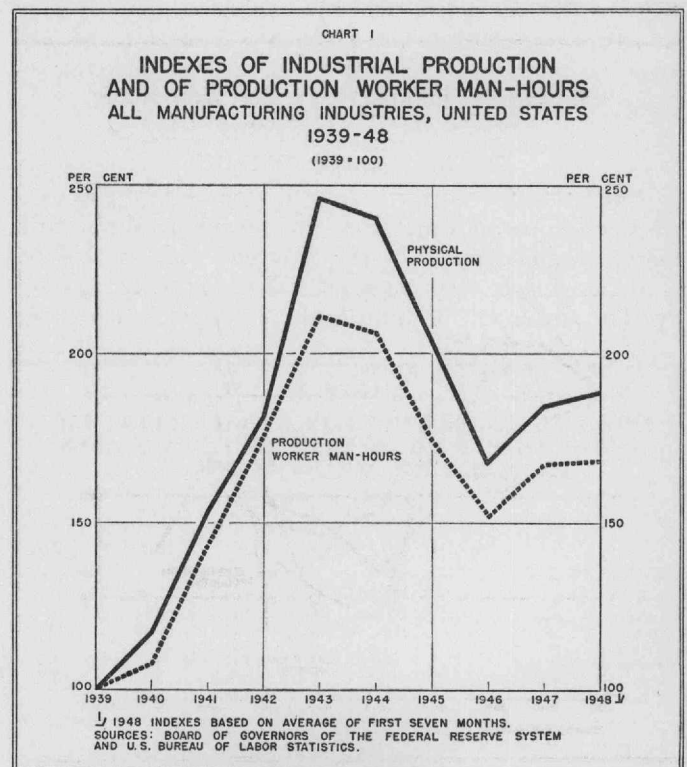
A further conceptual difficulty is encountered in analyzing productivity trends over long periods of time, because of changes in nature of the product. For example, the present day automobile is a much more

efficient and luxurious vehicle than the automobile of the 1920's. If it had to be manufactured with the plant and equipment in use at that time, the cost in man-hours of labor would be prohibitive. Thus, the measurement of productivity by merely relating the number of hours worked to the number of cars produced overlooks this qualitative improvement.

Major quality changes have occurred broadly throughout industry, as can readily be perceived by comparing today's radio, washing machine, refrigerator, and many other mechanical products with those of a few decades ago, but no generally accepted statistical method of adjusting for these changes has been developed. Indeed, many products, such as television sets, were not produced at all in previous decades, and therefore, no basis for long-run comparison exists.

Labor turnover, both among production workers and among supervisory employees, also has been an important influence affecting man-hour productivity. Turnover at the war peak was more than double the prewar rate and is currently about 30 per cent above 1939. Undoubtedly the high volume of turnover in supervisory positions, as well as among the production workers themselves, by minimizing the gains in efficiency attributable to experience on the job has had a marked effect upon the total output of manufacturing plants.

In view of these limiting factors cited and still others,



it may even be considered remarkable that over-all output per production worker man-hour has not followed a more generally unfavorable course in recent years. Had it done so, the inflation might well have been at an even more rapid rate than that actually experienced.

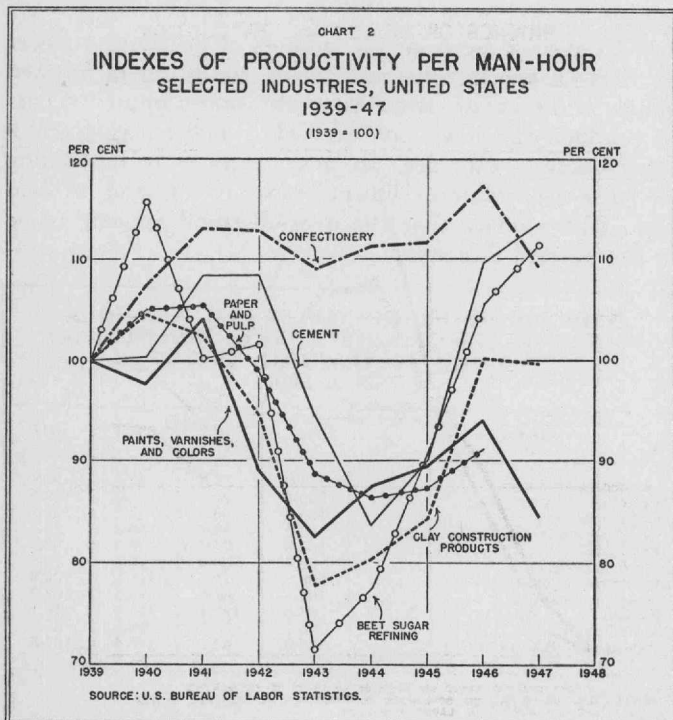
METHODS OF MEASUREMENT

In addition to the views of business executives, some rough indications of the trend of over-all productivity may be obtained by comparing the Federal Reserve Board index of industrial production with the index of total production worker man-hours in manufacturing industries. While certain limitations are inherent in this comparison¹ and make it unwise to draw inferences from small changes in the comparative trends of the two indexes, the broad movements are sufficiently clear to support the general conclusions given earlier.

The index of man-hours did not go above the index of physical production at any time during the period 1939-48, and since 1946 the upward trend of production has been greater than that of man-hours. The year 1946 marked the low point in this period, a situation which appears to have been accounted for largely by reconversion problems and by the interruptions of production through work stoppages arising from industrial disputes. The general trend of the last 18 months seems likely to continue into the future (see Chart 1).

More satisfactory—but unfortunately not widely enough used—methods of measuring productivity per

¹Caution must be used in making inferences from this comparison for two principal reasons even though both indexes are computed on an identical base period. (1) The component industries are not weighted into the all manufacturing index of industrial production on the basis of man-hours. Therefore production changes in specific industries would not be reflected in the total index in exactly the same proportion as would changes in man-hours. (2) Use of production worker man-hours only (made necessary because man-hour data are not available for non-production workers) results in a restricted picture of productivity.



man-hour involve the detailed study of manufacturing efficiency among a carefully drawn sample of firms in each industry. This procedure, currently being employed by the BLS, is based upon the collection of precise man-hour data actually expended in the production of a closely specified group of products over a defined period of time. By means of plant visitation, man-hours, both direct and indirect, are obtained along with output records, notes on production methods, and accounts of any extenuating circumstances which may have affected output. A weighted index for the industry is then constructed from these sample reports. To date, these indexes have been prepared and published for only a small number of industries and, methods must be devised to reflect the over-all changes in industry, but an important beginning at least has been made. By developing and maintaining such indexes of productivity in the many industries not now covered, a combined index of all manufacturing industries could be obtained. Such a combined index would place productivity analysis on a much firmer and more factual plane.

TRENDS IN HEAVY GOODS PRODUCTIVITY

Measured in the broad sense of the relationship of the durable goods component of the Federal Reserve index of industrial production to the index of total production worker man-hours, productivity in the hard goods industries currently is slightly above 1939, but somewhat under 1941. Since output per man-hour tends to rise—within limits—as production increases, the record of 1941 may present a more meaningful basis upon which to compare our present high production experience. Stated in another way, it can be said that productivity per man-hour in the durable goods industries has improved during the decade since 1939, but that the peacetime increase took place chiefly during the first two years of the period, and that today it appears that the level achieved seven years ago has not fully been regained.

Numerous factors relating both to labor and to other items of input, as already suggested, account for this situation. Dislocation in the supply of raw and semi-processed materials, as well as interruptions in the availability of parts and sub-assemblies, because of the unprecedented demands and insufficient supplies, have made it virtually impossible for managements to maintain a satisfactory balance between work force and output under these conditions.

The mere existence of full employment—desirable as it is from other standpoints—unquestionably is a deterrent to optimum output per man-hour. Not only do marginal workers become a more important segment of the work force, thus reducing the average of worker ability, but some indifference toward output and unwillingness to put forth full cooperative effort tend to become more common. When operations are being maintained at full capacity, there also appears to be less general incentive for best effort at the various levels of management, as well as among the more numerous production workers. In periods of labor shortage, some

individuals tend to be upgraded beyond their best capacities oftentimes causing misjudgments costly to productivity.

Recently published data on the productivity records of three specific durable goods industries studied by the United States Bureau of Labor Statistics reveal a somewhat variable experience. For example, in the cement manufacturing industry, productivity per man-hour in 1947 was about 13 per cent above 1939 and had improved over the previous year. Output per man-hour in this industry likewise was somewhat higher in 1947 than in 1941. In the clay construction products industries, however, productivity per man-hour was very slightly below the 1939 figures, and most recent trend data do not indicate improvement. The intermittent nature of production during the later war years caused productivity to decline greatly in both of these industries (see Chart 2).

In the clay construction products industry, the extreme shortage of supplies compared with demand undoubtedly has had an important adverse effect upon man-hour output. With the construction boom of the war and postwar years, manufacturing equipment in many cases has been allowed to deteriorate, and as a result greater expenditure of man-hours per unit of output has been necessary. In the case of the cement industry, improved productivity probably can be explained by the use of productive facilities at full capacity following a long period of excess plant capacity during the prewar decade.

In the glass production industry—the other durable goods industry for which specific data are available—productivity experienced a small advance over 1939 and appeared to be improving in 1947. However, this industry's 1947 productivity index was only 2.3 per cent above 1939.

NONDURABLE GOODS INDUSTRIES

Over-all output per man-hour seems to have made somewhat more progress in the industries producing nondurable products than in those specializing in durable goods manufactures. Among the "soft" goods industries, including food, clothing, chemicals, petroleum, leather, paper, and other goods of the less durable kind, over-all productivity advanced steadily during the war years to a point some 12 per cent above 1939, then receded somewhat during 1946. The recent trend, however, is again toward higher productivity, with the current level about 10 per cent higher than in 1939.

In view of the fact that so many firms in this group of industries were unable to maintain and replace their productive equipment during the war years because of lack of priorities, their productivity record is considerably better than might have been expected. Shortages of raw materials, however, in most cases have been less serious. Also, for the most part "assured" markets have been fewer in number and less enduring than in the durable goods industries, and the resulting competitive pressures have more commonly led to improvements in efficiency.

Of the specific industries for which BLS indexes are available, the rayon, sugar refining, flour milling, coke products, and fertilizer lines have had the best record in productivity improvement from 1946 to 1947. Other industries, for example, malt liquors, paints and varnishes, and condensed and evaporated milk, have experienced declines both from 1946 to 1947, and over the longer run from 1939 to 1947 (see accompanying table and Chart 2). The footwear and hosiery industries showed improvement in man-hour productivity throughout the war years, but a distinct trend in the opposite direction was evident in 1947. The detailed reasons underlying these varied trends are not immediately apparent. Nevertheless it may be said generally that the degree of the modernization of plant and equipment and the ability to maintain a capable work force within the individual plants comprising the industry rank as the most important factors.

PRODUCTIVITY AND INFLATION

From the standpoint of combatting inflation, improved productivity per man-hour is one of the most desirable influences. The net result of such improvement is to increase the supply of goods without increasing the volume of purchasing power, provided, of course, that proportionate price reductions occur. The fact that increased productivity since the war period has not been great enough to serve as a strong counterbalance to the increases in money wages has been a contributing influence to the general price rise. This is particularly true in those instances where output per man-hour has not only failed to improve, but has actually declined. The minor improvement in productivity over 1939 has been matched by an increase in unit wage costs of more than double the 1939 level. The expanded hourly earnings which have brought about this greater increase in unit wage cost have resulted in larger amounts of purchasing power available to workers for bidding up the prices of finished goods, while at the same time the lesser improvements in productivity have not exerted a sufficiently forceful counteracting influence. In any event it is heartening to have reports from business executives, and to find from BLS studies, that the over-all trend appears to be in the upward direction.

**INDEXES OF PRODUCTIVITY PER MAN-HOUR
IN SELECTED MANUFACTURING INDUSTRIES
UNITED STATES, 1941, 1945-47
(1939 = 100)**

Industry	1941	1945	1946	1947
Cane sugar refining	111.0	85.2	82.3	86.4
Canning and preserving	105.6	104.7	114.2	110.5
Coke products	105.3	100.5	97.0	105.2
Condensed and evaporated milk	98.4	85.5	86.3	82.1
Fertilizers	100.8	96.0	109.7	112.5
Flour milling	99.9	83.4	79.3	85.6
Footwear (except rubber)	108.5	111.3	116.5	106.6
Glass products	104.6	97.6	98.1	102.3
Hosiery	108.8	127.4	125.0	119.1
Malt liquors	96.1	88.3	88.0	85.3
Rayon and allied products	132.0	163.7	176.4	196.8

SOURCE: U.S. Bureau of Labor Statistics.

AGRICULTURAL OUTLOOK FOR 1949

(Continued from Inside Front Cover)

to result in milk production per cow in excess of the record 5,000 pounds in 1948.

Relatively high prices for meat animals and grain have made milking of cows much less attractive to farmers in recent years. Milk cow numbers declined 12 per cent since 1944 and total milk production about five per cent since 1945. Declines were much larger in areas where production of grains and meat animals are important alternatives to dairying. In this respect, it is interesting to note that substantial increases in milk cow numbers are expected only under less favorable general economic conditions. Under such conditions dairy product prices probably would hold up better than prices of meat animals, thereby encouraging farmers to devote more of their feed and labor supply to the production of dairy products. The strong demand for fluid milk and cream and domestic and foreign demands for whole milk manufactured products are expected to utilize a large part of the total milk supply. Thus, butter production and consumption, although showing some increase, would continue near the low level of recent years. Exports of dairy products in 1949 may be a little larger than the 2.3 per cent of total milk production estimated for 1948. Any increase would probably be largely in non-fat dry milk solids.

POULTRY AND EGGS: GROSS DOWN, NET UP

Gross returns from farm sales of poultry products in 1949 are expected to be slightly lower than in 1948. Lower feed costs, however, probably will more than offset the drop in gross receipts so that net farm income from poultry products may average higher.

Egg production for the full year is expected to about equal 1948, but probably will be lower in the first half of the year and higher in the second half. Egg prices may average higher in the first half of the year than in the corresponding period of 1948, but lower in the fourth quarter as supplies of eggs and meat increase.

The number of chickens raised in 1949 may exceed the current year by 15 per cent. Broiler and other chicken prices are expected to average lower than in 1948 with the greatest decline coming in the fourth quarter of the year. The percentage increase in turkey numbers is expected to be about the same as for chickens with lower prices in prospect, especially during the fourth quarter.

Export outlets accounted for less than four per cent of 1948 egg production and a negligible amount of poultry. Such outlets are likely to be even smaller in 1949.

Prices of chickens, eggs, and turkeys will be supported at an annual average price equal to 90 per cent of parity through December 31, 1949. No particular problem is anticipated except for eggs which may require price support when marketings are heavy.

GRAINS: ABUNDANT SUPPLIES ON HAND

Large domestic wheat supplies will add to the building

up of stocks which started last year. The carryover on July 1, 1949, may total 275 million bushels, compared with 195 million bushels this year. The 1948 crop is being moved rapidly into export, but the outlook for the years immediately ahead is for declining levels of wheat exports as production recovers in other countries. Prices will be supported by loans at 90 per cent of parity again in 1949. The loan rate averaged \$2.00 per bushel at farms for the 1948 crop. Prices have been below the loan level, however. This situation is expected to prevail again when the 1949 crop is harvested, even though the loan level for the 1949 crop may be five to 10 cents lower. The Department of Agriculture has recommended that farmers reduce acreage planted to wheat for harvest in 1949 by as much as eight per cent, shifting some of the available acreage to other crops. It is expected, however, that farmers will increase wheat acreage. Favorable markets for recent levels of wheat production are not in prospect for the years immediately ahead.

Record corn production and high levels of output of oats, barley, and grain sorghum resulted in sharp price reductions for feed grains during recent months. Prices of these grains are below support levels currently and probably will not exceed support levels unless prospects for 1949 crops appear unfavorable. The quantity of corn placed under loan or Government purchase agreement may exceed the 302 million bushels so handled in 1939. The loan rate for the 1948 crop of corn averages \$1.44 per bushel at farms. Loan rates for other feed grains are comparable to corn on a feed value basis. The 1949 corn crop will be supported at 90 per cent of parity according to present agricultural legislation. Carryover of feed grains into the 1949-50 crop year will be very large.

Export of feed grains in the year ahead probably will total about five million tons, equal to 1946-47 but much larger than 1947-48. The increase would be largely in corn.

OILSEEDS: LARGE SUPPLIES

Increased domestic production of fats and oils is expected to result in a lower level of prices for these commodities in 1949. Bumper 1948 crops of oilseeds assure a material increase in production of vegetable oils in 1948-49. Output of animal fats may decline slightly, but imports of copra and palm oil probably will be larger.

Prices received by farmers for soybeans produced in 1948 may average higher than the \$2.18 per bushel support price but materially lower than the price received for the 1947 crop. Flaxseed is supported at \$6.00 per bushel with no prospect for the market price exceeding the support level. Large crops of peanuts and cotton (cottonseed) will augment supplies of vegetable oils.

Foreign demand for edible fats and oils from the United States continues strong. Except for controls over exports, the volume of foreign shipments, particularly of lard and soybeans, probably would increase materially. Total exports of fats and oils from the United States in 1948 will amount to about one billion pounds. Edible fats and oils have a high priority in the allocation of foreign aid funds.

SEVENTH FEDERAL



RESERVE DISTRICT

