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RECENT TRENDS IN CONSTRUCTION ACTIVITY

Total private and public construction usually accounts for about one-tenth of economic activity in the United States. Viewed in this simple perspective, construction activity may not seem to be of great importance. Similar to other types of investment spending, however, construction spending tends to have a multiplied influence on economic activity, generating an amount of final spending that exceeds the original investment. It is not surprising, therefore, that construction has a mixed influence on the course of general business activity. At times, construction is in phase with the pace of business activity, thus complementing or reenforcing increases and declines in economic activity. At other times, construction is out of phase with the predominant trend in the economy, thus tending to moderate swings in either direction. The behavior of construction spending during the past few years provides examples of the relationship between construction and general economic activity.

CONSTRUCTION ACTIVITY, 1960-1967

Overview. From the third quarter of 1960 (which marked the completion of a full cycle in construction activity) through the fourth quarter of 1967, construction activity expanded at an average annual rate of 5.3 percent, and Gross National Product increased at an average annual rate of 6.7 percent (see Table I). For the period as a whole, construction activity was not a major stimulus to economic growth, at least insofar as the record of overall business activity is concerned. Within total construction, the record was mixed, with public construction increasing faster (7.4 percent) than GNP and private construction increasing at a slower rate (4.4 percent). The nonresidential component of private construction performed more favorably than residential construction (5.8 percent) compared with 3.3 percent).

The record of construction activity from the third quarter of 1960 through the fourth quarter of 1967 cannot be characterized as a smooth, straight-line trend, which may be implied by the figures cited above. In fact, during the period under review, construction activity underwent four separate and distinct phases, including two phases of rapid increase, a phase of moderate increase, and one of outright decline. A review of developments within each of the four phases may help clarify the role played by construction during 1960-1967.

First Phase: Third Quarter 1960 – Fourth Quarter 1964. During this phase, the economy was in the early stages of recovery from the 1960-1961 recession, and total construction

TABLE I Changes in Gross National Product and Construction Activity Selected Periods 1960-1967

		Avero	age Annual Rates of C	Change*	
	III 60 to IV 67	III 60 to IV 64	IV 64 to I 66	1 66 to IV 66	IV 66 to IV 67
In Current Prices					
Gross National Product	+ 6.7%	+6.0%	+ 9.8%	+ 6.7%	+ 5.9%
Total construction	+ 5.3	+5.0	+12.1	-10.5	+11.3
Public	+ 7.4	+5.6	+14.7	+ 1.6	+10.4
Private • • • • • • • • • • •	+ 4.4	+4.9	+10.8	-15.8	+11.7
Nonresidential	+ 5.8	+5.0	+23.3	- 2.8	— 3.6
Residential	+ 3.3	+4.8	+ 0.6	-29.0	+32.1
GNP less construction	+10.0	+6.1	+ 9.6	+ 9.0	+ 5.4
In Constant Prices					
Gross National Product	+ 4.7%	+4.6%	+ 7.6%	+ 3.2%	+ 2.8%
Total construction	+ 2.4	+3.0	+ 8.4	-14.7	+ 6.3
Public	+ 4.3	+3.4	+10.9	— 3.8	+ 6.9
Private	+ 1.5	+2.9	+ 7.3	-19.3	+ 6.0
Nonresidential	+ 3.2	+3.1	+18.9	- 6.5	- 7.0
Residential	-0-	+2.6	— 2.5	-32.4	+23.5
GNP less construction	+ 5.0	+4.8	+ 7.6	+ 5.4	+ 2.4

* Calculated from seasonally adjusted data.

Sources: U. S. Department of Commerce, Office of Business Economics and Federal Reserve Bank of Cleveland

expanded at a slightly slower pace than GNP (see Table I). Construction activity in the first phase tended to parallel the general recovery in economic activity, but provided no additional fillip to the recovery. Total private construction grew at an annual rate of less than 5 percent over the entire period. Within private construction, nonresidential construction was sluggish until the end of 1963, and there were only modest gains in homebuilding. Public construction rose somewhat faster (5.6 percent) than private construction, but did not alter the overall contribution of construction to economic activity.

Second Phase: Fourth Quarter 1964 – First Quarter 1966. The growth of GNP during the second phase was at the high annual rate of nearly 10 percent, and construction activity surged forward at an even faster pace. As a result, the behavior of construction tended to intensify the pace of general economic activity. Both GNP and construction grew faster in the second phase than in any of the four phases. A rapid expansion in capital spending that spurred private nonresidential building, as well as a sharp increase in public construction (especially of educational buildings and highways), contributed to the resurgence of construction activity. As shown in Table I, residential construction registered only a slight increase in the period.

Third Phase: First Quarter 1966 – Fourth Quarter 1966. During the third phase, due in large part to a severe contraction in residential construction, total construction activity fell 10.5 percent at an annual rate. This helped

TABLE II

Gross National Product and Construction Activity (seasonally adjusted) 1966-1967

		19	66		1967				
	۱*	Ш	Ш	IV*	1	11	Ш	IV	
			(Bill	ions of dollar	s, at annual re	ates)			
Gross National Product	\$725.9	\$736.7	\$748.8	\$762.1	\$766.3	\$775.1	\$791.2	\$807.3	
Total construction	79.9	77.4	75.5	73.5	75.2	75.2	79.0	81.8	
Public	24.6	24.1	23.6	24.9	26.1	25.8	26.8	27.5	
Private	55.3	53.3	51.9	48.6	49.1	49.4	52.2	54.3	
Nonresidential	28.3	27.5	28.2	27.7	27.7	26.3	26.6	26.7	
Residential	27.0	25.8	23.7	20.9	21.4	23.1	25.6	27.6	
GNP less construction	646.0	659.3	673.3	688.6	691.1	699.9	712.2	725.5	
			(Billions	of 1958 dol	lars, at annua	l rates)			
Gross National Product	\$645.4	\$649.3	\$654.8	\$661.1	\$660.7	\$664.7	\$672.0	\$679.6	
Total construction	67.8	64.7	62.2	60.2	61.3	60.8	62.3	64.0	
Public	20.8	19.9	19.1	20.2	21.1	20.8	21.1	21.6	
Private	47.0	44.8	43.1	40.0	40.2	40.0	41.2	42.4	
Nonresidential	24.2	23.4	23.7	23.0	22.9	21.7	21.5	21.4	
Residential	22.8	21.4	19.4	17.0	17.3	18.3	19.7	21.0	
GNP less construction	577.6	584.6	592.6	600.9	599.4	603.9	609.7	615.6	

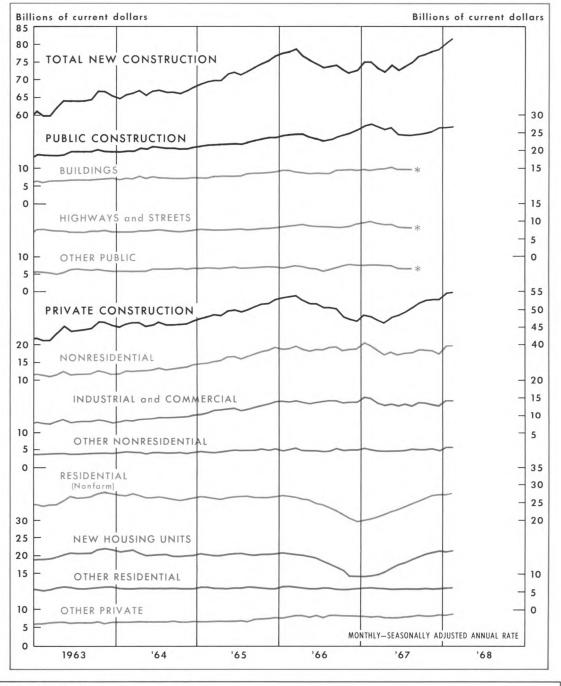
* The first and fourth quarters of 1966 represent the most recent turning points in total construction activity.

Source: U. S. Department of Commerce, Office of Business Economics

to moderate the growth of GNP to an annual rate of 6.7 percent (the average growth rate over the entire period from the third quarter of 1960 to the fourth quarter of 1967). The decline in private construction activity was one of the shortest but sharpest in the postwar period. Residential building experienced the sharpest contraction in two decades, declining at an annual rate of 29 percent. Nonresidential construction also declined, but only by a modest amount (2.8 percent). Public construction was slowed by decreases in educational, hospital, and other institutional-type projects.

Fourth Phase: Fourth Quarter 1966 — Fourth Quarter 1967. During the fourth phase, total construction expanded at an annual rate of over 11 percent, nearly matching the record attained during the second phase, and contributing important support to the advance of GNP at a time when other sectors of the economy were expanding more slowly. Because a sharp and steady advance in residential construction (see Chart 1 and Table II) was offset by sluggishness in public (particularly highways and streets) and private nonresidential construction, total construction during the first half of the fourth phase remained at a level only slightly above that of the final quarter of 1966. The sluggishness of total construction activity contributed to a slowing of the pace of economic activity during the first half of 1967. After midyear, construction advanced again from earlier reduced lows,

Chart 1. NEW CONSTRUCTION PUT in PLACE by TYPE United States



*Not available.

Source of data: U.S. Department of Commerce, Bureau of the Census

Last entry: Feb. '68, Aug. '67

reflecting continued strong expansion in private housing activity, some strengthening of private nonresidential building, and renewed growth in public construction.

GENERAL DEVELOPMENTS IN

1966-1967

In the fourth quarter of 1967, the total value of construction¹ (GNP basis) amounted to \$81.8 billion (seasonally adjusted annual rate). At that level, construction had recovered from the effects of a sharp contraction in 1966 and was \$2 billion greater than at the previous peak reached in the first quarter of that year (see Table II). Developments in the pattern of construction activity during 1966-1967 were determined largely by the swings in private construction, particularly the residential component (see Chart 1). For example, as indicated in Table II, more than 90 percent (\$6.1 billion) of the \$6.4 billion decline in total construction activity in 1966 was accounted for by the residential component. In comparison, nonresidential construction receded modestly during 1966, while public construction, after slackening at midyear, regained its previous high by the fourth quarter. Similarly, when construction activity recovered during 1967, the bulk of the increase in total construction was accounted for by the residential component, or about 80 percent (\$6.7 billion) of the \$8.3 billion increase. Nonresidential construction slipped further during 1967 as a whole, and the remainder of the recovery in construction was accounted for by a fairly sizable gain in public construction (see Table II).

Even after adjustment for changes in costs, the contour of construction over the past two years is essentially the same, except that in terms of 1958 dollars, total construction in the fourth quarter of 1967 fell considerably short (\$64.0 billion) of the previous high of \$67.8 billion in the first quarter of 1966 (see Table II). Public construction was the only major construction category in which the estimated physical flow (real terms) at the end of 1967 was greater than at the beginning of 1966. Nevertheless, private building activity, particularly residential, still accounted for the bulk of both the contraction during 1966 and the recovery in 1967. As measured by the U.S. Department of Commerce, the sharp resurgence in private residential building was, however, accompanied by cost increases that exceeded those of any other major type of construction.

SECTOR DEVELOPMENTS IN 1966-1967 Monthly data on the value of new construction put in place make it possible to identify turning points in construction activity, as well as to evaluate the sector-by-sector details of the swings in construction activity. The data in Table III are constructed so as to measure changes from the most recent peak and trough months in the total value of new construction put in place.

As the table shows, private construction accounted for all of the decline in total construction during 1966 and most of the advance after late 1966. On the downside, while resi-

¹ The GNP series is more comprehensive than the construction expenditure series published by the U. S. Department of Commerce. The "structures" component of GNP is obtained from new private and public construction put in place, as compiled by the U. S. Department of Commerce, Bureau of the Census, plus estimated construction expenditures for natural gas and crude petroleum drilling, plus commissions on the sale of structures, plus net transfers of used structures from or to government.

TABLE III Value of New Construction Put in Place in the United States (seasonally adjusted)

					Ave	rage Annual	al Rates of Change			
	1	966	1968			h 1966 to	November 1966 to			
	March*	November*	February p		Novem	ber 1966	Februe	ary 1968		
	(Billions	s of dollars, at ann	nual rates)†	(B	illions)		(Billions)			
Total New Construction	\$78.43	\$71.99	\$81.30	_	\$ 9.66	-12.1%	+\$7.45	+10.2%		
Public construction	24.53	24.89	26.30	+	0.54	+ 2.2	+ 1.13	+ 4.5		
Buildings	8.87	9.44	n.a.	+	0.86	+ 9.8	n.a.	n.a.		
Highways and streets	8.61	8.25	n.a.	-	0.54	- 6.2	n.a.	n.a.		
Other public	7.05	7.21	n.a.	+	0.24	+ 3.4	n.a.	n.a.		
Private construction	53.90	47.10	54.90	-	10.20	-18.4	+ 6.24	+13.1		
Nonresidential	19.50	18.66	19.60	-	1.26	- 6.4	+ 0.75	+ 4.0		
Industrial; commercial	14.07	13.57	14.10	-	0.75	- 5.4	+ 0.42	+ 3.1		
Other nonresidential	5.44	5.10	5.50	_	0.51	- 9.2	+ 0.32	+ 6.2		
Residential (nonfarm)	26.33	20.32	27.10	_	9.01	-32.2	+ 5.42	+25.9		
New housing units	20.33	14.64	21.10	-	8.54	-38.9	+ 5.17	+34.0		
Other residential	6.01	5.68	6.00	-	0.50	— 8.2	+ 0.26	+ 4.5		
Other private	8.06	8.11	8.20	+	0.08	+ 0.9	+ 0.07	+ 0.9		

n.a. Not available.

p Preliminary.

* Months representing the most recent peak and trough, respectively, in total value of new construction put in place.

[†] Details may not add to totals because of rounding.

Source: U. S. Department of Commerce, Bureau of the Census

dential construction accounted for the bulk of the decline in private construction activity, most areas of nonresidential building-industrial, commercial, and institutional ("other nonresidential")-also participated to some extent in the decline (see Table III and Chart 1). The slowdown in nonresidential construction activity, which was more marked in 1967, was concentrated mainly in spending for industrial and commercial buildings, with such spending declining irregularly through much of 1967. Contracts awarded for industrial and commercial buildings fell 30 percent between February 1966 and January 1967. Private educational, hospital, and other institutionaltype construction also turned down early in 1966 and declined irregularly until the middle of 1967. The only segment of private construction to resist the downward course of the group as a whole during 1966 was "other private," which is dominated by the privately owned gas, electric, and telephone utilities (see Table III and Chart 1).

In February 1968, the total value of new construction put in place amounted to \$81.3 billion (see Table III and Chart 1).² The recovery in total construction after November 1966 was dominated by private building, mainly reflecting an upsurge in construction of new housing units. By late 1967, new residential construction put in place was above its recent high in early 1966, though still somewhat short of its absolute peak in November 1963. Industrial and commercial building remained

² January 1968 was the first month in which total construction topped the previous high reached in March 1966.

below the March 1966 level, as well as its early 1967 peak, holding down total nonresidential construction until January 1968, when spending for business construction finally showed some strength (see Chart 1).

RESIDENTIAL CONSTRUCTION

Residential construction declined in 1966 after moving within a very narrow range during 1964 and 1965. The plateau-like movement of homebuilding in 1964 and 1965 is revealed by the behavior of private nonfarm housing starts shown in Chart 2. Housing starts had reached a high for the current economic expansion in October 1963, and after declining slightly through 1964, housing starts rose somewhat unevenly until the end of 1965. At that time, starts were nearly 16 percent below the 1963 peak. Most of the decline in total housing starts during 1964 and 1965 occurred in the western states, where starts fell by more than one-half (see Chart 2). Elsewhere during 1964 and 1965, starts remained relatively level and rose slightly in the North Central region.

The weakness in housing during 1964 and 1965 was concentrated in the West; however, reflecting the unusually tight monetary situation that developed, every major region registered a slump during the first ten months of 1966. In the West, a further drop of about a third in 1966 was in part a continuation of the earlier trend. From October 1966 to February 1968, total nonfarm housing starts increased by about 85 percent, recovering nearly all of the 1966 decline. In that period, the western states nearly doubled the monthly rate of starts experienced in late 1966; housing starts also rose strongly in other regions of the country, though less so in the Northeast.

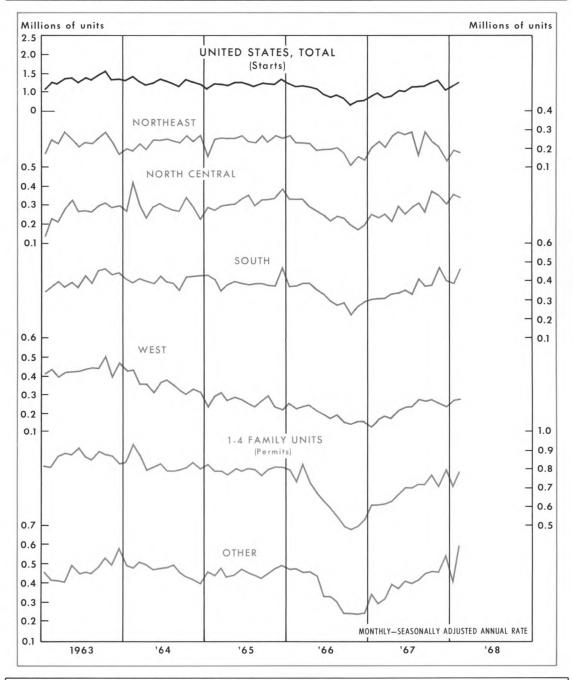
RENTAL VACANCIES AND HOUSING DEMAND

As indicated by the trend of residential rental vacancy rates³ in the West, the earlier downturn in homebuilding activity in that region seems related to a previous expansion that gradually resulted in an excess of housing capacity. In the late 1950's, the rental vacancy rate in the West averaged around 7 percent. By the middle of 1963, however, the rate had moved up to around 10 percent and, by the end of 1965, approached 12 percent (see Chart 3). Partly because of the very high rate of activity earlier, the rise in the rental vacancy rate occurred even though housing starts in the region had been declining for about two years. The further drop in housing starts in the West in 1966 coupled with continued rapid net in-migration to the area, however, helped reduce the rental vacancy rate to about 8 percent in the spring and summer of 1967, and then even lower in the fall and winter. The return to a level more typical of a decade earlier indicated better balance between the supply of and demand for housing and provided a basis for the further expansion of housing starts in that region.

Vacancy rates in the South declined irregularly from mid-1961 to mid-1965, contributing stability to the region's rate of housing starts until the end of 1965. The housing decline

³ Rental vacancy rates are used because they are a sensitive measure of the balance between supply and demand. Vacancy rates for owner-occupied homes tend to show relatively little change.

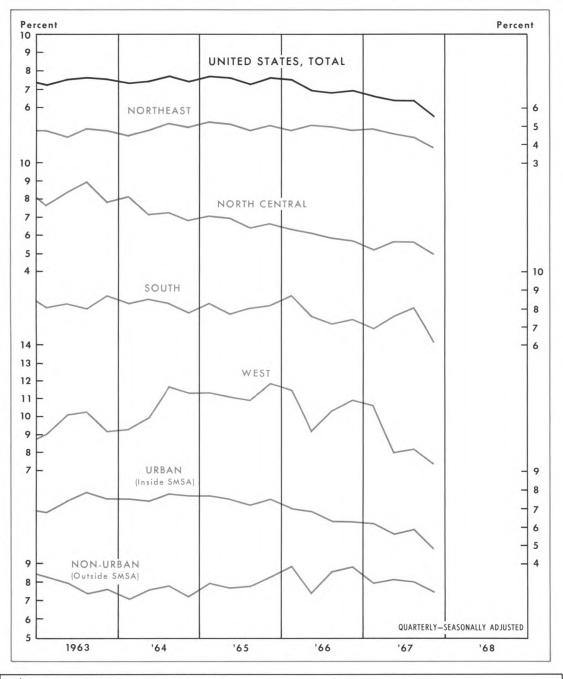
Chart 2. NEW PRIVATE HOUSING STARTS and PERMITS* United States by Region and Size of Structure



* Recorded in 12,000 permit-issuing places. Source of data: U. S. Department of Commerce, Bureau of the Census

Last entry: Feb. '68

Chart 3. RESIDENTIAL VACANCY RATES* United States by Region and Location



* Percent of vacant units to total existing units. Sources of data: U. S. Department of Commerce, Bureau of the Census and Federal Reserve Bank of Cleveland Last entry: 4Q '67 in the South in 1966 was accompanied by a further reduction in rental vacancies, which helped set the stage for a vigorous recovery of starts in 1967.

Housing starts were relatively strong in the North Central states until the end of 1965. As shown in Chart 3, the rental vacancy rate for the North Central region fell sharply from about 9 percent in mid-1963 to about 6½ percent during the second half of 1965. The further decline in the region's rental vacancies in 1966 seems related mainly to the decline in housing starts in the North Central region during the nationwide contraction. Nonetheless, the decline to 5 percent by yearend 1967 (the lowest level in more than a decade) provided strong support for a vigorous housing recovery in the North Central region.

Despite the sharp contraction in housing starts in the Northeast in 1966 and sluggish recovery in 1967, the region's current vacancy rate of about 4 percent is somewhat higher than the 3 to 3½ percent level that prevailed in the late 1950's. The vacancy rate in the Northeast has not declined significantly from the highs registered in 1965, which was before housing starts in the region began to fall.

During the gradual downward drift of total housing starts in 1964 and 1965, the average rental vacancy rate for the nation as a whole, although below levels reached in 1961, remained within a narrow range, around $7\frac{1}{2}$ percent compared with a range of 6 to $6\frac{1}{2}$ percent during the late 1950's. The sharp decline in housing starts in 1966 was associated with a downward movement in vacancy rates. In the fourth quarter of 1967, the rate (5.5 percent) was lower than at any time since the fourth quarter of 1957, reflecting under-

FACTORS IN THE HOUSING MARKET

Rental Vacancy Rates. Even though the rental vacancy rate in the nation remained at a high level until the beginning of the housing contraction in 1966, it is unlikely that the degree of contraction was caused primarily by an excess stock of rental housing. The decline in homebuilding activity affected 1-4 family dwellings almost as much as buildings with five or more dwelling units (see Chart 2). That is to say, the relative decline in 1966 in permits issued for larger buildings (51 percent) was not considerably different from the relative decline in permits for 1-4 family houses (41 percent), and thus does not explain the 1966 housing slump as a reaction to continued overbuilding of apartments. In addition, the recovery since late 1966 in large multiple-unit building permits has been substantially sharper than the recovery in permits issued for single-family and smaller multiple-unit dwellings.

The continued high rental vacancy rate in the United States through early 1966 reflected a high rate in areas where large multipleunit structures are relatively scarce. The average vacancy rate outside metropolitan areas, where smaller housing structures predominate, rose from 7 percent in early 1964 to nearly 9 percent in early 1966 and declined relatively little thereafter (see Chart 3). In contrast, the average vacancy rate inside metropolitan areas, where most large multiple-unit housing structures are found, has been in steady decline since mid-1964: The decline during 1966 in permits for large multiple-unit housing structures apparently contributed to a further drop in the vacancy rate *inside* metropolitan centers.

Demand for Housing. According to recent projections, there was a net increase of about 1.1 million households between March 1967 and March 1968.⁴ To meet this basic demand for housing in 1967, it is possible that as few as 0.7 million housing units were supplied (including 1.2 million newly built units, plus 0.2 million new mobile homes purchased as primary housing, less a decline of possibly as many as 0.2 million vacant units, less about 0.5 million in removals and other losses from the housing stock). It thus appears that the total net supply of new housing in 1967 not only failed to meet total demand, but also failed to provide some cushion against normal inter-regional imbalances. If the estimates are at all reasonable, perhaps as many as 400,000 former single-family dwellings may have been divided for multiple occupancy during the year.

Current demands for housing may hit rental units the hardest. The increase in the number of households headed by individuals who are 35 to 54 years of age (years in which home purchasing tends to be greatest) is estimated at less than 190,000 in 1967 and is expected to amount to no more than 30,000 in 1968. In contrast, households headed by individuals less than 35 years old may increase by nearly 690,000 in 1968, on top of an increase of 830,000 in 1967. These younger heads of households, by preference or necessity, tend to favor rental housing. Recent sharp gains in starts of large multiple-unit

⁴ Estimated by the U.S. Department of Commerce, Bureau of the Census.

structures probably reflect to a large extent the sizable increases in younger households.

Other barometers of housing demand also suggest continuing pressures on supply. Despite the recovery in housing starts, sales of new one-family homes have more than kept pace. Consequently, the inventory of unsold new homes declined almost continuously throughout (and despite) the advance in homebuilding during 1967. In fact, although slightly above the low reached last summer, the unsold stock of new homes at the beginning of 1968 was below the number outstanding at the beginning of 1967, reflecting the reduced availability of new homes and sharp increases in rents that are occurring with rising frequency in major urban centers. From these and other indications, it appears that the need for housing remains basically strong.

CONCLUDING COMMENTS

In early 1968, total construction activity advanced further, with the bulk of the increase accounted for by private construction activity. Unlike 1967, however, nonresidential construction provided somewhat greater thrust, although residential construction continued to increase from the advanced late 1967 levels. Within nonresidential construction, both industrial and commercial types of activity showed recovery from earlier rates. While the basic underlying demands for residential housing apparently continue strong, it is too early to tell at this juncture to what extent the recent shift in monetary policy and the fiscal measures still under consideration will affect the course of housing over the period ahead.

AN ECONOMIC PROFILE OF WHEELING

The City of Wheeling, West Virginia, was incorporated in 1826. Because of its iron-cut nail industry, the City was known as the "Nail City" until the 1880's, when steel replaced the area's iron works. By 1900, the industrial mix of the Wheeling area included mining, glassware, and iron and steel production. The chemical industry entered the Wheeling Standard Metropolitan Statistical Area (SMSA)¹ during World War II and expanded in the 1950's.

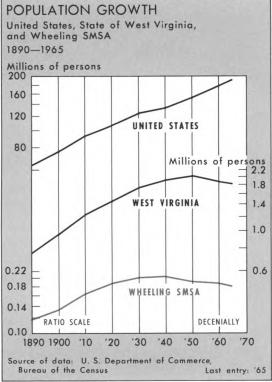
In the early post World War II period, the industrial and employment environment of the Wheeling SMSA changed markedly. Although a number of chemical firms moved into the Wheeling SMSA during the 1950's, a general lack of employment opportunities prevailed. The then existing labor surplus resulted from plant and mine modernizations, consolidation and merging of production facilities of area employers, and a loss of markets for some of the products of the metropolitan area. Recently, the severity of the unemployment problem has lessened because of general population out-migration from the area, as well as advances in employment opportunities.

POPULATION

As shown in the chart, the population of the Wheeling SMSA attained a peak in the 1940 Census, reaching 208,918 persons. The estimated population of the Wheeling SMSA in 1965 was 182,381.² The absolute population decline between 1940 and 1965 thus amounted to approximately 26,500 persons, or a reduction of 13 percent. Similarly, but in a broader context, although the nation as a whole experienced population gains during 1950-1965, the State of West Virginia lost 190,500 persons, with declines expected to continue into the early 1970's.

¹ The Wheeling Standard Metropolitan Statistical Area is located in the panhandle of West Virginia and includes Ohio and Marshall Counties, West Virginia, and Belmont County, Ohio.

 $^{^2\ {\}rm U.}$ S. Department of Commerce, Bureau of the Census projection.



Population losses in the Wheeling SMSA and the State of West Virginia can be attributed to net out-migration from both areas. Between 1950 and 1960, approximately 25,000 more persons migrated from the three-county Wheeling SMSA than moved into the area. In addition, it is estimated that 9,000 people left the Wheeling SMSA in the 1960-1965 period. Comparable figures for the State of West Virginia indicate a net loss of 446,700 people during 1950-1960 and a net loss of 162,000 people during 1960-1966. The out-migration of persons in both the 1950-1960 period and 1960-1965 period resulted in absolute population declines in the respective areas, inasmuch as

In 1967, manufacturing provided the largest single source of employment in the Wheeling SMSA (see Table I). Although slightly greater than in the United States and the States of

than in the United States and the State of West Virginia, the proportion of Wheeling's employment in manufacturing is generally below the shares typical of large Fourth District SMSAs, except for Columbus, Ohio, and Lexington, Kentucky.

natural increases in population were less

than the net outward movement.

EMPLOYMENT DISTRIBUTION

The primary metal and fabricated metal products industries are the most important sources of manufacturing employment in the Wheeling SMSA. In 1967, these two industries accounted for more than one-third of all manufacturing employment in the three-county area (5,700 jobs). In West Virginia as a whole, three industries account for 55 percent of manufacturing employment in the State —

TABLE I

Percent Distribution of Nonagricultural Employment Wheeling SMSA, State of West Virginia, and United States 1967

	Wheeling	West Virginia	United States
Mining	5.5%	9.6%	0.9%
Manufacturing	30.7	26.3	29.3
Contract construction	4.3	5.1	4.9
Transportation and public utilities Wholesale and retail trade	7.2	8.3 17.6	6.5 20.7
Finance, insurance, and	22.0	17.10	200
real estate	3.7	2.9	4.9
Services	15.5	11.9	15.2
Government	11.1	18.3	17.6
Total nonagricultural employment	100.0%	100.0%	100.0%

Source: U. S. Department of Labor

chemicals, primary metals, and stone, clay, and glass, respectively.

Trade and services — the principal nonmanufacturing employment categories in the Wheeling SMSA — accounted for nearly 38 percent of the area's nonfarm employment in 1967. The proportion employed in trade and services in the Wheeling SMSA is higher than in other large Fourth District SMSAs. Government employment, however, in the Wheeling SMSA in 1967 was relatively less than in either the State of West Virginia or the United States. On a per capita basis, the Wheeling SMSA has one of the lowest proportions of government employment among Fourth District metropolitan areas.³

EMPLOYMENT TRENDS

The 1950's. The movement of people away from the Wheeling SMSA reflects both insufficient employment opportunities and net employment losses in the area that resulted in an excessive labor surplus in the 1950's. From 1950 to 1960, total nonfarm employment declined 8 percent in the Wheeling SMSA and 9 percent in the State of West Virginia. In the United States, however, total nonfarm employment increased 22 percent during the same period. Although there were new employers in the area and some existing firms

³ In 1966, government employment per 1,000 population varied among selected Fourth District SMSAs as follows:

Akron	43	Dayton	66
Canton	30	Toledo	41
Cincinnati	44	Youngstown-	
Cleveland	48	Warren	33
Columbus	79	Wheeling	34

Sources: U. S. Department of Commerce and Division of Research and Statistics, Ohio Bureau of Employment Services expanded employment, there was a net loss of approximately 5,300 jobs in the Wheeling SMSA between 1950 and 1960. The State of West Virginia registered a net loss of more than 51,000 jobs in the 10-year period.

The industrial categories responsible for the employment declines between 1950 and 1960 are shown in Table II. Approximately 42 percent of total employment losses in the Wheeling SMSA and 81 percent in the State of West Virginia during the 1950-1960 period were accounted for by mining, particularly bituminous coal. Shrinking employment in bituminous coal mining has been a national as well as a regional phenomenon. As indicated in Table III, between 1950 and 1960, the State of West Virginia suffered a 59-percent loss in employment in its coal industry, compared with a 61-percent decline in the United States. The employment decline can largely be attributed to technological innovations in the coal mining industry that increase labor productivity and thereby require fewer workers to maintain production levels. For example, while employment in bituminous coal mining in the Wheeling SMSA declined 63 percent between 1950 and 1960, labor productivity (average tons per man per day) increased by 164 percent. Productivity increases in coal mining operations in the Wheeling SMSA greatly outstripped gains of 100 percent and 96 percent in the United States and State of West Virginia, respectively. In absolute terms, labor productivity in the Wheeling SMSA moved ahead of the levels in the State and the nation during 1950-1960. As shown by the employment declines in Table III, these rates of productivity change indicate a greater relative impact on the economy of

TABLE II

Changes in Nonagricultural Employment Wheeling SMSA, State of West Virginia, and United States 1950-1960

		Employment, hous. of pers		Percent	Change 19	50-1960
	Wheeling	West Virginia	United States	Wheeling	West Virginia	United States
Total nonagricultural employment	. 60.9	514.4	60,289.4	- 8%	- 9%	+ 22%
Manufacturing	. 18.6	125.7	17,513.1	— 10	+ 6	+ 19
Durable goods	. 13.8	72.2	9,828.7	— 15	+ 2	+ 27
Stone, clay, and glass	. 1.8	19.1	600.4	- 49†	-13	+ 28
Primary metals	. 6.3	23.9	1,224.9	— 23	+17	+ 3
Fabricated metals	. 2.8	6.7	1,291.7	+ 23	+17	+ 53
Nonelectrical machinery	. 1.3	4.0	1,568.0	+ 99	+24	+ 25
Other durables	• 1.6	18.5	5,143.7	-0-	+ 5	+ 10
Nondurable goods	. 4.8	53.5	7,684.4	+ 7	+14	+ 11
Food and kindred products	. 1.7	8.9	1,822.5	+ 27	+ 9	+ 23
Chemicals and allied products	. 1.0	25.6	864.5	+206	+23	+ 36
Other nondurables	• 2.1	19.0	4,997.4	— 28	— 2	+ 4
Mining	. 3.4	59.1	654.0	— 56	—56	— 30
Contract construction	. 3.5	29.3	3,815.9	+ 9	- 9	+ 10
Transportation and public utilities	. 4.6	47.3	4,458.1	- 19	-12	-0-
Wholesale and retail trade	. 12.9	97.1	11,792.6	- 4	-0-	+ 12
Finance, insurance, and real estate	. 1.9	12.5	2,694.6	+ 15	+25	+ 40
Services	. 10.2	77.8	11,012.6	+ 10	+10	+ 29
Government	. 3.9	48.2	5,740.3	+ 15	+23	+ 41
Other, not specified	• 1.9	17.4	2,608.2	+ 99	+74	+209

* Based on employment by place of residence (month of April).

† 1950 figure estimated.

Source: U. S. Department of Commerce, Bureau of the Census

TABLE III

Production, Employment, and Productivity in Bituminous Coal Mining Wheeling SMSA, State of West Virginia, and United States 1950-1965

	Productio	on (net tons, t	housands)	Average Num	ber of Men	Working Daily	Average Tons Per Man Per Day			
	Wheeling	West Virginia	United States	Wheeling	West Virginia	United States	Wheeling	West Virginia	United States	
1950	8,002.4	122,610.6	437,868.0	7,701	124,750	433,698	5.86	6.17	6.43	
1955	8,848.9	139,167.9	464,633.4	3,248	66,231	225,093	11.56	9.38	9.84	
1960	9,609.0	118,944.3	415,512.3	2,821	51,062	169,400	15.49	12.07	12.83	
1965	n.a.	149,191.2	512,088.3	n.a.	41,008	133,732	18.71p	15.90	17.52	

n.a. Not available.

p Preliminary.

Sources: U. S. Department of the Interior and West Virginia Department of Mines

the Wheeling SMSA than in either the United States or the State of West Virginia.

Significant changes also occurred in bituminous coal markets during the 1950's. The Wheeling SMSA was especially affected by the loss of the railroad fuel and retail markets, accompanied by declines in the manufacturing market. Offsetting these declining markets, the expanding electric power industry helped to maintain production levels in Wheeling. The State of West Virginia as a whole suffered from the loss of the railroad fuel and retail markets and decreases in the steel-coke and manufacturing markets, as well as the collapse in the export market in the latter half of the 1950's. These losses resulted in an absolute drop in tonnage produced, both for West Virginia and the United States in the 1955-1960 period. Since 1960, bituminous coal production has been expanding because of increased sales to the export and electric utilities markets and reduced costs of transporting coal, especially by rail.

As shown in Table II, primary metals and the stone, clay, and glass industry also contributed to the employment decline in the Wheeling SMSA during 1950-1960. Secondary effects were felt from decreases in trade employment and employment in the transportation and public utilities category. These employment groups, when combined with mining, accounted for 92 percent of total employment losses in the Wheeling SMSA during 1950-1960. In the State of West Virginia, the major sources of employment declines during 1950-1960 were mining, transportation and public utilities, lumber and furniture, construction, and the stone, clay, and glass industries. Because of these employment losses, the unemployment ranks grew in the Wheeling SMSA and the State of West Virginia; by 1958, the Wheeling SMSA was considered an area with substantial and persistent unemployment. Between 1950 and 1960, the unemployment rate in the Wheeling SMSA climbed from 5.0 to 14.0 percent, in marked contrast to the change from 4.8 to 5.6 percent in the United States as a whole (see Table IV).

The 1960's. Aggravated by the 1960-1961 recession in the United States, the unemployment rate in the Wheeling SMSA rose to 15.0 percent in 1961, or more than twice the unemployment rate in the United States. Unemployment in the State of West Virginia also rose, as the average state unemployment rate worsened to 12.8 percent in 1961. Despite the recovery in business activity beginning in

TABLE IV

Rate of Unemployment Among all Civilian Workers 14 Years of Age and Over Wheeling SMSA, State of West Virginia, and United States 1950-1967

			Wheeling	West Virginia	United States
1950*	۰.		5.0%	4.8%	4.8%
1960			14.0	11.3	5.6
1961			15.0	12.8	6.7
1962			12.0	10.8	5.6
1963			10.1	9.5	5.7
1964			7.3	8.0	5.2
1965			6.7	7.8	4.6
1966			5.4	6.8	3.9
1967			5.6p	6.4	3.8†

p Preliminary.

* Bureau of the Census estimate, by place of residence (month of April).

[†] Based on civilian workers 16 years of age and over.

Sources: U. S. Department of Commerce, Bureau of the Census; U. S. Department of Labor; West Virginia Department of Employment Security 1961, unemployment in the Wheeling SMSA remained at a relatively high rate due in part to the closing of an area steel facility and railroad terminal and to continued employment losses in mining and the stone, clay, and glass industries.

Nevertheless, the unemployment rate in the Wheeling SMSA has shown noticeable improvement since 1961. By 1967, the average unemployment rate fell to 5.6 percent, up only slightly from the recent low reached in 1966 (5.4 percent). The unemployment rate in the State of West Virginia dropped to an average of 6.4 percent in 1967.

The improvements in unemployment rates in the Wheeling SMSA and the State of West Virginia came from three sources: the business expansion in the United States that began in 1961; continued out-migration from the respective areas, which resulted in a reduction of area labor forces; and recent gains in area employment opportunities. Table V shows the changes in employment during the 1960's.

Total nonfarm wage and salary employment increased 11 percent in the Wheeling SMSA during 1961-1967. This increase, however, is much smaller than the 22-percent advance in the United States during the same period. Government employment, particularly state and local government, and services represented the principal sources of employment gains in the Wheeling SMSA. Between 1961 and 1967, an additional 1,500 people were employed in each sector, and employment in manufacturing increased by 1,000 jobs. These three sectors — government, services, and manufacturing — accounted for more than three-fourths of the employment advances in both the Wheeling SMSA and the State of West Virginia during 1961-1967. Continued softness of employment in some manufacturing industries, along with labormanagement disputes, especially in mining and construction, have been the major sources of weakness in the Wheeling SMSA during the 1960's.

Although between 1961 and 1967 employment in the Wheeling SMSA advanced at only half the rate as that in the United States, the gain in Wheeling represents a significant reversal of the postwar decline.

TRENDS IN MANUFACTURING ACTIVITY

Employment. Durable goods employment in Wheeling remained very sluggish during the first half of the 1960's, and by 1966, had not yet regained 1960 employment levels (see Table VI). In the United States as a whole, however, this industry group was 19 percent higher in 1966 than in 1960. Among the durable goods industries in the Wheeling SMSA, employment in the stone, clay, and glass industries continued to decline and, in 1967, was 37 percent less than in 1960. Primary and fabricated metals, two other sources of weakness in the economy of the Wheeling SMSA, have not yet reattained 1960 employment levels.

Employment advances in the nondurable goods industries in the Wheeling SMSA have helped to offset the sluggishness in the durable goods industries. Between 1960 and 1966, nondurable goods employment increased 11 percent in the Wheeling SMSA compared with an increase of 8 percent in the United States. The chemical industry accounted for two-thirds of the increase in nondurable goods employment in the Wheeling SMSA.

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TABLE V

Trends in Nonagricultural Employment* Eight Major Employment Categories Wheeling SMSA, State of West Virginia, and United States 1960-1967 and Percent Change 1961-1967

	1960	1961	1962	1963	1964	1965	1966	1967	Percent Change 1961-1967
Total nonagricultural employment									
Wheeling (thous.)	50.5 460.0	48.8 448.1	49.4 447.5	50.0 449.9	52.1 460.9	53.4 476.6	54.1 492.3	54.0 498.5	+11% +11
United States (mil.).	54.2	54.0	55.6	56.7	58.3	60.8	64.0	66.1	+22
Manufacturing									
Wheeling (thous.)	16.4 124.6 17.0	15.6 120.1 16.3	15.7 122.6 16.9	15.7 124.2 17.0	16.1 126.2 17.3	16.3 129.2 18.1	16.7 132.3 19.2	16.6 131.2 19.3	+ 6 + 9 +18
Mining									
Wheeling (thous.)	3.0 56.3 0.7	2.6 49.9 0.7	2.5 •49.2 0.7	2.5 47.7 0.6	2.6 48.3 0.6	2.4 47.9 0.6	2.6 47.2 0.6	3.0 47.6 0.6	+15 - 5 - 14
Wholesale and retail trade									
Wheeling (thous.)	11.4 84.5 11.4	11.1 81.4 11.3	11.1 79.3 11.6	11.1 79.5 11.8	11.3 81.5 12.2	11.7 85.0 12.7	11.9 87.3 13.2	11.9 88.0 13.7	+ 7 + 8 +21
Contract construction									
Wheeling (thous.)	2.3 18.4 2.9	2.5 18.8 2.8	2.7 17.8 2.9	2.9 18.4 3.0	3.2 20.5 3.1	3.3 21.9 3.2	3.0 24.8 3.3	2.3 25.5 3.3	-8 + 36 + 18
Transportation and public utilities									
Wheeling (thous.) .	4.3 44.4 4.0	3.8 41.6 3.9	3.7 41.3 3.9	3.7 40.8 3.9	3.7 40.8 4.0	3.8 40.7 4.0	3.8 40.8 4.2	3.9 41.3 4.3	$^{+3}_{-1}$ +10
Finance, insurance, and real estate									
Wheeling (thous.)	2.0 13.3 2.7	1.9 13.3 2.7	2.0 13.4 2.8	1.9 13.5 2.9	1.9 13.7 3.0	2.0 14.1 3.0	2.0 14.2 3.1	2.0 14.5 3.2	+ 5 + 9 +18
Services									
Wheeling (thous.)	6.6 51.1 7.4	6.9 51.5 7.7	7.3 52.6 8.0	7.3 53.7 8.3	7.6 54.7 8.7	8.0 56.1 9.1	8.2 58.0 9.5	8.4 59.3 10.1	+22 +15 +31
Government									
Wheeling (thous.)	4.6 67.5 8.4	4.5 71.5 8.6	4.6 71.4 8.9	5.0 72.1 9.2	5.9 75.3 9.6	6.1 81.7 10.1	6.2 87.8 10.9	6.0 91.0 11.6	+33 +27 +35

* Based on employment by place of occupation. Due to recording differences, data in Table II are not strictly comparable to data in Table V.

Source: U. S. Department of Labor

TABLE VI Selected Indicators of Industrial Activity Wheeling SMSA, State of West Virginia, and United States 1960-1966

	Durable Goods Employment (thous. of persons)			Nondurable Goods Employment (thous. of persons)			Value Ac	lded by Mo (mil. \$)	anufacture	Capital Expenditures (new) (mil. \$)			
	Wheeling	West Virginia	United States	Wheeling	West Virginia	United States	Wheeling	West Virginia	United States	Wheeling	West Virginia	United States	
1960	10.8	74.4	9,459.0	5.7	50.2	7,336.0	140.8	1,371.1	163,998.5	7.4	116.7	10,097.8	
1961	10.1	69.9	9,070.0	5.5	50.3	7,256.0	136.4	1,377.9	164,281.1	12.5	113.8	9,779.8	
1962	10.1	71.9	9,480.0	5.7	50.7	7,373.0	157.6	1,625.5	179,071.1	12.3	167.6	10,436.2	
1963	9.7	73.1	9,616.0	6.0	51.1	7,380.0	190.1	1,834.0	191,034.9	25.1	173.0	11,228.0	
1964	10.0	75.9	9,816.0	6.1	50.3	7,458.0	198.5	1,875.6	206,193.6	28.6	178.2	13,287.2	
1965	10.1	78.9	10,406.0	6.2	50.3	7,656.0	191.0	2,033.1	225,365.6	30.3	204.5	16,534.2	
1966	10.4	80.7	11,256.0	6.3	51.6	7,930.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	

n.a. Not available.

Sources: U. S. Department of Commerce and U. S. Department of Labor

The major sources of growth in manufacturing employment in the State of West Virginia were an 8-percent gain in durable goods employment between 1960 and 1966 and a 3-percent increase in nondurable goods employment over the same period. Major increases in employment in the electrical machinery and transportation equipment industries were in large part responsible for the overall gains in the State.

Value Added and Capital Spending. Value added by manufacture in the Wheeling SMSA advanced by 36 percent between 1960 and 1965, nearly matching the 37-percent increase in the United States, but well below the 48-percent rise in the State of West Virginia. The gain in value added in the Wheeling SMSA occurred, however, during a period in which the level of manufacturing employment remained virtually unchanged, reflecting increased labor productivity in manufacturing in the area stemming from fairly sizable capital investments.

Large-scale new capital expenditures in the Wheeling SMSA suggest a marked improvement over the late 1950's and early 1960's. The upsurge in expenditures in the 1963-1965 period in the Wheeling SMSA largely represents new facilities and procedures in the primary metal and fabricated metal products industries. New capital expenditures in the State of West Virginia also reflect improved industrial conditions, with the increase in the State outpacing in relative terms the gain in the United States. The chemical and primary metal industries have contributed importantly to the gains in capital spending in the State of West Virginia. Wages in Manufacturing. During 1967, average hourly earnings of production workers in the Wheeling SMSA were \$2.94, an increase of 21 percent over 1960 (see Table VII). Although the gain in the Wheeling SMSA roughly matched the percent increase for the State of West Virginia, the gain in Wheeling was below that for the United States (25 percent).

In 1967, average hourly earnings varied considerably between industries in the Wheeling SMSA, ranging from \$3.66 in the highly automated chemical industry to \$2.43 in the food and kindred products industry. Although employment growth in the Wheeling SMSA has lagged considerably behind growth in the United States, wage levels in the Wheeling SMSA have remained above the national level. This is the case largely because the average wage level in Wheeling is heavily weighted by high-wage industries, notably the primary metal and fabricated

TABLE VII

Average Hourly Earnings of Production Workers in Manufacturing Wheeling SMSA, State of West Virginia, and United States 1960-1967 Annual Average

			Wheeling	West Virginia	United States
1960			\$2.44	\$2.41	\$2.26
1961			2.51	2.48	2.32
1962			2.60	2.55	2.39
1963			2.68	2.61	2.46
1964			2.73	2.67	2.53
1965			2.78	2.74	2.61
1966			2.85	2.82	2.72
1967			2.94	2.91	2.83

Source: U. S. Department of Labor

metal products industries, as well as the chemical industry.

BANKING ACTIVITY

Selected indicators of banking activity are additional evidence of the relative sluggishness of the Wheeling economy in recent years. For example, bank debits in Wheeling increased only 23 percent over the past seven years, trailing the progress made in other metropolitan areas of the Fourth District (see Table VIII). Similarly, total loans at insured commercial banks in Wheeling lagged behind increases in other metropolitan centers between 1960 and 1966, although commercial and industrial loans showed an average performance in comparison with other centers. During 1960-1967, savings deposits of individuals in Wheeling showed the type of pattern that would be expected in view of the other economic developments in the area.

CONCLUDING COMMENTS

The economy of the Wheeling SMSA clearly experienced the effects of postwar technological changes in manufacturing and mining methods, as well as changes in product markets. Population out-migrations helped, in part, to alleviate some of the problems of employment and unemployment. Hopefully, more permanent solutions will be provided by a continuation of the recent trend in capital expenditures, which is indicative of a more favorable economic climate in the Wheeling SMSA. Furthermore, the recently completed interstate highway through the Wheeling area makes the area more accessible to other metropolitan centers. Expansion

TABLE VIII

Bank Debits, Savings Deposits of Individuals, and Loans Outstanding Wheeling and Other Selected Areas in the Fourth District 1966-1967

			Sauting	s Deposits		Loans Outstan	anding (yearend)			
	Bank Debits (annual totals)		of In	of Individuals (annual average)		lotal	Commercial and Industrial			
	(mil. \$) 1967	Percent Change 1960-1967	(mil. \$) 1967	Percent Change 1960-1967	(mil. \$) 1966	Percent Change 1960-1966	(mil. \$) 1966	Percent Change 1960-1966		
Wheeling	\$ 1,295	+ 23%	\$ 45	+ 88%	\$ 126	+ 42%	\$ 24	+ 84%		
Akron	12,922	+ 86	332	+ 96	514	+ 78	144	+129		
Cleveland	77,076	+ 66	1,967	+ 64	3,473	+ 76	1,175	+102		
Columbus	30,882	+130	398	+253	844	+129	237	+ 87		
Dayton	11,652	+ 85	179	+147	511	+ 66	141	+ 23		
Toledo	12,268	+ 42	307	+ 98	436*	+ 71	121*	+ 58		
Lexington	3,628	+ 89	81	+151	168	+ 91	55	+132		

* Does not include Monroe County, Michigan.

NOTE: Bank debits and savings deposits data are for reporting banks (member and nonmember) in selected centers, which are reported monthly to the Federal Reserve Bank of Cleveland. Savings deposits at reporting banks (member and nonmember) represent chiefly savings deposits of individuals and eleemosynary organizations, Christmas savings and similar thrift accounts, and time certificates of deposit of individuals. Loan data are from call reports of all insured commercial banks in the SMSAs.

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Source: Federal Reserve Bank of Cleveland

in government and service employment, new chemical firms, stronger coal markets, and new facilities in the primary metal and fabricated metal products industries seem to have come together to forge a reversal of Wheeling's postwar decline.

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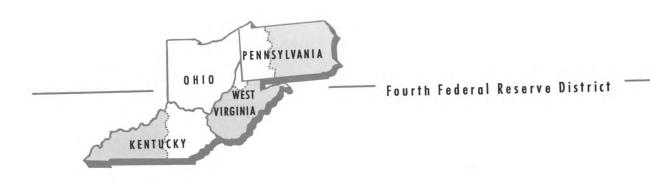
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