

# economic review

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FEDERAL RESERVE BANK OF CLEVELAND

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# THE ANATOMY OF FOURTH DISTRICT BANKING, 1954-65

The number of banks, branches, and banking offices in both the United States and the Fourth Federal Reserve District changed markedly during the 1954-65 period.<sup>1</sup> The purpose of this article is to trace out that change, comparing, where appropriate, District patterns with those in the U. S. This article thus deals with changes in the numbers of banks, branches, banking offices, de novo starts (new banks), and mergers. A future article will consider the effects of changes in the numbers on the banking structure and banking markets of the Fourth District, with particular emphasis on the "deposit concentration ratio."<sup>2</sup>

## CHANGES IN THE NUMBERS

**Fourth District General Characteristics.** The Fourth Federal Reserve District includes all of Ohio (88 counties) and parts of three states—eastern Kentucky (56 counties), western Pennsylvania (19 counties), and northwestern

West Virginia (6 counties). The number of new banks (28) started in the Fourth District during 1954-65 was relatively minimal, accounting for 1.6 percent of the 1,718 new banks established in the United States during the period. Of the 28 new banks in the District, 21 were established in Ohio, 5 in Pennsylvania, and 1 each in Kentucky and in West Virginia. (Of the 28, five are no longer in existence as a separate legal entity.) One county—Cuyahoga (Ohio)—had 3 de novo establishments, with 5 counties—Allegheny (Pennsylvania), Beaver (Pennsylvania), Allen (Ohio), Ashtabula (Ohio), and Lake (Ohio)—each having 2 de novo starts. (See Table I.) Seven of the 21 new banks in Ohio were in the northeastern part of the State, while 4 of the 5 in western Pennsylvania were in the Pittsburgh area.

**TABLE I**  
De Novo Starts, Commercial Banks, by County  
Fourth District  
1954-65

State	Number of Counties	De Novo Starts	Number of Counties Involved	Number of Counties	
				With More Than One De Novo Start	Largest Number Per County
Ohio . . .	88	21	16	4	3
Kentucky . .	56	1	1	0	1
Pennsylvania	19	5	3	2	2
West Virginia	6	1	1	0	1
Total	169	28	21	6	—

Source: Federal Reserve Bank of Cleveland

<sup>1</sup> End-of-year figures are used throughout the article.

<sup>2</sup> In this study, a "bank" is defined as an individual banking organization whether it consists of one main office or of a main office and several branches. "Branch" refers to a nonmain office banking facility, and total "banking offices" encompass both main offices and branch offices of commercial banks. A "de novo" start is the establishment of either a bank or a branch where no other banking office existed previously. "Banking structure" refers to the number, type, and distribution of banks and banking facilities.

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**TABLE II**  
**Mergers and Acquisitions, Commercial Banks, by County**  
 Fourth District  
 1954-65

State	Number of Counties	Number of Counties Involved	Percent of Counties Involved	Number of Mergers and Acquisitions	Number of Counties with:		
					1 Merger	2-5 Mergers	More than 5 Mergers
Ohio	88	45	51%	109	20	23	2
Pennsylvania	19	11	58	88	2	6	3
Kentucky	56	11	20	14	9	2	0
West Virginia	6	2	33	4	1	1	0
Total	169	69	41%	215	32	32	5

Source: Federal Reserve Bank of Cleveland

There were 215 mergers and acquisitions in the Fourth District during 1954-65. The effect of the establishment and elimination of Fourth District banks was a net reduction of 192 banks. (The difference does not come out to 187 because of the five *de novo* banks merged or acquired.) Of the 215 mergers and acquisitions, Ohio had 109, Pennsylvania 88, Kentucky 14, and West Virginia 4. Banks in Ohio and Pennsylvania (Fourth District portion) dominated the merger and acquisition statistics in the Fourth District during 1954-65, with more than one-half of the counties in those areas involved, as contrasted to about two-fifths of all counties in the District (69 of 169). In Kentucky only 20 percent of the counties (11 of 56) had bank merger activity, and in West Virginia only one-third (2 of 6). As Table II shows, 32 counties in the District had one merger and 37 counties experienced more than one. Allegheny County was by far the most active, with 44 mergers. No Ohio county had more than eight mergers, although more than half of the counties that had mergers had more than one. In contrast, mergers occurred in 11 different

counties of Kentucky with only two having more than one.

Based on the total number of banks in each District state (portion) at the end of 1954, 21 percent of the banks in the Fourth District were involved in a merger or acquisition during the period. However, similar to county patterns, the merger pattern by banks was also not symmetrical throughout the District. Thus, 8 percent of Kentucky's banks and 17 percent of Ohio's banks were involved in mergers, while 42 percent of the Pennsylvania banks located within the Fourth District were merged or acquired. A sharp reduction in the number of banks coupled with the marked increase in the number of branches indicates that the portion of Pennsylvania in the Fourth District experienced the major changes of any District subarea.

**Comparison of U. S. and Fourth District.** From the end of 1954 through 1965, the total *number of banks* in the U. S. followed an uneven pattern, first declining and then increasing. Thus, from 1954 through 1962, the total number of banks in the U. S. fell from 13,840 to 13,427, or a decline of 3 percent; since the

end of 1962, the number of commercial banks has increased, returning by the close of 1965 to a level virtually the same as 1954. (See Chart 1, where, for purposes of comparison, these and subsequent similar data are on an index basis with the number of banks, branches, and banking offices in existence as of December 31, 1954 equal to 100.) In contrast, during 1954-65, the total number of banks in the Fourth District followed a marked and even pattern, but one of steady decline, from 1,035 to 843 banks (a 18.6 percent reduction from the 1954 level).

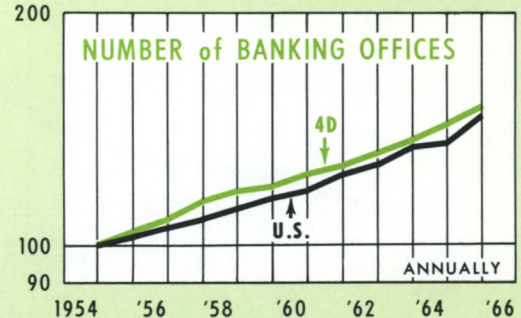
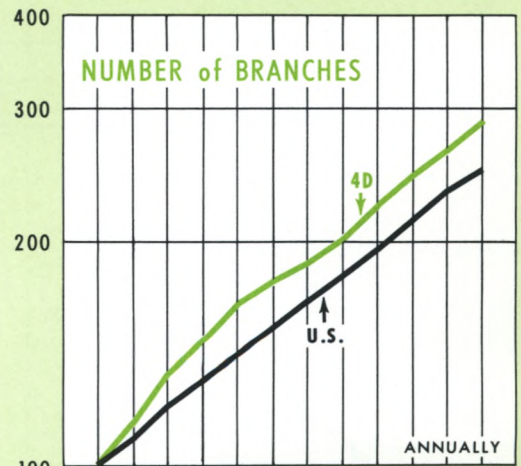
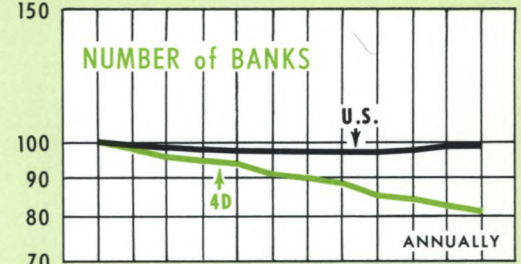
As shown in Chart 1, the number of branch banking offices in the U. S. increased by two and a half times in the past 11 years (1954-65), while the number of branches within the Fourth District nearly tripled. The increases in both cases were fairly steady, and the rate of increase throughout the entire period was obviously faster in the Fourth District than in the U. S.

Total banking offices in the U. S. and in the Fourth District (the sum of the number of banks and of branches) increased virtually *pari passu*, or by 47 percent and 50 percent, respectively, during the 1954-65 period. This is illustrated in Chart 1, against the background of the fact that the shortfall in the number of banks in the Fourth District was more than offset by the expansion in number of branches, thereby giving a net effect similar to that of the U. S. In short, there are now considerably more banking offices in the Fourth District than at the end of 1954, as is the case in the U. S. However, the route to this result was clearly different in the District from that of the U. S.

# 1. ALL COMMERCIAL BANKS

U.S. and Fourth District  
(1954-1965) - Ratio Scale

INDEX Dec. 31, 1954=100



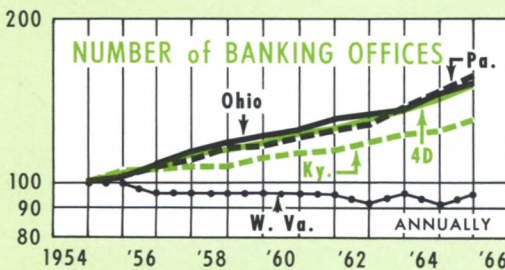
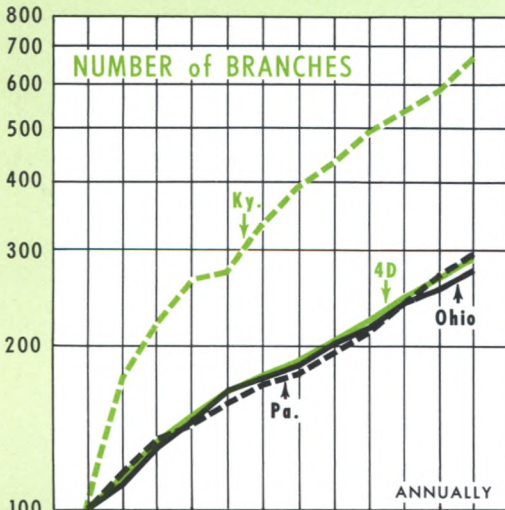
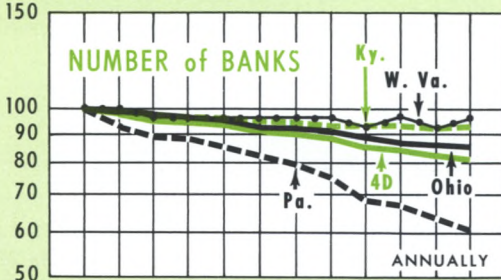
Sources of data: Board of Governors of the Federal Reserve System and Federal Reserve Bank of Cleveland

2.

## ALL COMMERCIAL BANKS

Fourth District and Area Portions  
(1954-1965) - Ratio Scale

INDEX Dec. 31, 1954=100



Source of data: Federal Reserve Bank of Cleveland

**Banks, Branches, and Banking Offices.** Chart 2 shows changes in the number of banks, branches, and banking offices within the Fourth District—for the subareas as well as for the District as a whole. As the chart reveals, the *number of banks* in the Pennsylvania portion of the Fourth District declined most dramatically during the 1954-65 period, or by 40 percent. The number of banks fell by 15 percent in Ohio, 8 percent in the Fourth District portion of Kentucky, and 4 percent in the six counties of West Virginia.<sup>3</sup>

The growth of branch banking in the District is clearly evident in Chart 2. However, while the *number of branches* in the District increased 189 percent during the 1954-65 period, growth was clearly uneven in individual areas. Accordingly, the number of branches expanded by 195 percent in Pennsylvania and 174 percent in Ohio, but by 573 percent in Kentucky, reflecting a basic change in banking regulations affecting branch banking. Because branching is prohibited in West Virginia, there was no change during 1954-65.

Perhaps some mention should be made at this point of the possible impact of branch banking on banking changes in the Fourth District. The laws of the individual states in the Fourth District are not the same in respect to branch banking. For example, branching is prohibited in West Virginia, while in Kentucky and Ohio it is permissible within the

<sup>3</sup> Since the number of banks in the relevant portion of West Virginia is small and thus subject to large percentage changes, only selected reference is made to that area in the subsequent discussion, although Fourth District totals include West Virginia's figures.

TABLE III

## Changes in the Number of Commercial Banks, Branches, and Banking Offices

Fourth District and U. S.

1954-65

	Dec. 31, 1954	Dec. 31, 1965	Net Change	Percent Change
<b>United States</b>				
Banks . . . . .	13,840	13,804	- 36	- 0.3%
Branches . . . . .	6,306	15,753	+9,447	+150.0
Total Banking Offices . . . . .	20,146	29,557	+9,411	+ 47.0
<b>Fourth District</b>				
Banks . . . . .	1,035	843	- 192	- 18.6%
Branches . . . . .	510	1,474	+ 964	+190.0
Total Banking Offices . . . . .	1,545	2,317	+ 772	+ 50.0
<b>Ohio</b>				
Banks . . . . .	637	542	- 95	- 15.0%
Branches . . . . .	345	945	+ 600	+174.0
Total Banking Offices . . . . .	982	1,487	+ 505	+ 52.0
<b>Pennsylvania (4D portion)</b>				
Banks . . . . .	212	128	- 84	- 40.0%
Branches . . . . .	154	455	+ 301	+196.0
Total Banking Offices . . . . .	366	583	+ 217	+ 59.0
<b>Kentucky (4D portion)</b>				
Banks . . . . .	161	149	- 12	- 8.0%
Branches . . . . .	11	74	+ 63	+573.0
Total Banking Offices . . . . .	172	223	+ 51	+ 31.0
<b>West Virginia (4D portion)</b>				
Banks . . . . .	25	24	- 1	- 4.0%
Branches . . . . .	—	—	—	—
Total Banking Offices . . . . .	25	24	- 1	- 4.0

Sources: Federal Reserve Bank of Cleveland and Board of Governors of the Federal Reserve System

county in which the head office of a bank is located, with a few exceptions in the case of the latter.<sup>4</sup> Pennsylvania, on the other hand, permits branching within the home office county and into all counties contiguous to the home office county. This somewhat more liberal policy has of course been reflected in

<sup>4</sup> A number of branches were established outside of a county prior to the enactment of the Ohio law, and since then others have been established under extenuating circumstances.

the rapid spreading of branches throughout the Pennsylvania portion of the District.

*Total banking offices* in the Fourth District increased 50 percent during 1954-65, reflecting the increase in the number of branches despite the decline in the number of banks. As Chart 2 shows, the increase in banking offices was largest in Pennsylvania, followed by Ohio and Kentucky. West Virginia experienced a decline in total banking offices, owing to a reduction in the number of

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banks. Table III summarizes changes in the number of banks, branches, banking offices in the U. S., the Fourth District, and relevant subareas of the District.

**Fourth District Counties.** Although there is not complete agreement on the definition of a banking market area, many analysts have used the county and/or the Standard Metropolitan Statistical Area (SMSA) as approximations of such an area. Accordingly, figures have been assembled on changes in the number of banks, branches, and banking offices by county and SMSA for the state and portions of states that lie within the Fourth District.

As shown in Table IV, the *number of banks* (main offices) increased in only ten of the 169 counties of the Fourth District during 1954-65, despite the aforementioned fact that 28 new banks were chartered. More than half of the District counties had no net change in the number of banks during the period. This was especially true in Kentucky, where in 44 of the 56 counties the number of banks did not change. More counties in Ohio showed a net decline in the number of banks than any

other area, reflecting the dominance of Ohio counties in District totals. However, the large number of counties in the Pennsylvania portion of the District that experienced declines placed that area well above other areas in relative terms. Perhaps most significant is the fact that the bulk of reduction in the total number of banks (192) occurred in just 39 of the 169 District counties. That is to say, with 28 counties losing only one bank, 39 counties in the District absorbed the loss of the other 164 banks. In fact, the counties in the Pennsylvania portion of the District alone accounted for a loss of 84 banks, with Allegheny County (Pittsburgh) by itself absorbing 26 losses.

Changes in the *number of branches* by county in the Fourth District were not dissimilar to the pattern of changes in the number of banks. Thus, the net increase of 964 branches in the District during 1954-65 was fairly concentrated, as was the case with the number of banks. As shown in Table V, the number of branches was unchanged in 54 counties of the District, and declined by one in a single county of Pennsylvania. With 26

**TABLE IV**  
**Changes in Number of Commercial Banks, by County**  
 Fourth District  
 1954-65

State	Number of Counties	Number of counties where number of banks:					Net Change in Number of Banks
		Increased By More Than One	Increased By One	Did Not Change	Decreased By One	Decreased By More Than One	
Ohio	88	1	5	41	17	24	- 95
Kentucky	56	0	2	44	7	3	- 12
Pennsylvania	19	0	1	4	3	11	- 84
West Virginia	6	1	0	3	1	1	- 1
<b>Total</b>	<b>169</b>	<b>2</b>	<b>8</b>	<b>92</b>	<b>28</b>	<b>39</b>	<b>-192</b>

Source: Federal Reserve Bank of Cleveland



**TABLE V**  
**Changes in Number of Branch Commercial Banks, by County**  
 Fourth District  
 1954-65

State	Number of Counties	Number of counties where number of branches:						Net Change in Number of Branches
		Decreased By More Than One	Decreased By One	Did Not Change	Increased By One	Increased By More Than One But Less Than Ten	Increased By Ten Or More	
Ohio	88	0	0	16	15	39	18	+600
Kentucky	56	0	0	29	9	17	1	+ 63
Pennsylvania	19	0	1	3	2	6	7	+301
West Virginia	6	—	—	6	—	—	—	—
Total	169	0	1	54	26	62	26	+964

Source: Federal Reserve Bank of Cleveland

**TABLE VI**  
**Changes in Number of Commercial Banking Offices, by County**  
 Fourth District  
 1954-65

State	Number of Counties	Number of counties where number of banking offices:						Net Change in Number of Banking Offices
		Decreased By More Than One	Decreased By One	Did Not Change	Increased By One	Increased By More Than One But Less Than Ten	Increased By Ten Or More	
Ohio	88	0	2	16	11	47	12	+505
Kentucky	56	0	2	32	6	15	1	+ 51
Pennsylvania	19	3	3	1	0	9	3	+217
West Virginia	6	1	1	3	0	1	0	— 1
Total	169	4	8	52	17	72	16	+772

Source: Federal Reserve Bank of Cleveland

counties experiencing an increase of only one branch, the remainder of the 964—or 938—were accounted for by 88 counties in the District. Interestingly, in 26 of the counties there were more than ten branches established during the period, all in communities with populations over 50,000. The largest number of branches were established in Allegheny County, Pennsylvania (168), with Cuyahoga County, Ohio (118), second.

Eighteen of the 88 counties in Ohio accounted for 426 of the 600 new branches; and in the Pennsylvania portion of the District, seven counties accounted for 256 of the 301 new branches.

As would be expected, changes in the *number of banking offices* in subareas of the District reflect the relative dominance of changes in number of banks or changes in number of branches, respectively. As shown

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in Table VI, increases in the number of banking offices in Ohio were widespread, with only two of the 88 counties showing a net reduction during the 1954-65 period, and 16 counties showing no change. In contrast, in the Pennsylvania area of the District, which in total experienced a 59-percent increase in the number of banking offices, there were six counties (of 19) in which the number of banking offices decreased. Obviously, the 12 counties in which banking offices increased had to register substantial gains in order to bring the total figure up to the 217 banking offices shown in the last column of the table—which they did. These developments are indeed indicative of the considerable but uneven changes that occurred in banking offices in the portion of Pennsylvania within the Fourth District. The situation in Kentucky was strikingly dissimilar, with a majority of counties having no net change in the number of banking offices during the period under review.

In short, 64 of the 169 counties in the Fourth District did not experience an increase in the number of banking offices during the period. In addition, while expansion of the number of banking facilities in the Fourth District was substantial during 1954-65, in fact relatively greater than for the nation as a whole, the subareas and individual counties of the District did not share proportionally. But this should not be surprising, in that, as alluded to earlier, changes in banking offices tend to concentrate in areas that are more heavily populated. This is revealed by analysis of the figures on an SMSA basis.

**Fourth District SMSA's.** The Fourth District contains all or parts of 19 SMSA's (an area

**TABLE VII**  
**Changes in Selected Commercial Banking**  
**Statistics of SMSA's as a Percent of**  
**Changes in Fourth District and Subarea Totals**  
 (signs omitted)  
 1954-65

SMSA Changes as Percent of:	Number of Banks	Number of Branches	Number of Banking Offices	Number of Mergers
Fourth District . . . .	61%	70%	72%	61%
Ohio . . . . .	60	73	74	62
Pennsylvania . . . .	66	72	75	63
Kentucky . . . . .	42	39	48	36
West Virginia . . . .	100	—	100	100

Source: Federal Reserve Bank of Cleveland

with a central city of at least 50,000 population). While a number of SMSA's include only one county—for example, Lima, Ohio, and Lexington, Kentucky—others contain three or more counties—for example, Cleveland, Dayton, and Pittsburgh. Four of the SMSA's—Toledo, Cincinnati, Johnstown, and Huntington-Ashland—include counties that are outside the Fourth Federal Reserve District; those counties are not included in the statistics or in the following discussion.

Only 39 of the 169 counties in the Fourth District are within SMSA's. However, from the end of 1954 through 1965, the preponderance of changes in the District occurred in the counties of the SMSA's—61 percent of the decrease in the number of banks, 70 percent of the increase in the number of branches, and 72 percent of the net change in banking offices (see Table VII). Changes in the SMSA's of Ohio and Pennsylvania, as compared with the respective totals of those two areas, closely paralleled the relationships of all SMSA's to the District as a whole. In Kentucky, the proportions accounted for by SMSA's were con-

siderably smaller, as shown in Table VII.

It should not be surprising that a large proportion of changes in the banking statistics took place in the SMSA's of the District. Such concentration of activity reflects a number of factors: population distribution, heavier competitive pressures, increasing integration of banking and credit markets, and so forth. In short, no SMSA in the Fourth District failed to have some type of change during 1954-65, and no SMSA closed the 11-year period without increasing the number of banking offices.

The proportion of mergers and acquisitions in the District accounted for by the SMSA's closely paralleled (disregarding signs) that of the decline in the number of banks during 1954-65 (see Table VII), as would be expected. Again, relative changes in the SMSA's of Ohio and Pennsylvania, insofar as mergers and acquisitions are concerned, paralleled those in the District. The majority of mergers within SMSA's can be classified as "acquisition of suburban outlets." That is to say, there was little intracity merging during 1954-65, with the bulk of the mergers involving large city banks that acquired smaller banks on the periphery of a banking service area in order to enlarge the sphere of service. In other cases, of course, banks established new branches in similar locations.

## SUMMARY OF THE NUMBERS

In the preceding discussion, it was shown that during 1954-65, the number of banks declined in the Fourth District as a whole, in the subareas of the District, in most of the counties, and in all of the SMSA's. At the same time, however, the number of banking

offices increased in the District, in the subareas, in all of the SMSA's, and in most of the counties. By implication, the numbers suggest that bank competition is greater in the Fourth District currently than it was at the end of 1954, despite the reduction in the number of banks. Unfortunately, competition cannot be measured by numbers—or by counting—alone, although some insights into the phenomenon can perhaps be gained by "looking at the numbers."

As has been shown, most changes in the Fourth District during 1954-65 took place in the metropolitan areas. With the decline in the number of banks confined to 67 counties in the District (of the other 102 counties, 10 gained banks and 92 experienced no change), the location of the decline tended to be relatively concentrated. On the other hand, the number of banking offices decreased in only 12 District counties during 1954-65, and increased in 105 counties. Only four counties in the entire District can be said to have suffered an appreciable reduction in the number of banking offices. Admittedly, it is impossible to determine what would be an appropriate or desirable number of banking offices, for example, from the standpoint of most efficient allocation of banking resources. However, if the number of banking offices can be used as a criterion for making a judgment about competition, the fact that the number of banking offices in the Fourth District did increase appreciably during 1954-65 suggests, at least intuitively, that competition is unlikely to be less intense currently than 11 years ago. (This involves of course the heroic assumption that the District may be considered as a banking market entity.)

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With reference to the impact of mergers and acquisitions, it has been pointed out that there were 215 mergers in 69 counties of the District during 1954-65. These led to losses in total banking offices in only 12 counties in the District, suggesting that the impact of mergers and acquisitions was relatively minimal during the period under review. Even in areas where mergers were heavily concentrated, there were more banking offices at the

end of 1965 than at the close of 1954.

Finally, the chartering and opening of new banks in the Fourth District was of relatively minor importance during the 1954-65 period. Of the 28 new banks chartered, 21 were established in Ohio; only 7 banks were started in the other 3 subareas of the District. Of the 28 banks established since the end of 1954, 5 have since been eliminated through merger or acquisition.

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# TRENDS IN GOVERNMENT EMPLOYMENT

## (Fourth District Metropolitan Areas)

Nonagricultural employment in the United States increased from 43.9 million persons in 1947 to 60.4 million in 1965, or at the rate of 1.8 percent per year.<sup>1</sup> In line with the trend toward a service-type economy, employment during 1947-65 grew faster in service-producing industries than in goods-producing industries, or at an annual rate of 2.3 percent compared with 0.9 percent.<sup>2</sup> That the goods sector contributed only 20 percent of the net employment gain during 1947-65, despite a remarkable increase in 1965, was due largely to losses sustained in the second half of the 1950's, particularly in manufacturing employment.

Reflecting a much faster rate of growth, service-type industries raised their share of total employment from 58 percent in 1947 to 64 percent in 1965, as indicated in Chart 1. Four points of this six-point gain by the ser-

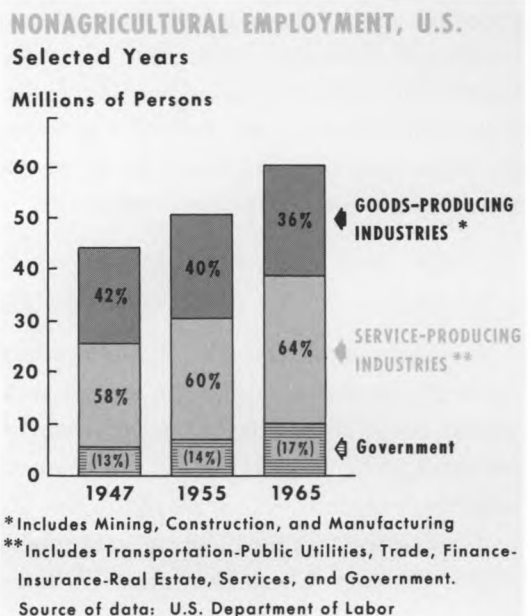
<sup>1</sup> Unless otherwise stated, "employment" throughout this article refers to nonagricultural wage and salary employment (establishment series).

<sup>2</sup> Service-producing industries as used in this article include transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; business and personal services; and government. Goods-producing industries include mining, construction and manufacturing, as well as agriculture. The latter category is excluded from the figures used in this article.

Some analysts consider transportation and public utilities as "related" to the goods-producing industries and include it with the goods sector.

VICES were accounted for by rising employment in government agencies at the Federal, state, and local levels (including public education). The government component of the service sector grew at a 3.4 percent annual rate over the entire 18 years and a 3.7 percent annual rate during the last ten years. Consequently, government employment boosted its share of total employment from 13 percent in 1947 to 17 percent in 1965, a gain not equalled by any of the other four major components of the service sector.

The long-term pattern of government employment in the nation cannot be totally translated to the regional level. However, some



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**TABLE I**  
**Employment in Selected Industry Divisions as**  
**a Percent of Total Nonagricultural Employment**  
 Ten Largest SMSA's in the Fourth District and U. S.  
 1965

	Manu- facturing	Trade	Special Services	Government
Akron . . . . .	44%	19%	12%	12%
Canton . . . . .	50	18	12	9
Cincinnati . . . . .	35	21	14	12
Cleveland . . . . .	38	20	14	12
Columbus . . . . .	26	21	15	21
Dayton . . . . .	41	18	13	18
Toledo . . . . .	38	21	14	12
Youngstown-Warren	48	18	13	10
Erie . . . . .	49	17	13	10
Pittsburgh . . . . .	37	20	16	11
Average, 10 areas	38	20	14	13
United States . . . . .	30	21	15	17

Sources: U. S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service

perspective on recent trends in government employment in the Fourth Federal Reserve District can be obtained by considering developments in the District's ten largest metropolitan areas. Specifically, this article is concerned with the relationship of government employment to total employment in those metropolitan areas and with the growth of public employment in recent years as compared with other types of employment.

### GOVERNMENT EMPLOYMENT COMPARED WITH TOTAL EMPLOYMENT

An average of one out of eight persons currently employed in the ten largest metropolitan areas of the Fourth District is working for an agency of government, as compared with one person in six employed in the U. S. as a whole (see Table I). In the metropolitan areas, virtually the same number of people

are employed in government as in the special service industries, but substantially more are employed in trade, and an even larger number in manufacturing industries.

The average for the ten areas tends to conceal differences among the individual areas as to the proportions of government to total employment. In two areas, as much as one worker in five (Columbus) or one in six (Dayton) is currently in public employment. In Columbus, this is due to the large number of state employees—almost 40 percent of the statewide total—connected with the State's central government or with The Ohio State University.<sup>3</sup> In Dayton, the high proportion of government employment reflects the sizable contingent of Federal workers at Wright-Patterson Air Force Base. At the opposite end of the range, government employment in Canton, Erie, and Youngstown-Warren accounts for as little as one-tenth (or a shade less) of total area employment.

If data for Columbus and Dayton are excluded from statewide totals for Ohio, the proportion of government employment to total employment in the remaining portion of the state—12.5 percent (not shown in Table I)—exceeds the proportion for each of the six remaining metropolitan areas in Ohio, which suggests that the ratio of public to private employment in Ohio is higher outside than within metropolitan areas.

<sup>3</sup> For a more detailed analysis of employment in the Columbus area see "An Economic Profile of Columbus, Ohio," *Economic Review*, Federal Reserve Bank of Cleveland, Cleveland, Ohio, January 1966, p. 3.

Government employment in 23 state capitals for which published employment data are available ranges from one-eighth to one-third of total area employment, with a median of one-fifth.

**TABLE II**  
**Employment in Government and in**  
**Manufacturing as a Percent of Total Non-**  
**Government Employment**

Ten Largest SMSA's in the Fourth District and U. S.  
 1965

	Government		Manufacturing	
	Percent	Rank	Percent	Rank
Akron . . . . .	13%	5	50%	7
Canton . . . . .	10	1	55	10
Cincinnati . . . . .	14	8	40	2
Cleveland . . . . .	14	6	44	5
Columbus . . . . .	26	10	33	1
Dayton . . . . .	22	9	50	6
Toledo . . . . .	14	7	43	4
Youngstown-Warren . . . . .	11	2	53	8
Erie . . . . .	11	3	54	9
Pittsburgh . . . . .	13	4	41	3
Average, 10 areas . . . . .	15	—	44	—
United States . . . . .	20	—	36	—

Sources: U. S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service

Sharper focus on the size of government employment in the metropolitan areas may be obtained by measuring it against private employment rather than total (public plus private) employment. Table II shows that public employment ranges between 10 percent and 26 percent of private employment in the ten areas and that the average for the areas is smaller than the corresponding percentage for the U. S. as a whole. Visual inspection of the data in Table II indicates that the proportion of government employment is inversely related to the amount of manufacturing activity in a given area. Thus, the three areas ranking highest in manufacturing employment—Erie, Canton, and Youngstown-Warren—rank lowest in government employment. The visual judgment is confirmed by a rank correlation test producing a correlation coefficient that is significant at the 5-percent

level (and close to being significant at the 1-percent level).<sup>4</sup> A similar test with a larger group of metropolitan areas throughout the country likewise shows a statistically significant relationship between the two categories of employment.<sup>5</sup>

Population density is associated even more strongly than manufacturing activity, in an inverse relationship, with the relative size of public employment. This is indicated by the following figures, which show the range and the median of public employment as a percent of private employment for 48 states grouped by number of inhabitants per square mile (1960):

	Group 1	Group 2	Group 3
	2.6-49.2	62.5-99.6	100.4-812.4
Range	18.4-40.0%	13.6-26.8%	11.9-22.9%
Median	28.1%	19.2%	15.9%

Coincidentally, manufacturing employment as a percent of private employment presents this pattern:

Range	5.5-45.2%	19.4-51.5%	32.0-48.8%
Median	24.5%	33.6%	43.4%

The full significance of the relationship between government employment and population density is not readily apparent. While there are instances where Federal installations are purposely placed in sparsely populated areas, or in areas lacking opportunities for industrial employment, the explanation seems to reflect primarily the activities of local governments. As indicated by data in the 1962

<sup>4</sup> The  $r^2 = -0.73$  (for all ten areas) or 0.74 (for eight areas, excluding Columbus and Dayton).

<sup>5</sup> The  $r^2 = -0.66$  (for 26 areas), which is significant at the 1-percent level.

## ECONOMIC REVIEW

*Census of Governments*, per capita local government employment in states with similar population sizes but different population densities is generally higher in low-density states. This is true for both total local government employment and employment in public education (the largest component), suggesting that some governmental functions invoke the benefits of economies of scale. With reference to the lower proportion of employment in public education in densely populated as against sparsely populated areas, *Census of Population* data show that, in the nation as a whole, private schools account for a much larger percentage of total school enrollments in urban areas than in rural areas.

### GOVERNMENT EMPLOYMENT MIX

The amount of government employment in any local area involves a "mix" between local and central government.<sup>6</sup> While agencies of local government are indigenous to an area, central government agencies are at particular locations only at the discretion of the central authority. In general, and with explainable exceptions, the government employment "mix" in the metropolitan areas of the District tends to be one of fairly stable proportions of local and central government employment (see Table III). By far the largest portion of all public employment—roughly between 70 and 80 percent of the total, except in Columbus and Dayton—is found at the local government level. The balance of public employment is divided between state and Federal employment according to no

<sup>6</sup> Central government refers to Federal and state government agencies; local government covers all other government units, including cities, counties, and special districts.

TABLE III  
Federal, State, and Local Government  
Employment as a Percent of Total  
Government Employment

Ten Largest SMSA's in the Fourth District and U. S.  
1965

	Federal	State*	Local
Akron . . . . .	10%†	9%	81%
Canton . . . . .	11†	12	77
Cincinnati . . . . .	24	5	71
Cleveland . . . . .	25	5	70
Columbus . . . . .	20	48	32
Dayton . . . . .	56	5	39
Toledo . . . . .	12†	9	79
Youngstown-Warren . . . . .	12†	6	82
Erie . . . . .	13	‡	87§
Pittsburgh . . . . .	18	‡	82§
Average, 8 Ohio areas . . . . .	26	14	60
United States . . . . .	26	19	55

\* State government employment for Ohio SMSA's, unless specifically shown in the published statistics, was obtained by subtraction of Federal and local government employment from total government employment.

† Estimated by Federal Reserve Bank of Cleveland on the basis of 1964 data.

‡ Data for state government not available separately.

§ State and local government employment combined.

Sources: U. S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service

readily discernible pattern other than a concentration of Federal employment in the larger population centers or for special circumstances as in the case of Dayton.<sup>7</sup> While

<sup>7</sup> It should be borne in mind that the distinction between Federal government and state and local government employment is somewhat formalistic in that programs enacted by Federal legislation are often administered by employees carried on state or local payrolls under Federal grants-in-aid. While such arrangements may be of long standing in some cases, for example, state employment services or unemployment compensation agencies, the practice of delegating the administration of Federal legislation to state or local government agencies has increased in recent years with the enactment of such programs as manpower training, the fight against poverty, and urban redevelopment, among others.



the average for the eight metropolitan areas in the Ohio portion of the District shows a distribution of public employment among Federal, state, and local governments fairly similar to the national pattern, there is no semblance of similarity between the distribution in any of the individual areas and in the U. S. as a whole.<sup>8</sup> As the situations in Columbus and Dayton show, heavy concentrations of either state or Federal employment can drastically alter the "normal" mix and also raise the proportion of public to private employment in an individual area.<sup>9</sup>

### CHANGES IN GOVERNMENT EMPLOYMENT

As previously stated, government has been a "growth" industry in terms of employment. With vigorous expansion in recent years it has helped, together with several other industries in the service-producing sector, to

<sup>8</sup> A comparison of distribution patterns between areas in the District and metropolitan areas in other parts of the country is precluded by lack of published data, as government employment in many instances is not broken down at all or else only into two categories, Federal and state-and-local employment. In 15 metropolitan areas outside the District for which a limited breakdown of public employment is published, the Federal share of government employment ranges from 11 percent (in Paterson, New Jersey) to 67 percent (in Norfolk-Portsmouth, a situation similar to Dayton's), while state and local government employment combined accounts for the remainder.

<sup>9</sup> Since the published employment statistics for 22 other areas that include a state capital do not show separate figures for state government employment, it is not possible to compare the proportion of state government employment in Columbus, where the large figure represents both employees of the state's central administration and the staff of the state's largest public university, with that in other state capitals.

TABLE IV

### Percent Changes in Employment in Government, Manufacturing, and All Industries

Ten Largest SMSA's in the Fourth District and U. S. 1958 to 1965

	Government	Manufacturing	All Industries
Akron* . . . . .	+32%	- 1%	+ 6%
Canton . . . . .	+17	+17	+13
Cincinnati* . . . . .	+18	- 4	+ 4
Cleveland* . . . . .	+28	+ 6	+10
Columbus* . . . . .	+32	+13	+21
Dayton* . . . . .	+10	+15	+17
Toledo* . . . . .	+22	+ 7	+ 7
Youngstown-Warren	+21	+ 7	+ 9
Erie . . . . .	+24	+16	+10
Pittsburgh . . . . .	+24	- 4	†
Average, 10 areas .	+23	+ 4	+ 8
United States . . . .	+28	+13	+18

\* Data for 1965 modified by Federal Reserve Bank of Cleveland for comparability with 1958 data.

† Less than - 0.5%.

Sources: U. S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service

offset relative employment losses in slow-growing or declining industries in both the goods and service sectors.

In the U. S. as a whole, public employment between 1958 and 1965 expanded by 28 percent, a gain substantially larger than that of 18 percent in total employment or of 13 percent in manufacturing employment (see Table IV).<sup>10</sup> The pattern of employment changes in the District's metropolitan areas between 1958 and 1965 was similar to that in the country as a whole in general direction, but not in specific details, as the table shows. On average, the ten areas came close to matching the national gain in public employment; gains in individual areas, however,

<sup>10</sup> Analysis is limited to this seven-year span since published data for metropolitan areas in Ohio are not available for earlier years.

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fluctuated widely about the national figure. The fact that private employment, especially in manufacturing industries, advanced more slowly in most areas of the District than in the U. S. as a whole makes the amount of growth of the areas' public employment all the more significant.

During 1958-65, as shown in Chart 2, public employment grew faster than total employment in all areas of the District except Dayton, in some instances by a substantial margin. In six of the areas, government experienced the largest percent rise of employment among the major industry divisions. The wide variation of growth in public employment, from 10 percent in Dayton to over 30 percent in Columbus and Akron, reflects such local factors as the substantial curtailment of Federal employment at Wright-Patterson Air Force Base retarding government employment in the Dayton area, or the unusually large increase in state government payrolls (including state education) in Columbus.

The broad range of employment changes at different levels of government in the metropolitan areas of the District is apparent from Table V. Changes at the local government level, despite the wide range of increases between 22 percent and 47 percent, were at least consistent as to direction. In marked contrast, changes at the Federal and state levels involved employment losses intermingled with gains. The latter is actually not surprising, since the "normal" growth pattern of public employment at the state and Federal levels is more subject to disruption by legislative or administrative action, such as the creation of a new state university in Cleveland or the reduction of Federal personnel at

a military base in Dayton.

The largest percentage increases in public employment during 1958-65, in both the metropolitan areas of the District and the nation, occurred at state and local levels (see Table V). Undoubtedly, a very substantial portion of the rise in state and local government employment represented increased staffs for numerous state and local government functions, including public schools and universities (where employment may be inflated by students employed in part-time positions financed through Federal aid).

**TABLE V**  
Percent Changes in Federal, State, and Local Government Employment

Ten Largest SMSA's in the Fourth District and U. S. 1958 to 1965

	All Levels of Government	Federal	State*	Local
Akron† . . . . .	+32%	+13%‡	+33%	+35%
Canton . . . . .	+17	0‡	0	+23
Cincinnati† . . . . .	+18	+ 9	+ 9	+22
Cleveland† . . . . .	+28	+27	+38	+27
Columbus† . . . . .	+32	+19	+28	+47
Dayton† . . . . .	+10	- 3	+16	+33
Toledo† . . . . .	+22	-17‡	+15	+32
Youngstown-Warren . . . . .	+21	- 5‡	-10	+28
Erie . . . . .	+24	0	§	+26#
Pittsburgh . . . . .	+24	+ 3	§	+30#
Average, 8 Ohio areas	+23	+ 9	+25	+29
United States . . . . .	+28	+ 9	+38	+35

\* State government employment for Ohio SMSA's, unless specifically shown in the published statistics, was obtained by subtraction of Federal and local government employment from total government employment.

† Data for 1965 modified by Federal Reserve Bank of Cleveland for comparability with 1958 data.

‡ Federal government employment for 1965 estimated by Federal Reserve Bank of Cleveland.

§ Data for state government employment not separately available.

# State and local government employment combined.

Sources: U. S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service

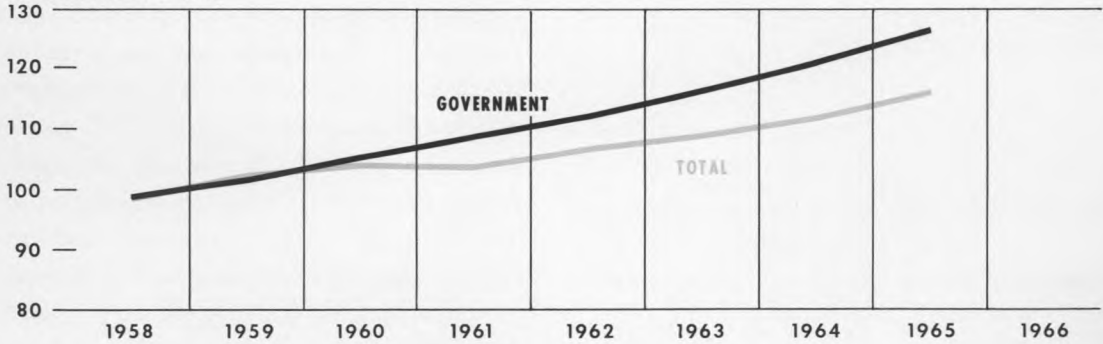
# TOTAL EMPLOYMENT AND GOVERNMENT EMPLOYMENT

U.S. and 10 Largest SMSA's in Fourth District

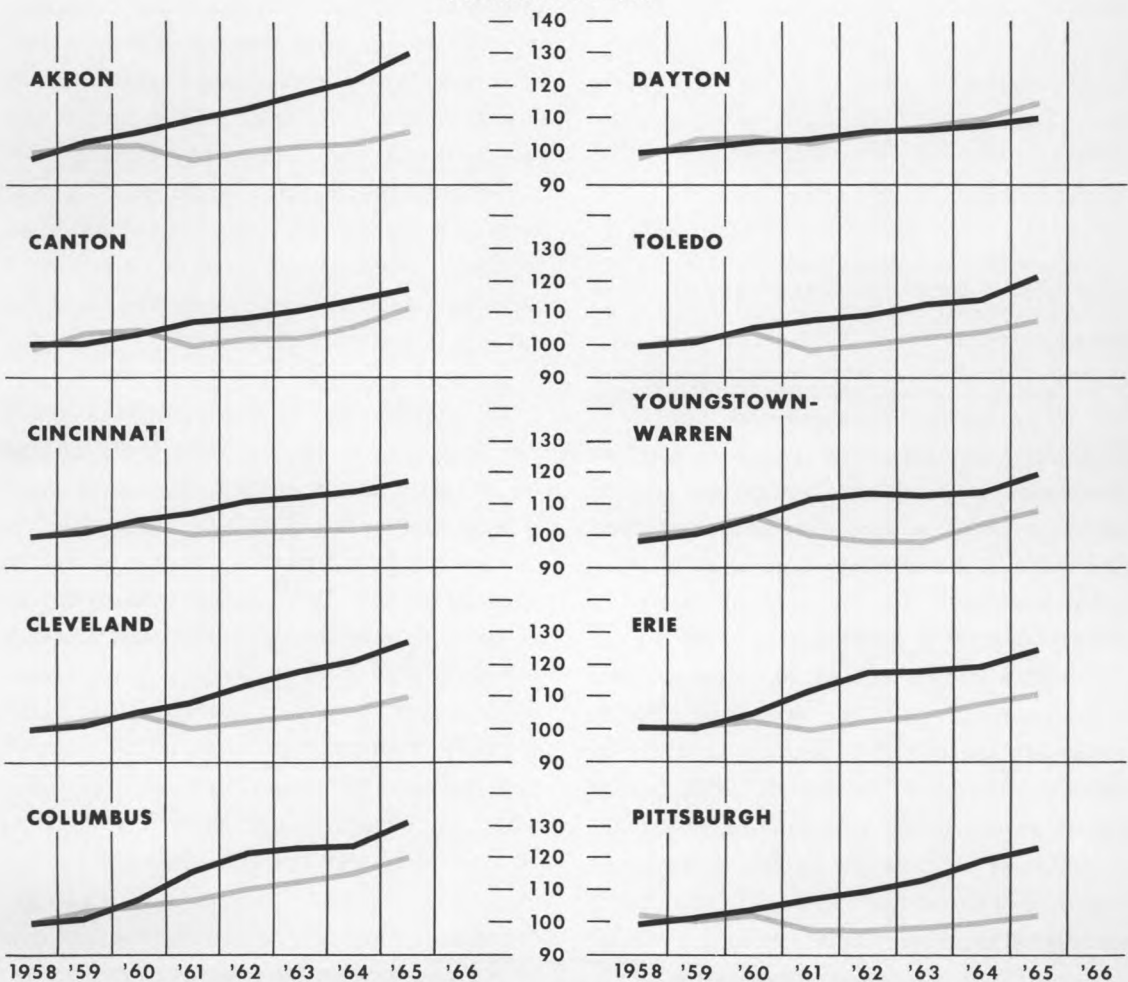
Annual Averages

## UNITED STATES

INDEX 1958-59=100



INDEX 1958-59=100



Sources of data: U.S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service.

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**TABLE VI**  
**Net Changes in Total Employment and Government Employment**  
 Ten Largest SMSA's in the Fourth District and U. S. 1958 to 1965

	Total Employment (000)	Government Employment (000)	Government as Percent of Total Employment Gain*
Akron† . . . . .	+ 10	+ 4	44%
Canton . . . . .	+ 13	+ 2	11
Cincinnati† . . . . .	+ 14	+ 7	53
Cleveland† . . . . .	+ 68	+ 19	28
Columbus† . . . . .	+ 52	+ 14	28
Dayton† . . . . .	+ 40	+ 4	11
Toledo† . . . . .	+ 11	+ 3	27
Youngstown-Warren .	+ 13	+ 3	21
Erie . . . . .	+ 8	+ 2	21
Pittsburgh . . . . .	- 2	+ 17	‡
Average, 10 areas .	+ 23	+ 8	33
United States . . . .	+9,064	+2,206	24

\* Percentages based on unrounded figures.

† Data for 1965 modified by Federal Reserve Bank of Cleveland for comparability with 1958 data.

‡ Net employment loss.

Sources: U. S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service

However, the difference between employment expansion at the Federal as against state and local levels may be exaggerated due to extensive use of state and local government personnel in the administration of Federal programs under grants-in-aid.<sup>11</sup>

Due to a sizable rate of gain, government employment contributed more than its proportionate share to the increase in total employment between 1958 and 1965. In the nation as a whole, public employment accounted for 24 percent of the increase in total employment (see Table VI, column 3) although it represents only 17 percent of total

employment (see Table I, column 4). Public employment in the ten metropolitan areas in the District, on average, was responsible for 33 percent of the total gain in employment, or more than double its share of total employment (13 percent). In five of the areas—Akron, Cincinnati, Cleveland, Columbus, and Toledo—public employment accounted for at least one-fourth of the area's total employment gain during 1958-65. In some cases, notably Akron and Cincinnati, large percentage gains were more the reflection of a rather small rise in total employment—usually due to a loss in manufacturing employment—than the mark of exceptionally strong growth in public employment. In only one area—Dayton—did government employment fail to contribute at least its proportionate share. In another area—Pittsburgh—the gain in public employment served to offset all except a tiny portion of the net loss in private employment.

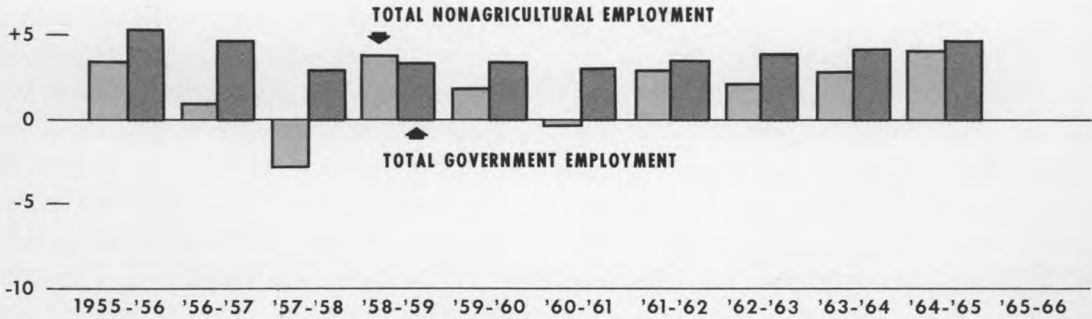
The support that government employment has been able to lend to the growth of total employment, in the metropolitan areas of the District and in the U. S. as a whole, derives its strength both from the steady and above-average growth of public employment during periods of business expansion and from its immunity to decline in periods of recession. As shown in the upper panel of Chart 3, the virtually undiminished rise in the nation's government employment in 1958 and 1961, when total employment showed a cyclical decline, indicates that the demand for the services of firemen and teachers, for example, continues even as the demand for the products or services of manufacturing and other industries is reduced.

<sup>11</sup> See footnote 7.

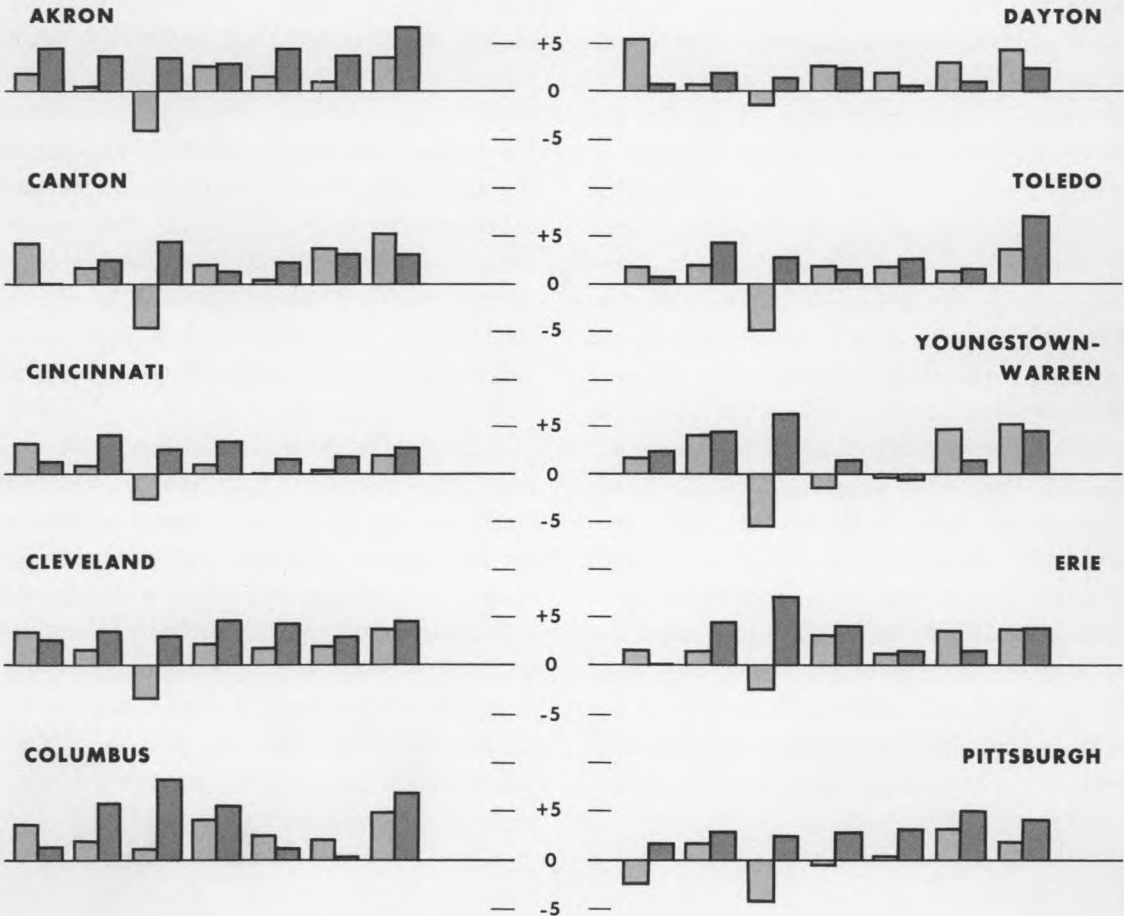
# TOTAL EMPLOYMENT AND GOVERNMENT EMPLOYMENT

U.S. and 10 Largest SMSA's in Fourth District  
Year-To-Year Percent Changes

## UNITED STATES Percent changes



Percent changes



1958-'59 '59-'60 '60-'61 '61-'62 '62-'63 '63-'64 '64-'65 '65-'66

1958-'59 '59-'60 '60-'61 '61-'62 '62-'63 '63-'64 '64-'65 '65-'66

Sources of data: U.S. Department of Labor; Division of Research and Statistics, Ohio Bureau of Unemployment Compensation; Pennsylvania State Employment Service.

## ECONOMIC REVIEW

A similar pattern during recession of declining (or barely rising) total employment combined with continued (though possibly slower) increase in public employment prevailed also in the metropolitan areas of the District. (Unfortunately, lack of earlier data permits the inclusion of only one period of recession, 1960-61, in the charts for the individual areas.) In general, the loss of total employment between 1960 and 1961 was greater in the metropolitan areas of the District than in the country as a whole. This reflects the cyclical vulnerability of employment in durable goods manufacturing, which is more predominant in most areas of the District than in the nation as a whole. On the other hand, the rise in government employment between the two years exceeded the national percentage in six of the ten areas.

In view of the stability of public employment during recession, it is reasonable to assume that areas with a large proportion of government employment will suffer less severe cyclical losses of total employment than areas where public employment is relatively small. The assumption is supported by the minor employment loss in Dayton between 1960 and 1961 and the absence of any loss in Columbus—the two areas ranking highest among the District areas as to the proportion of government employment. It is strengthened further by a rank correlation test of all ten areas, which yields a correlation coefficient of 0.66 that is significant at the 5-percent level.

## CONCLUDING COMMENTS

With continued growth of the population in size and degree of urbanization, the need for public services in such fields as health, transportation, education, and general welfare will also continue to increase. This in turn will likely lead to the introduction of some measure of public participation or regulation in new areas or the broadening of the scope of participation in existing areas. Further growth in government employment (including public education) can, therefore, be expected. Such growth will affect the metropolitan areas of the District, as well as the nation as a whole, and will help to perpetuate the gradual shift in the industrial makeup of the work force of the individual metropolitan areas and the nation. Enlarging the employment share of industries less vulnerable to employment declines during recession should contribute to greater stability of employment and income levels in the individual areas as well as in the nation.

A change in the industrial composition of the work force due to increased government employment will also affect the occupational profile of the work force. The manpower demands of the public sector will be aimed more at white-collar than at blue-collar occupations and will provide additional employment opportunities in professional and semiprofessional occupations for which special education or training may be required.

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