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INCOME GROWTH, ECONOMIC CHANGE, AND CAPITAL INVESTMENT

INCOME GROWTH in the Eighth District has tended to reduce per capita income differentials among the many areas of the district. This equalization is the result of many different kinds of adjustment to pervasive trends in the national economy. In some cases the adjustment is directly influenced by shifts in the national market, in others, more indirectly through local and regional markets.

Capital investment plays a key role in the adjustment process by increasing the productivity of local resources. Investment always permits the more intensive use of resources and often requires an addition to the local labor force. In local economy adjustments to an integrated national market, labor-using and labor-saving capital investments both help raise per capita income.

Clearly, there is no single, "best" way for a local area to participate in the nation's economic development.

Federal Reserve Bank

of St. Louis

Income growth in the Eighth District . . .

IN THE RECORDS of the Department of Commerce, national income for 1953 is registered at 252 per cent greater than that recorded for 1929. Despite the turbulence of the intervening years, a great depression, two wars, and inflation, real income has grown rapidly for the country as a whole. But it has been an experience that has, quite literally, changed the face of the nation. To meet the changing needs of the country, new techniques of production, new products, more of some things, less of others have been required. And in the process no one has quite stood still.

For at least a quarter of a century total district income payments to individuals have hovered at 5 per cent of national income payments to individuals. Occasional dips and rises have occurred to be sure, but there are no distinct trends in either direction. Broadly speaking, the economic activity within this region has grown apace with that of the nation. But something has been added, for this increase has been achieved with a smaller increase in population than nationally.

Income statistics as a measure of economic change take on added meaning when used together with population statistics. For economic development implies that an increase in productive capacity is not simply the result of a larger labor force. It would be difficult to equate economic growth with a larger national income, if population growth in the meantime had resulted in a smaller per capita income. If per capita income is used as a measure of change, the district has experienced a more rapid rate of growth than the nation as a whole—the district has not stood still

In the decade from 1929 to 1939 total income payments to individuals nationally and districtwise declined by about 15 per cent and district per capita income payments remained at a level of only 65 per cent of those nationally. In the following decade total district income payments to individuals rose as sharply as for the nation, but per capita incomes rose even more rapidly. By 1952 district per capita incomes were 164 per cent greater than they had been in 1929 while the average gain for the nation was 133 per cent.

The district aggregates, however, do not reveal the conditions that led to this increase in per capita income. This story is best introduced by a summary of the income records of the many small areas which make up the district.

. . . has tended to reduce per capita income differential among the many areas of the district.

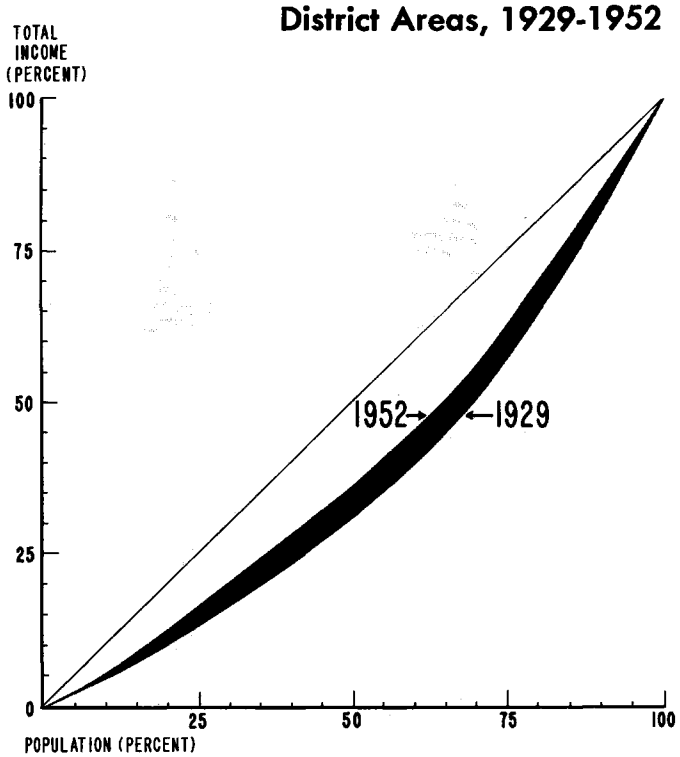
The increase in district per capita income is really the story of rising per capita incomes among all areas of the district under a variety of conditions. Total incomes did not grow apace with national income in all areas. Fully a fourth of the 99 areas experienced an income growth which lagged behind that of the nation and the district as a whole. Nor did all areas enjoy an increase in per capita incomes to the extent of the average. Yet on balance, as with the nation as a whole, there was a marked tendency toward geographic equalization of per capita incomes. It should be stressed that this tendency was not apparent in the depressed decade of the 'thirties, but was markedly so in that of the 'forties.

The movement toward geographic equalization of per capita incomes within the district can be indicated by measuring the geographic association of population and income. If per capita incomes were equal for all geographic areas, this would mean that the per cent of district population in each area would be equal to the per cent of the total district income in that area. The extent of any deviation thus provides a measure of the geographic inequality of per capita incomes. If this is done for each of the 99 areas in the district and the resulting deviations (either positive or negative) of like sign are summed, a coefficient is produced. The closer this coefficient approaches zero, the greater is the geographic equality of per capita incomes. For the district the results are: 1929, .20; 1939, .20; and 1952, .16.

The same information is presented graphically in Chart I. Equal per capita incomes among all areas will show up as a 45 degree line. The divergence from this condition is indicated by a curve lying to the right of the 45 degree line. That the 1952 curve lies closer to the 45 degree line than either the 1929 or 1939 curve is the significance of this diagram.

This district tendency toward geographic equalization of per capita incomes illustrates one of the most fundamental results of economic development in free trade areas generally. When population (labor force), or goods, or capital are free to move in response to economic incentive the result is to increase productivity and incomes for all concerned. Where all three are free to move, the increase takes place much more rapidly. The effect is a growing equalization of per capita incomes among places as all incomes rise. Contrary to the words of an old popular song and a much older political slogan, the poor *and* the rich grow richer.

Trend Toward Equalization of Per Capita Income among District Areas, 1929-1952



This equalization is the result of many different kinds of adjustment . . .

The trend toward geographic equalization of per capita incomes is a nationwide phenomena and is at once a source and result of nationwide economic growth. It is not an overstatement to say that without the high occupational mobility of our labor force the expansion of the 'forties would not have been possible. As many kinds of resources are geographically immobile, changing jobs frequently means changing locality. In this light, a high rate of migration among areas within the country is an index of economic expansion with a double meaning. When areas experience a rapid growth in real output and in the demand for additional labor, the quick response of the labor force to move in encourages further rapid growth. When areas are endowed with other kinds of resources and when the demand for labor grows more slowly, the opportunity for some to shift their jobs from an area with a relatively redundant labor supply to an area of relative scarcity means higher productivity and per capita income for those who remain.

Per capita income, of course, is simply a statistical ratio and, statistically, changes in per capita income can occur as a result of a change in the denominator (population), or the numerator (income), or both. For this reason it is important to note what kinds of changes in the ratio of income to population actually do result in the higher per capita incomes. All areas within the Eighth District experienced rising per capita incomes in the period 1929 to 1952. Part of this, however, is simply due to an inflated price level. Therefore it is more instructive to examine the record with respect to the rates of increase in per capita income for small areas as these compare with the average for the district as a whole. In this way a clearer picture of the sources of geographic income equalization can be drawn. Table I summarizes the record.

TABLE I

ASSOCIATION OF INCOME AND POPULATION CHANGES
EIGHTH DISTRICT AREAS, 1929-1952
(Number of Areas)

Per Capita Income Growth Above District Average

	Population growth above district average	Population growth below district average	Total
Total income growth			
above district average	15	23	38
below district average	none	18	18
Total	15	41	56

Per Capita Income Growth Below District Average

	Population growth above district average	Population growth below district average	Total
Total income growth			
above district average	9	none	9
below district average	5	29	34
Total	14	29	43

The significance of the data lies in the diversity of experience among areas within this district—a diversity which is really indicative of the great variety of change continually absorbed by an expanding economy.

In a closely integrated economy, specialization of function is in part geographical. No area or community is completely self sufficient nor completely diversified in its economic base. Of necessity—enforced by competition—each locality specializes more or less heavily in certain lines of production for "export." The support of this production may require considerable of other kinds of economic activity which create a substantial home market. But efficient organization of production generally involves an increasing amount of trade with the "rest of the world." It also means that changes in per capita income for the small area, by way of population change or total income change, necessarily reflect the changing relationship of that area and its resources to the national economy—an "adjustment" in the use of local resources to the "rest of the world" demand.

. . . to pervasive trends in the national economy.

It is not surprising that there has been such a diversity of experience in income and population growth among the many areas of the district. On the one hand all areas are not endowed with the same stock

of resources and on the other hand there are many different and pervasive trends in the nation's demand for resources. Each of these trends, therefore, must affect communities in this district in many different ways.

Final causes for economic development can hardly be assigned, but many of the end results in the American economy are summarized in the continuing change in the location of its people and its industry. For many years there has been a persistent geographic shift of American population reflecting two trends: (1) the migration of population from rural to urban areas, and (2) from the interior states to the border states (excepting the north and middle Atlantic states). In the decade from 1940 to 1950 the nation's population increased by over 19 million persons, yet during the same period almost half of the counties in the United States actually lost population. Even on the Pacific Coast where the increase in total population had been a phenomenal 40 per cent in ten years, more than 10 per cent of the counties lost population. While the average non-metropolitan county gained 6.5 per cent the average metropolitan county increased its population by 20.6 per cent. The effect of the migration out of the interior states of the country is observable in differences in growth among metropolitan areas. Along the seacoasts metropolitan area growth was more rapid than in the interior and the younger cities of the West and South grew more rapidly than did the older cities in the Middle West and Northeast.

These trends are clearly evident in district population data. The rural-to-urban shift shows up in the increasing proportion of district residents living in the large metropolitan areas (see Table II). The population shift away from the interior states shows both in the less-than-average rate of population growth for the district as a whole as well as for district metropolitan areas.

TABLE II

PERCENTAGE DISTRIBUTION OF POPULATION
SELECTED METROPOLITAN AREAS

	1930	1940	1950
St. Louis	14.14	14.06	16.05
Evansville	1.18	1.28	1.53
Louisville	4.38	4.43	5.51
Little Rock	1.43	1.53	1.88
Memphis	3.19	3.52	4.60
Total	24.32	24.82	29.57
District	100.00	100.00	100.00

Studies of internal population migration indicate that one of the principal motives for migration is the response to economic incentive. This is borne out rather strikingly in the population data for the district and for the United States for the two decades 1930-1940 and 1940-1950. As Table III shows, the district population grew at about the same rate as nationally in the 'thirties, but at a much slower rate during the 'forties. Since the natural rate of population increase is as high in the district as in the nation as a whole, if not higher, these data indicate a rapid increase in migration during the 'forties. The principal explanation, of course, lies in the fact that the 'thirties were years of depression and mass unemployment. For the most part this unemployment was concentrated in the urban areas. During the early 'thirties there was, in fact, a heavy migration out of the cities in the search for economic alternatives to unemployment. As a consequence of falling total incomes and the slow rate of outmigration of district population, district per capita incomes in the 'thirties declined by 21 per cent. Nationally, per capita income declined about the same proportion. Consequently, the district average remained 65 per cent of the national figure. The net effect was to cause a build up of population in the rural areas which was highly responsive to the return of prosperity.

TABLE III

DISTRICT POPULATION CHANGE

	1930-1940	1940-1950	1930-1950
United States	7%	14%	23%
District	6	3	9
Arkansas	5	— 2	3
Illinois	5	1	6
Indiana	5	8	14
Kentucky	7	6	14
Mississippi	6	— 6	— 1
Missouri	5	4	10
Tennessee	9	14	24

In the brief period from 1939 to 1944, the mobilization and early war years, national industrial employment increased more than 40 per cent—a phenomenon made possible only by the high rate of occupational and geographic mobility of our labor force. During this period an estimated total of 7,977,000 civilians migrated from farms and an estimated 3,117,000 migrated to farms. This net from-the-farm migration of 4,860,000 contrasts strikingly with a net migration of only 636,000 over the next five years of the decade. It is this trend which is reflected fully in district per capita income data. While total district income payments increased at about the same rate as nationally, the much smaller rate of population increase resulted in the sharper rise in district per capita income payments and the resulting equalization of income differentials between district residents and the rest of the United States.

In a sense, it took the recovery and sustained prosperity of the 'forties to give full weight to the remarkable changes that had been occurring in agricultural production since well before the onset of the 'thirties. The persistent rural-to-urban migration is in part the net result of two equally persistent features of the rural community. One is the sociological fact that the

natural rate of population increase is higher in rural areas than in urban areas. The other is the technological fact that there is a continuing increase in farm productivity, a continuing reduction in the amount of farm labor required to produce what the nation consumes.

In the fifteen years from 1930 to 1945, while total farm acreage increased, the number of acres of farm land in crops actually declined by 10 per cent. The reduction in cropland was accompanied by a 24 per cent increase in the average size of the farm and a decline of over 20 per cent in the number of farm workers. The sharp increase in the amount of farm machinery, equipment and power available to farm workers has been frequently noted. This, coupled with improved farm management, resulted in an estimated 54 per cent increase in the amount of farm output per farm worker over this period. Thus, a smaller labor force working in fewer acres of cropland was able to increase the output of all crops to the extent that 1949 crop production was 40 per cent greater than that in 1930. Total farm output was 47 per cent greater.

Coupled with the pervasive trends in productivity, have been highly significant shifts in the consumption of agricultural products. Since 1941, consumers have increased the proportion of household expenditures spent on food from 22 per cent to 28 per cent. While this is in large part the result of an intervening inflation, it also represents an increase in physical consumption of food and an increase in the amount of service demanded with food purchases. That is, part of the increased spending on food has directly influenced the farmer's market, while part has had its most direct impact on the food processing and marketing industry. In addition, the trend toward increased expenditure on food has centered on the "better" foods. The effect of rising per capita income has been to increase the per capita demand for fresh fruits and vegetables, meat and poultry, fish, eggs and milk, accompanied by a declining per capita demand for cereals, potatoes, fats and oils, and sugar and syrups.

The domestic demand for cotton has been adversely affected by the rapid growth of the synthetic fiber industry, while the foreign market for American cotton has actually declined over the past twenty-five years. Feed grains, on the other hand, have benefited substantially from the sharply increased per capita consumption of meat.

As per capita incomes have risen, personal consumption patterns of items other than food have also changed significantly, but with considerable variability. The proportion spent on services has declined since 1929 and on nondurable manufactured goods since 1938. Expenditures on durable manufactured goods, on the other hand, have increased their share of the consumer's dollar.

Imposed upon these changes in demand have been the highly variable changes in spending by the Government since 1940 on war and defense. These changes in the pattern of total final demand, including capital formation, have been coupled with rapid strides in technology including new products as well as new processes. The net result has been great diversity in growth rates among the manufacturing industries as indicated in Table IV.

TABLE IV

GROWTH IN OUTPUT OF SELECTED INDUSTRIES

	Average annual rate of growth 1940-1951 (Per cent)
Antibiotics	118
Television sets	113
Air conditioning units, room	43
Plastic materials	22
Frozen foods	18
Electric ranges	11
Tractors	10
Rayon and acetate	10
Woodpulp	6
Industrial explosives	5
Canned vegetables	5
Crude petroleum	5
Electric refrigerators	4
Passenger automobiles	3
Lumber	2
Shoes and slippers	1
Men's suits	— 2
Manufactured tobacco	— 4
Creamery butter	— 4
Wood shingles	— 6
Silk, consumption	—16

This recital of changes in the American economy over the past quarter of a century is quite literally endless. The highlights noted serve to emphasize that for a variety of reasons—for example, a larger and more mobile population, rapidly changing technology, war and peace—the pattern of demand for the nation's resources continues to change. To these changes the local community must continually, in one way or another, make adjustments.

In some cases the adjustment is directly influenced by shifts in the national markets . . .

Communities, areas, whole regions have been making these adjustments throughout the history of the land. Much of American economic history can be written in terms of the continuous relocation of economic activity, of the impact of economic growth on younger regions and the adjustments this has required in older sections of the country, and of the discovery of new economic frontiers. Many areas have experienced relative growth and decline and new growth, others have maintained their positions but perform new functions, and, inevitably there are those which the main stream of economic development has passed by. The history of each region is the story of the changing use of its resources and the history of each is related to the history of all.

For some areas and regions this relationship to all other areas is so general that it is helpful to simply speak of their relationship to the nation as a whole, for the markets of the national economy are closely integrated. Many communities specialize in production which directly serves a national market. This district as a whole specializes in agricultural production and "exports" on balance an estimated 46 per cent of its agricultural production. Clearly, district farmers, whether they produce soybeans or cereals or cotton or meat, do not produce for a regional market. The local areas of the district where this kind of production is concentrated are directly influenced by changes in the national market. The adjustment of local economies to the changing pattern of national demand for agricultural products can be seen in the shifts of production which have occurred in district agriculture (Table V).

TABLE V
SHIFT IN DISTRICT AGRICULTURAL PRODUCTION BY VALUE OF OUTPUT

	Per Cent Distribution		District as Per Cent of U. S.	
	1929	1950	1929	1950
All Crops	56.5	52.5	11.3	10.6
Field crops	51.8	49.5	12.9	12.4
Other	4.7	3.0	4.8	3.2
All Livestock and Products	43.5	47.5	7.7	7.8
Dairy Products	9.7	8.6	5.3	5.6
Poultry and Products	10.6	6.6	10.6	7.3
Other Livestock and Products	23.2	32.3	8.3	9.0
All Farm Products Sold	100.0	100.0	9.4	9.1

Many of the district areas with manufacturing industries are also closely tied directly to the national market. This is of particular importance for such metropolitan areas as Evansville, Louisville, and St. Louis which have a high concentration of employment in manufacturing industries serving national markets. It is also true of many of the smaller areas where production in such lines as shoes and apparel is concentrated. Other examples come easily to mind, the oil fields of southern Illinois, the zinc and lead regions of Missouri, the chemical industry complex being built in Calvert City, Kentucky, and so on.

. . . in others, more indirectly through local and regional markets.

For many areas, however, adjustments in the local economy are the result of a more complex set of local and regional relationships. Some communities specialize in production for a regional market and are influenced by national developments only insofar as these affect the region they serve: for example, areas with income from certain kinds of manufacturing such as sawmills and planing mills and cement and brick production. For other communities producing for national markets, the local labor supply has been profoundly influenced by regional developments while the market for the local product has not materially changed. The resulting change in cost-price relationships may require considerable adjustment in the use of the area's resources. The strawberry producers in the region around Paducah, Kentucky, have had this experience, for example. Paralleling this is the changed competitive position of an area's industry as new capacity grows in other regions.

In any case, and regardless of the immediate cause, adjustment in the use of local resources is an effort by residents of a community to maintain and increase their income. For many this means a change in jobs involving a change in locality. For others it means either increasing the productivity of their present operations or shifting to a new occupation in the community which, under the changed set of circumstances, has a higher productivity. For still others the adjustment may consist of accepting a lower income.

Capital investment plays a key role in the adjustment process by increasing the productivity of local resources.

Given its broadest meaning, capital investment means giving up the use of present income for the purpose of securing a higher future income. Inevitably, the productivity of the investment itself is intimately associated with the kind of previous investment that has occurred. Like all resources, capital itself is scarce, it is accumulated only slowly, and always with the sacrifice of consumption today in the hope of something better tomorrow. There is perhaps no truer indication of the aspirations and values important to a community or a whole society than that observable in the rate at which it accumulates capital and how it uses it, for capital investment may take many forms, all of which, while having a profound effect on productivity, are not all connected with any measurable standard of physical production.

The education of our children, for example, is probably one of the most basic kinds of capital investment, an investment that has long since become institutionalized through compulsory schooling into a form of community investment. Quite aside from the current investment in school facilities, there is the more basic problem of determining how long a child shall remain in school. For as he reaches a working age, each added year in school represents an increasing investment in the sacrifice of possible present income from the child's present productivity. An increase in the average age of children in school is thus one measure of increased community investment in this kind of capital. In the past twenty-five years in the district the per cent of children between the ages of 16 and 17 in school has increased from 54 to 67 per cent.

At the other extreme from this kind of capital investment is that kind of capital formation more generally associated with investment, namely, investment

in more directly productive capacity, such as a factory plant and equipment. Between these two lie a perfect continuum of other types of investment all with the same purpose—to increase the productivity of our resources. It may be investment in highways, water systems, housing, electric utilities; it may be financed publicly through current or future taxes, or privately from a great variety of sources; but the purpose remains the same—increased productivity of resources.

Investment always permits the more intensive use of resources . . .

Any change which results in higher real per capita income implies capital investment. It need not be spectacular to yield high returns. It may simply be the amount a man needs to finance his move to a better job in another area, or it may mean an increase in taxes to finance a new water system. At the other extreme it may be the large scale inflow of capital created by the location of a new manufacturing plant or a public utility.

Whatever the nature of the investment it has the effect of permitting the more intensive use of some resources. For example, investment in agriculture in all its forms, from expensive farm machinery to simple crop rotation and the willingness to forego the maximum present harvest, has resulted in higher output per man on the farm; a more intensive use of both manpower and land. In the process some resources are frequently released for other uses. Again agriculture is an example. The rural-to-urban migration discussed earlier has accompanied the more intensive use of manpower on the farm which in turn has permitted a more rapid expansion of the nation's non-farm labor force. For the local economy the result has been a larger income stream from farming and higher per capita incomes.

. . . and often requires an addition to the local labor force.

Capital investment may also mean the more intensive use of resources in a somewhat different setting. The movement of a branch plant into a town, for example, frequently results in the creation of a new kind of labor force for that area. In a sense, this means the more intensive use of local labor if the labor force has been recruited from other occupations in the locality in response to higher wages. The same local labor is now being used more productively. On the other hand, there may be other local resources, such as the natural advantage of site, which are attractive to a new industry. This kind of capital investment then actually may result in an addition to the local labor force, either to work the new capacity, or to replace local labor hired in the new activity.

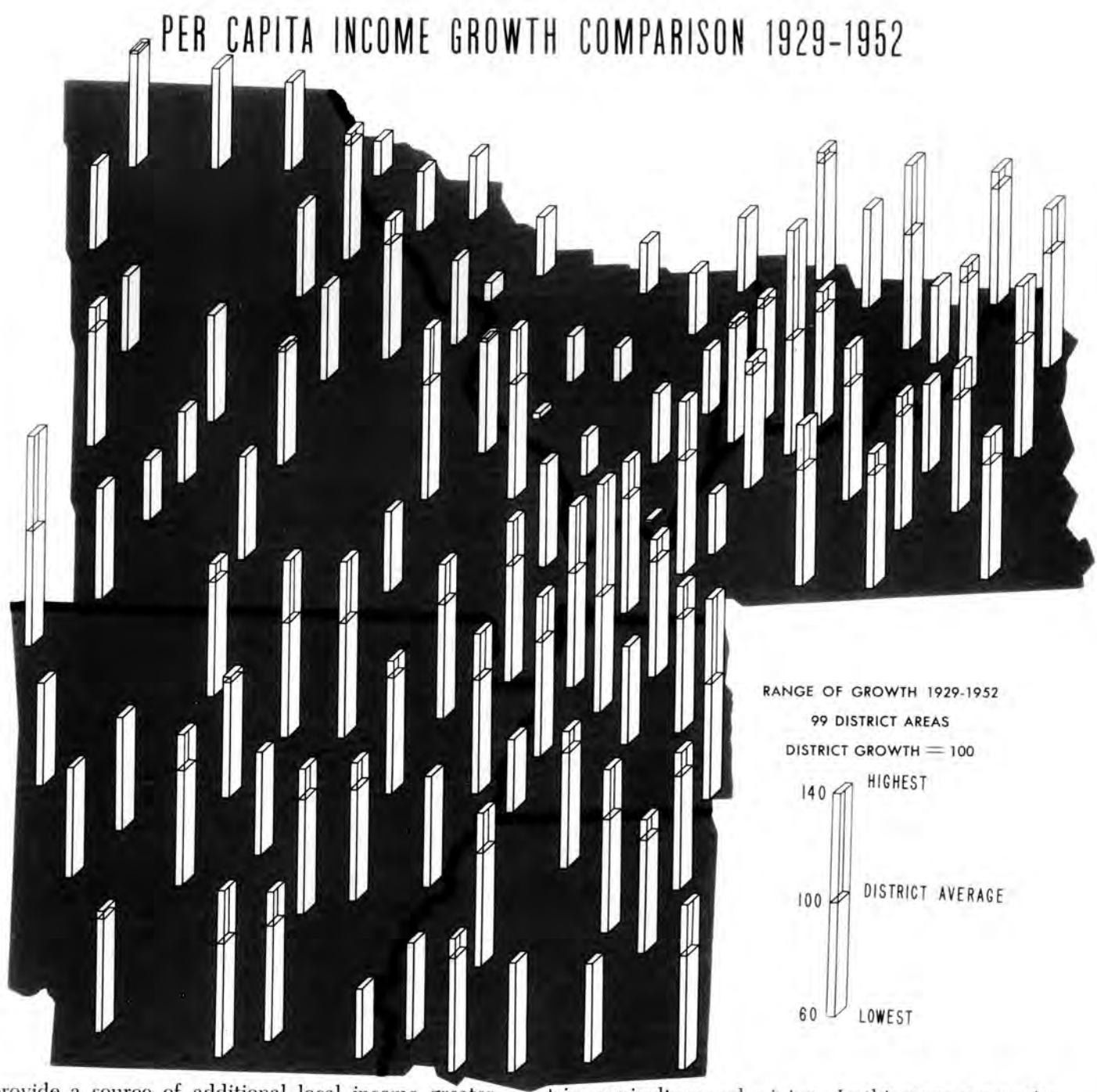
Investment which is not of itself the kind that requires additional labor force may indirectly generate demand for additional labor by the effect on the total income stream of the community. This is particularly true for an area where the urban centers are principally engaged in servicing the agricultural community. In fact, per dollars worth of invested capital, the net income stream accruing to the local community may frequently be greater from investment in agriculture than in other types of productive capacity.

In the local economy, adjustments to a highly integrated national market, labor-using as well as labor-saving capital investments both help raise per capita income.

The extent to which residents of a local area share in an increased value of production flowing from the area to a larger economy depends upon a number of factors. These are: (1) the ratio of direct income payments to the community to the total value of the outflow of production, (2) the nature of the non-income cost items involved in the production (specifically the kinds of raw material and service inputs that are supplied locally), (3) the ratio of direct local income payments to the value of the locally supplied inputs (and so on for each subsequent round of cost items), (4) the consumption patterns of the local residents, and (5) the extent to which their demands are supplied by local goods and services. From this it is apparent that the larger and more diverse the local economy, the greater will be the total derived income effect. But it is also apparent that the larger and more diverse the local economy is, the smaller will be the relative addition to total local income from any given initial source of income.

There is, however, a second consideration. The value of the output or production attainable with a given capital investment will vary rather widely among industries. The value of the direct local income resulting from a given value of output will also vary widely among industries. If the factors mentioned above are kept in mind it will be seen that the amount of total local income created by a given value of direct capital investment must then also vary widely.

In a price economy, however, capital investment in directly productive capacity will generally flow to those activities and areas where the highest return on the capital can be earned, i.e., where it has the highest productivity, commensurate with risk. Whether or not such an investment generates a high local income stream in addition is really not of primary interest to the owners of the capital or to the nation. But it is of interest to the local community to know that where an area's agricultural resources are such as to yield high returns, investment in agriculture can



provide a source of additional local income greater (per dollars worth of invested capital) than many kinds of direct labor-using capital investment.

Clearly, there is no single, "best" way for the local area to participate in the nation's economic development.

At this point it is of interest to examine a popular thesis concerning the processes of economic development. Very briefly, this thesis holds that a nation's economic development consists of three stages. In the initial stage, the principal activities and sources of income are the so-called "primary" or extractive industries, agriculture and mining. In this stage per capita incomes are very low. However, as the economy develops there is a marked shift to "secondary" industries, manufacturing and processing. This industrialization is accompanied by rapidly rising total and per capita incomes. Finally, as the economy matures and grows wealthy an increasing proportion of employment and income is created by service industries of all kinds, the "tertiary" industries, including transportation and communication.

There are large national economies or even larger regions whose developmental pattern fits roughly into this description. What happens is simply that increas-

ing specialization of labor occurs as an economy progresses, a feature which both results from and adds to the efficiency of a growing economy. However, it may be quite misleading to make a simple transfer of this descriptive statement to a prescriptive scheme for the development of areas within a larger economy. For within a highly integrated economy specialization of function also implies a certain geographical specialization. There is little evidence, for example, that the state of Iowa is an underdeveloped area by any measure. Indeed, by specializing in agriculture, for which the state is wonderfully well endowed, Iowa's citizens have achieved a standard of living matched by few other sections of the country. They have been able to accomplish this by relying on other areas, better endowed for other types of production to supply much that Iowans consume.

It is interesting to examine this question in the light of the experience in the Eighth District. The problem might be stated as follows: Wide differences in per capita income growth are apparent among the 99 areas in this district. To what extent can these differences be explained by shifts from primary to secondary industries in each of these areas?[1]

It is true that there is at least a statistical relationship between industrialization and per capita income levels. For the 99 small areas into which this district has been subdivided for this analysis, 56 per cent of the variation in per capita income levels among areas in 1929 could be explained statistically by variation in the per cent of the labor force engaged in manufacturing. When the metropolitan areas are removed from the sample this relationship reduces to 52 per cent. For the year 1951, however, only 35 per cent of the variation between per capita income levels could be explained by differences in industrialization.

The question might be turned around to ask if there is any measurable relationship between the per cent employed in agriculture and the level of per capita income. That is, to what extent can the observed variation in levels of per capita income among district areas be explained statistically by variation in the per cent of the population engaged in agriculture. The relevant statistical measure in this case was 71 per cent in 1929 and only 58 per cent in 1951.

Neither of these tests is sufficient to indicate any very significant relationship between the economic base of the local economy and its level of per capita income. There is in addition a slight upward bias in the relationship because of some correlation between per cent employed in manufacturing and urbanization.

But the real question is not addressed to existing per capita income differentials among areas, but to the kinds of adjustments made by the local economies which tend to reduce these differentials. That is, what are the adjustments which permit the community to share fully in the nation's economic development? The data given above provoke the real question: Is there any measurable relationship between growth in per capita income and industrialization? Is it possible to explain differences in the growth of per capita incomes (as a measure of local economic development) among district areas in terms of the rate of industrialization (as measured by changes in the per cent employed in manufacturing)?

The answer is quite simply that there is no statistical evidence of such a relationship. No correlation was found between growth in per capita incomes in the local economies of the district and growth in the proportion employed in manufacturing. Other factors than increased industrialization were at work improving the levels of income in this district over the period from 1929 to 1951.

In summary, statistics cannot provide definitive answers to the questions raised above, and a quarter of a century is a relatively short time. However, coupling the evidence available on per capita income growth in this district with knowledge of the pervasive nature of change in the economy as a whole, the argument presented in this article might be concluded as follows:

1. Rapid income growth and economic development in the United States has resulted in increasing equality of per capita income levels among the geographic sections of the country.

2. This is due to the free mobility of goods, population and capital across the land.

3. This mobility requires continuing adjustment by communities to economic changes taking place in their region, in other regions and to those which are nationwide.

4. Involved in making these adjustments are capital investments by individuals, businesses, governments, and nongovernmental community organizations.

5. For some communities the combination of these adjustments results in an increased demand

[1] Before attempting to answer the question, a word of warning about comparisons of per capita incomes is needed. Such comparisons between predominantly urban areas and predominantly rural areas overstate differences in real incomes or standards of living. This is true because of differences in consumption patterns, differences in price levels of certain important items of the household budget such as rent, and differences in the extent to which many services performed through the market in urban areas are performed outside the market in rural areas. This caveat is set forth here because frequently when per capita incomes are compared between rural and urban areas the idea is prevalent that the way to raise per capita incomes is to urbanize. This is not to say of course that there are not significant differences in standards of living between some rural areas and urban areas. The continuing large migration is testimony that there is.

for labor, in others an outmigration of population takes place.

6. There is no evidence that any single type of adjustment results in more rapid rate of per capita income growth than others involving a response to economic incentive.

Clearly, these is no single best way for a local area to participate in the nation's economic development. The particular adjustment best suited to the local economy will depend upon the nature of its local resources and the interests and energies of its citizens.

GUY FREUTEL

Survey OF CURRENT CONDITIONS

Business activity during May held steady.

IMPROVEMENTS IN SOME SECTORS of the Eighth District economy during May were not sufficient to raise the rate of over-all activity. Reflecting layoffs from defense and household durable goods manufacturing plants and seasonal layoffs from apparel plants and coal mines, insured unemployment in district states was higher in early May than a month earlier. Brighter aspects in the business picture were the continued improvement in steel output, the recent rise in construction contract awards, and the improved moisture conditions in most areas of the district. In addition, department store sales in the first half of May held close to the advanced rate of April.

In the nation, output increased during May in several important industries for which weekly data are available. Unemployment insurance claims remained high, however, rather than declining as they did last year from early April to early May. The record level of construction outlays probably continued into May, reflecting the high value of awards in recent months. And department store sales held close to the April rate after allowance for seasonal factors, but fell behind the high volume in May, 1953.

Output of some goods increased . . .

Through early May, indications were that the Eighth District industrial economy continued to operate at about the same reduced level as it had earlier this spring. However, the rate of steel ingot production at St. Louis continued its rapid recovery, having risen from 46 per cent of capacity in March to 61 per cent in April to 73 per cent in early May. Crude oil production in district states was 8 per cent higher than a year ago during the first two weeks of May.

Such signs of strength also were seen in the national situation. The index of industrial production of the Federal Reserve Board remained steady in April, following eight months of declining output (after seasonal adjustment). In early May, indications were that production continued steady. Steel ingot was produced at around 71 per cent of capacity, having risen from about 68 per cent in April, and automobile output was increased further.

Most industries in both district and nation continued at reduced levels of production. Coal production in the district was running from 15 to 20 per cent lower than a year ago. Nationally, the industry was hit by falling coal exports. Lumber output in the district and nation continued at a somewhat lower level despite the very active construction industry. And April power figures showed that district textile, primary metals, transportation equipment, shoe and leather, wood products, chemicals, rubber, and machinery industries were using from 7 to 20 per cent less power than a year ago, while only four—food, newspaper printing, paper and allied products, and fabricated metals—used more kilowatts.

. . . and department store sales remained at a high level . . .

In the first three weeks of May, department store sales in the district continued close to the advanced rate of April. However, sales lagged behind those a year ago, when they reached a peak for 1953, after allowance for seasonal factors.

District department store sales during April gained more than seasonally from March. If adjustment is made for the later date of Easter by combining March and April, sales still fell short of the same months last year. And cumulative 1954 district sales for the first four months were slightly under those in 1953. The only major district area to show an increase for the year to date—the Little Rock area—was experiencing a below average performance a year ago.

Furniture store sales in the district during April

were 9 per cent larger than in March but were 5 per cent lower than in April, 1953.

Inventories held by reporting district department stores on April 30 were slightly below those at the end of March and on the comparable date a year ago. Furniture store inventories on April 30 totaled slightly above those a month earlier but were lower than a year ago. Outstanding orders at district department stores on April 30 were substantially lower than a month earlier and a year ago, indicating a continued attempt to reduce inventories.

. . . but insured unemployment rose.

Reflecting both seasonal layoffs and reductions at defense and civilian goods plants, insured unemployment in district states was slightly higher in early May than a month earlier.

The volume of unemployment changed very little in most district areas from April to mid-May. In the St. Louis area there was a substantial increase in unemployment compensation claims resulting from further layoffs in durable goods plants, and a seasonal slackening in apparel production. Greater steel output required some rehiring and a return to a full work week at one plant. In the Louisville area an increase in construction employment was offset by layoffs at ordnance and appliance plants, leaving the volume of insured unemployment practically unchanged. Memphis area unemployment remained unchanged. Unemployment claims declined in Evansville reflecting in part recalls in May to an automobile assembly plant. In the state of Arkansas unemployment claims declined slightly over the month.

As in recent months, the ratio of insured unemployment to employment covered by State programs was higher in district states, except Indiana and Missouri, than in the nation. In part this may reflect the return of workers after being laid off from recent jobs in the large industrial areas outside the district.

Residential building has risen.

The seasonally adjusted rate of residential construction contracts awarded in the Eighth District has increased substantially from a low point in July, 1953. In part this rapid rise may be attributed to the increased availability and easier terms of mortgage money in recent months. This larger supply of funds for residential financing reflects the high rate of savings and the relatively more attractive yields of urban residential mortgages now that bond yields have declined. One result of the easier supply of mortgage funds has been an increase in speculative building. In the district and the nation, the proportion of one-family dwelling units for sale or rent to the total included in contract awards in the first four months this year was greater than in the same months last year when less money for residential mortgages was available and terms were not as easy.

Farm prospects improved . . .

Reports from the farms were also heartening. Precipitation during the months of April and May largely overcame temporary crop moisture shortages in most of the district. In addition, the planting schedule of district farmers was well ahead of normal. From the production standpoint, recent precipitation and early plantings improved prospects for district crops.

Favorable growing conditions raised the May 1 estimate of 1954 winter wheat production for district states to 114 million bushels. This represented a 13 per cent increase from the April 1 estimate, but is 28 per cent below 1953, a year of high acreages and high yields.

Favorable moisture and temperature conditions have also aided district states pastures, at least temporarily. Conditions as of May 1 averaged approximately normal, with all district states within 6 per cent of the ten-year average, 1943-52. However, total pasture production for the season will largely depend on future rainfall.

Cool weather severely damaged cotton plants in Arkansas, Mississippi, and Tennessee, making replanting of as much as 75 per cent of the crop a necessity in some areas. And because of wet soils, replanting was retarded to a less propitious time.

Reflecting declines in prices of farm products in recent years, for the one-year period ending March, 1954, farm real estate values in district states declined 5 to 8 per cent. However, most of the decline occurred from March to November, 1953. In the following four months, farm real estate values held relatively steady, remaining unchanged in the state of Tennessee and declining 1 or 2 per cent in other district states.

. . . and business loans declined less than usual.

Business loans by district weekly reporting member banks declined less than seasonally in the five weeks ended May 19. This relative strength in business loans in the district was in contrast to a continued contraction nationally, which was larger than that in the same weeks of most other areas. The smaller-than-usual net repayments by businesses in the district reflected both a slight increase in net borrowings by trade concerns and contractors and a less than normal amount of net repayments by commodity dealers. (This latter development was largely due to the relatively small amount of loans made to these dealers last fall.) On the other hand, "other," largely consumer, loans declined.

The DISTRICT RECORD

Industry

VARIOUS INDICATORS OF INDUSTRIAL ACTIVITY

	April 1954	Percentage Change* Mar. 1954	Apr. 1953
Industrial Use of Electric Power (thousands of KWH per working day, selected industrial firms in 6 district cities)	11,460	−0−%	— 9%
Steel Ingot Rate, St. Louis area (operating rate, per cent of capacity)	61	+33	—22
Coal Production Index—8th Dist. (Seasonally adjusted, 1935-1939=100)	153 p	+29	—17
Crude Oil Production—8th Dist. (Daily average in thousands of bbls.)	320.3	+ 2	+ 5
Freight Interchanges at RRs—St. Louis (Thousands of cars—25 railroads—Terminal R. R. Assn.)	98.4	— 5	—15
Livestock Slaughter—St. Louis area. (Thousands of head—weekly average—first 4 weeks)	101.5	— 9	— 4
Lumber Production—S. Pine (Average weekly production—thousands of bd. ft.)	187.8	— 1	—12
Lumber Production—S. Hardwoods. (Operating rate, per cent of capacity)	91	— 4	−0−

* Percentage change figures for the steel ingot rate, Southern hardwood rate, and the coal production index, show the relative per cent change in production, not the drop in index points or in per cents of capacity.

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Banking

BANK DEBITS[1]

	April 1954 (In millions)	Percent Change from Mar. 1954	Apr. 1953
Six Largest Centers:			
East St. Louis-National Stock Yards, Ill.	$ 136.8	— 5%	+ 7%
Evansville, Ind.	149.5	— 9	—12
Little Rock, Ark.	162.1	— 8	+ 1
Louisville, Ky.	692.9	— 9	+ 1
Memphis, Tenn.	632.0	—12	— 1
St. Louis, Mo.	1,979.4	—14	−0−
Total—Six Largest Centers	$3,752.7	—12%	−0−%
Other Reporting Centers:			
Alton, Ill.	$ 35.3	—14%	+ 8%
Cape Girardeau, Mo.	13.3	— 6	— 1
El Dorado, Ark.	28.6	— 5	+ 5
Fort Smith, Ark.	47.4	—16	— 1
Greenville, Miss.	23.2	—14	−0−
Hannibal, Mo.	9.1	— 6	−0−
Helena, Ark.	7.3	—15	—10
Jackson, Tenn.	20.6	—10	— 3
Jefferson City, Mo.	68.1	+ 3	+24
Owensboro, Ky.	34.3	— 9	—10
Paducah, Ky.	32.6	—16	—25
Pine Bluff, Ark.	35.1	— 2	−0−
Quincy, Ill.	34.5	— 9	−0−
Sedalia, Mo.	12.6	— 8	+10
Springfield, Mo.	69.2	— 5	+ 3
Texarkana, Ark.	17.2	— 9	—25
Total—Other Centers	$ 488.4	— 8%	−0−%
Total—22 Centers	$4,241.1	—12%	−0−%

INDEX OF BANK DEBITS—22 CENTERS SEASONALLY ADJUSTED (1947-49=100)

Apr. 1954	Mar. 1954	Apr. 1953
143.1	152.3	143.1

[1] Debits to demand deposit accounts of individuals, partnerships and corporations and states and political subdivisions.

Agriculture

CASH FARM INCOME

(In thousands of dollars)	Mar., 1954	Percentage Change Mar. '54 from Mar. '53	Jan. thru Mar. 1954 compared with 1953	1952
Arkansas	$ 20,941	—49%	— 3%	+ 5%
Illinois	187,913	+13	+ 6	+ 1
Indiana	92,103	+10	+ 7	— 1
Kentucky	23,033	+ 5	— 9	+ 3
Mississippi	23,489	—42	—35	+ 2
Missouri	71,030	+ 8	+ 3	+ 1
Tennessee	22,018	+ 4	— 9	—13
7 States	$440,257	−0−%	— 2%	−0−%
8th Dist.	$171,614	—11%	— 6%	+ 1%

Construction

INDEX OF CONSTRUCTION CONTRACTS AWARDED EIGHTH FEDERAL RESERVE DISTRICT*

(1947-1949=100)

Unadjusted	Mar. 1954	Feb. 1954	Mar. 1953
Total	169.8 p	147.4	175.6
Residential	191.5 p	157.8	204.7
All Other	159.7 p	142.5	162.1
Seasonally adjusted			
Total	189.2 p	192.3	195.6
Residential	205.9 p	197.3	220.1
All Other	181.5 p	190.0	184.2

* Based on three-month moving average (centered on mid-month) of value of awards, as reported by F. W. Dodge Corporation.

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ASSETS AND LIABILITIES OF EIGHTH DISTRICT MEMBER BANKS

(In Millions of Dollars)

Assets	Weekly Reporting Banks May 12, 1954	Change from Apr. 14, 1954	All Member Banks Apr. 28, 1954	Change from Mar. 31, 1954
Loans (Net)[1]	$1,360	$+ 7	$2,121	$—22
Business and Agricultural	694	—11		
Security	35	— 1		
Real Estate	257	+ 2		
Banks	44	+23		
Other (largely consumer)	349	— 5		
U. S. Government Securities	985	−0−	1,950	+ 8
Other Securities	200	+10	417	+ 1
Cash Assets	881	—26	1,380	—27
Other Assets	40	+ 2	61	+ 1
Total Assets	$3,466	$— 7	$5,929	$—39
Liabilities and Capital				
Demand Deposits of Banks	$ 684	$+ 6	$ 681	$—14
Other Demand Deposits	1,934	—49	3,624	—42
Time Deposits	528	+ 4	1,136	+ 8
Borrowings and Other Liabilities	82	+32	67	+ 8
Total Capital Accounts	238	−0−	421	+ 1
Total Liabilities and Capital	$3,466	$— 7	$5,929	$—39

[1] Loan breakdowns reported gross for weekly reporting banks, not available for all member banks.

Trade

RETAIL FURNITURE STORES

	Net Sales Apr., 1954 compared with Mar. '54	Apr. '53	Inventories Apr., 1954 compared with Mar. '54	Apr. '53
8th Dist. Total[1]	+10%	— 4%	+2%	—6%
St. Louis	+ 8	— 3	—2	—9
Louisville Area[2]	+ 1	— 5	+4	—4
Louisville	−0−	— 5	+4	—3
Memphis	+20	—16	*	*
Little Rock	+21	— 2	+6	—7
Springfield	+18	— 9	+6	—4

* Not shown separately due to insufficient coverage, but included in Eighth District totals.

[1] In addition to following cities, includes stores in Blytheville, Fort Smith and Pine Bluff, Arkansas; Hopkinsville, Owensboro, Kentucky; Greenwood, Mississippi; and Evansville, Indiana.

[2] Includes Louisville, Kentucky; and New Albany, Indiana.

PERCENTAGE DISTRIBUTION OF FURNITURE SALES

	Apr., 54	Mar., '54	Apr., '53
Cash Sales	14%	15%	14%
Credit Sales	86	85	86
Total Sales	100%	100%	100%

DEPARTMENT STORES

	Net Sales April, 1954 compared with Mar., '54	Apr., '53	4 mos. '54 to same period '53	Stocks on Hand Apr. 30, '54 comp. with Apr. 30, '53	Stock Turnover Jan. 1 to April 30, 1954	1953	Percentage of Accts. and Notes Receivable, Outstanding April 1, 1954, collected during April. Instal. Accounts	Excl. Instalment Accounts
8th F.R. District Total	+18%	+ 6%	— 2%	— 8%	1.18	1.14	17%	46%
Fort Smith Area, Ark.[1]	+22	+10	— 3	+ 7	1.02	1.10	---	42
Little Rock Area, Ark.	+25	+10	+ 2	— 7	1.12	1.06	14	48
Quincy, Ill.	+21	+ 9	+ 1	— 1	1.14	1.07	-----	-----
Evansville Area, Ind.	+24	— 3	—11	-----	-----	-----	-----	-----
Louisville Area, Ky., Ind.	+23	+ 2	— 4	—10	1.23	1.19	19	46
Paducah, Ky.	+18	—24	—26	-----	-----	-----	-----	-----
St. Louis Area, Mo., Ill.	+17	+ 9	−0−	— 9	1.22	1.15	19	52
Springfield Area, Mo.	+10	+ 2	— 7	—18	.97	.93	-----	-----
Memphis Area, Tenn.	+11	+ 5	— 1	— 2	1.23	1.20	17	32
All Other Cities[2]	+27	— 2	—14	—11	.77	.82	09	43

INDEXES OF SALES AND STOCKS—8TH DISTRICT

	Apr. 1954	March 1954	Feb. 1954	April 1953
Sales (daily average), unadjusted[3]	112	92	88	105
Sales (daily average), seasonally adjusted[3]	114	108	112	111
Stocks, unadjusted[4]	124	123	108	137
Stocks, seasonally adjusted[4]	116	120	113	128

[3] Daily average 1947—49=100

[4] End of Month average 1947—49=100

Trading days: April, 1954—26; March, 1954—27; April, 1953—26.

[1] In order to permit publication of figures for this city (or area), a special sample has been constructed which is not confined exclusively to department stores. Figures for any such nondepartment stores, however, are not used in computing the district percentage changes or in computing department store indexes.

[2] Fayetteville, Pine Bluff, Arkansas; Harrisburg, Mt. Vernon, Illinois; Vincennes, Indiana; Danville, Hopkinsville, Mayfield, Owensboro, Kentucky; Chillicothe, Missouri; Greenville, Mississippi; and Jackson, Tennessee.

Outstanding orders of reporting stores at the end of April, 1954, were 20 per cent smaller than on the corresponding date a year ago.