

Market Absorption of Apartments

ANNUAL: 1984 ABSORPTIONS (Completions in 1983)

U.S. Department of Commerce
BUREAU OF THE CENSUS

U.S. Department of Housing
and Urban Development

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SUMMARY

During 1983, completions of privately financed, nonsubsidized, unfurnished apartments in buildings of five units or more totaled 191,500 units. This represents an increase of about 64 percent from the 117,000 units completed in 1982 and is the largest number of unfurnished apartments completed since 1980. Sixty-nine percent of these units were rented within the first 3 months of completion, 85 percent within 6 months, and 96 percent within 12 months.

About 49 percent of new unfurnished apartments were built with two bedrooms. This was slightly higher than the 44 percent built with one bedroom. About 4 percent had three bedrooms or more and about the same (3 percent) were built without a bedroom. The median asking rent for apartments completed in 1983 was \$386, showing no change from the \$385 median for units completed in 1982. Units renting for \$400 or more accounted for 44 percent of newly completed units the same as in 1982. Approximately 16 percent of 1983 apartment completions rented for over \$500. About three-fifths (61 percent) of the new units included air-conditioning in rental payments and about two-thirds (66 percent) had swimming pools available at no extra cost.

A large majority (80 percent) of unfurnished apartments were constructed inside standard metropolitan statistical areas in 1983, with 40 percent located in both central cities and suburban areas. Regionally, about three-fifths (60 percent) of new apartments were built in the South and about one-fifth were built in the Midwest* (21 percent) and West (17 percent) regions. Only 2 percent of the new units were built in the Northeast region.

The data are based on a sample survey and, consequently, the figures cited are subject to sampling variability. Sampling errors (i.e., standard errors) for these figures can be calculated by using tables I and II.¹ These standard errors imply there are about 2 chances out of 3 that a complete count would be contained in the interval around the estimate defined by the standard error.

In 1983, a total of about 370,700 apartments were completed in buildings with five units or more, an increase of 29

percent from the 288,200 apartments completed in 1982. Fifty-two percent were nonsubsidized, unfurnished apartments. Of the remainder, cooperatives and condominiums accounted for 30 percent of the new completions. The 3-month absorption rate for cooperative and condominium apartments in 1983 was 66 percent compared with 54 percent for such units in 1982.

Cooperative and condominium apartments are predominantly two bedrooms or larger (81 percent). Sixty-two percent of these units were built in the South and 20 percent in the West regions of the United States. The remaining 17 percent were about equally divided between the Midwest* (10 percent) and Northeast (7 percent) regions. The median asking price for condominium units built in 1983 was \$79,000. About 25 percent had an asking price of over \$100,000, while only 4 percent were being sold for under \$40,000.

Furnished rental units accounted for 1 percent of the total number of privately financed apartments in buildings with five units or more. Furnished units tended to be smaller than unfurnished units. Apartments with fewer than two bedrooms accounted for 76 percent of the furnished units while less than half (47 percent) of the unfurnished units had fewer than two bedrooms. The median asking rent for furnished units was \$329.

Federally subsidized properties which account for 13 percent of total units completed are excluded from this survey. These units are built under the following programs of the Department of Housing and Urban Development: Low Income Housing Assistance (Section 8), Senior Citizens Housing Direct Loans (Section 202); and all units in buildings containing apartments in the FHA rent supplement program. An additional 4 percent of all the units are excluded for other reasons including turnkey housing (privately built and sold to local public housing authorities subsequent to completion). The data, however, include privately owned housing subsidized by State and local governments.

SAMPLE DESIGN

The Survey of Market Absorption (SOMA) is designed to provide data concerning the rate at which nonsubsidized and unfurnished privately financed units in buildings with five units or more are rented (or absorbed). In addition, data on characteristics of the units, such as rent and number of bedrooms, are collected.

*Formerly North Central.

¹See reliability of estimates on page 2.

Questions regarding these data may be directed to Charles Clark, Housing Division, Telephone 301-763-2866.

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The buildings selected for SOMA are those included in the Census Bureau's Survey of Construction (SOC).² For this survey the United States is first divided into primary sampling units (PSU's) which are sampled on the basis of population. Next, a sample of permit-issuing places is selected within each sample PSU. Finally, all buildings within sampled places with five units or more as well as a subsample of buildings with one to four units are selected.

Each quarter a sample of buildings with five housing units or more in the SOC sample reported as completed during that quarter come into sample for SOMA. Buildings completed in nonpermit-issuing areas are excluded from consideration. Information on the proportion of units absorbed 3, 6, 9, and 12 months after completion is obtained for units in buildings selected in a given quarter in each of the next four quarters.

ESTIMATION

Unbiased quarterly estimates are formed by multiplying the counts for each building by its base weight (the inverse of its probability of selection) and then summing over all buildings. The final estimate is then obtained by multiplying the unbiased estimate by the following ratio estimate factor:

$$\frac{\text{total units in 5+ buildings in permit-issuing areas as estimated by the SOC for that quarter}}{\text{total units in 5+ buildings as estimated by SOMA for that quarter}}$$

When all the completed 5+ buildings in the SOC are designated for SOMA, as is currently the case, this ratio estimate factor will be close to one. This procedure produces estimates of the units completed in a given quarter which are consistent with the published figures from the Housing Completions Series,³ and also reduces, to some extent, the sampling variability of the estimates of totals. Annual estimates are obtained by summing the four quarterly final estimates.

It is assumed that the absorption rates and other characteristics of units not included in the interview group or not accounted for are identical to rates for units where data were obtained. The noninterviewed and not accounted for cases comprise less than 2 percent of the sample housing units in this survey.

RELIABILITY OF THE ESTIMATES

There are two types of possible errors associated with data from sample surveys: sampling and nonsampling errors. The following is a description of the sampling and nonsampling errors associated with SOMA.

Nonsampling Errors. In general, nonsampling errors can be attributed to many sources: inability to obtain information about all cases, definitional difficulties, differences in the interpretation of questions, inability or unwillingness to provide correct information on the part of respondents, mistakes in recording or coding the data, and other errors of collection, response, processing, coverage, and estimation for missing data.

Sampling Errors. The particular sample used for this survey is one of a large number of possible samples of the same size that could have been selected using the same sample design. Even if the same questionnaires, instructions, and interviewers were used, estimates from each of the different samples would differ from each other. The deviation of a sample estimate from the average of all possible samples is defined as the sampling error. The standard error of a survey estimate attempts to provide a measure of this variation among the estimates from the possible samples and, thus, is a measure of the precision with which an estimate from a sample approximates the average result of all possible samples.

As calculated for this survey, the standard error also partially measures the variation in the estimates due to response and interviewer errors (nonsampling errors), but it does not measure, as such, any systematic biases in the data. Therefore, the accuracy of the estimates depends on both the sampling and nonsampling error, measured by the standard error, biases, and some additional nonsampling errors not measured by the standard error.

The sample estimate and its estimated standard error enable the user to construct confidence intervals, ranges that would include the average result of all possible samples with a known probability. For example, if all possible samples were selected, each of these surveyed under essentially the same general conditions, and an estimate and its estimated standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.
2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.
3. Approximately 95 percent of the interval from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

For very small estimates the lower limit of the confidence interval may be negative. In this case, a better approximation to the true interval estimate can be achieved by restricting the interval estimate to positive values, that is, by changing the lower limit of the interval estimate to zero.

² See "Housing Starts," Construction Reports Series C20, for details of this survey.

³ See "Housing Completions," Construction Reports, Series C22.

The average result of all possible samples either is or is not contained in any particular computed interval. However, for a particular sample, one can say with specified confidence that the average result of all possible samples is included in the constructed interval.

The conclusions stated in this report are considered significant at the 95-percent confidence level.

The reliability of an estimated absorption rate (i.e., a percentage) computed by using sample data for both the numerator and denominator depends upon both the size of the rate and the size of the total on which the rate is based. Estimated rates of this kind are relatively more reliable than the corresponding estimates of the numerators of the rates, particularly if the rates are 50 percent or more.

The figures presented in tables I and II are approximations to the standard errors of various estimates shown in the report. Table I presents standard errors for estimated totals, and table II presents standard errors of estimated percents. In order to derive standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, the tables of standard errors provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specific item. Standard errors for values not shown in tables I or II can be obtained by linear interpolation.

USE OF STANDARD ERROR TABLES

Table 1 of this report shows that 37,400 units completed in 1983 rented for \$300 to \$349. Table I shows the standard error of an estimate of this size to be approximately 2,458. The 68 percent confidence interval as shown by these data is from 34,942 to 39,858. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate derived from all possible samples lies within the interval from 32,484 to 42,316 (using twice the standard error) with 95 percent confidence.

Table 1 shows the rate of absorption after 3 months for these units is 74 percent. Table II shows the standard error on a 74 percent rate on a base of 37,400 to be approximately 2.8 percent. The 68 percent confidence interval for this estimate is from 71.2 to 76.8 percent. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate derived from all possible samples lies within the interval from 68.4 to 79.6 (using twice the standard error) with 95 percent confidence.

FIGURE A.
Percent of Apartments Absorbed, by Quarter of Completion,
by Months on the Market: 1983

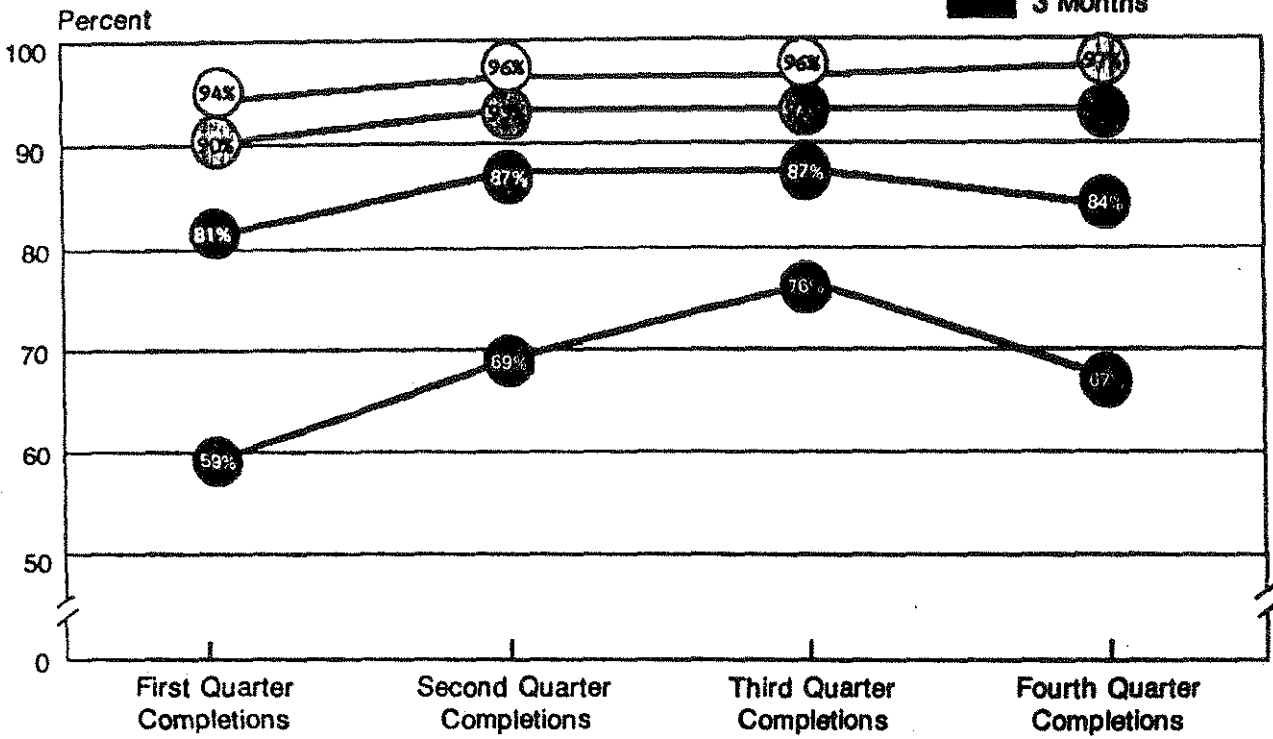
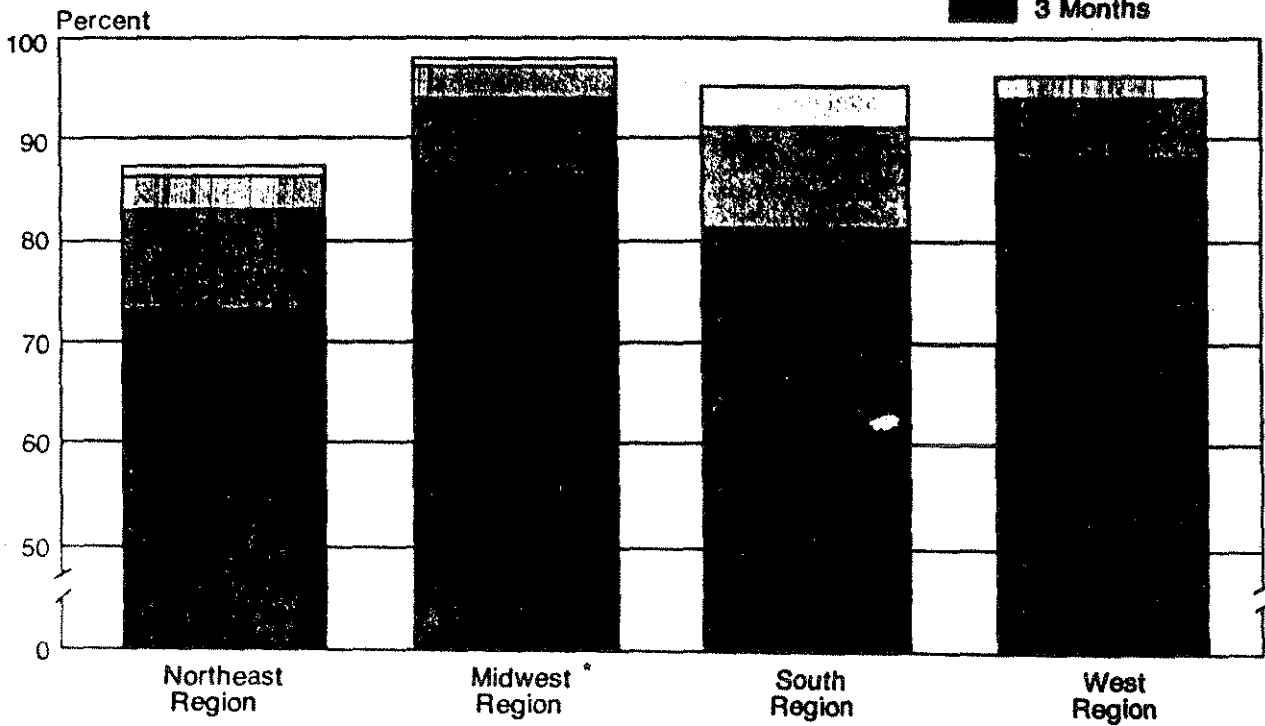


FIGURE B.
Percent of Apartments Absorbed, by Region, by
Months on the Market: 1983



* Formerly North Central

Table 1. Absorption Rates for Apartments Completed, by Number of Bedrooms and Rent Class, for the United States: 1983

(Privately financed, nonsubsidized, unfurnished apartments in buildings with five units or more. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Characteristics	Total		Percent absorbed after--			
	Number	Percent	3 months	6 months	9 months	12 months
Total.....	191,500	100	69	85	92	96
Less than \$300.....	25,300	13	77	91	96	98
\$300 to \$349.....	37,400	20	74	89	95	97
\$350 to \$399.....	45,400	24	69	85	93	96
\$400 to \$449.....	30,900	16	67	84	92	96
\$450 to \$499.....	22,800	12	57	78	89	93
\$500 or more.....	29,700	16	66	81	89	93
Median rent.....	\$386	(X)	(X)	(X)	(X)	(X)
No bedroom.....	5,800	3	70	84	91	96
Less than \$300.....	2,800	1	78	88	93	100
\$300 to \$349.....	700	(Z)	67	86	96	98
\$350 to \$399.....	1,000	1	63	85	96	99
\$400 to \$449.....	400	(Z)	70	87	98	100
\$450 to \$499.....	100	(Z)	68	81	91	94
\$500 or more.....	800	(Z)	56	67	74	77
Median rent.....	\$309	(X)	(X)	(X)	(X)	(X)
1 bedroom.....	83,600	44	67	84	92	95
Less than \$300.....	15,400	8	73	90	96	98
\$300 to \$349.....	24,300	13	70	88	94	98
\$350 to \$399.....	23,500	12	63	81	90	95
\$400 to \$449.....	9,700	5	63	80	89	94
\$450 to \$499.....	4,700	2	65	82	91	95
\$500 or more.....	6,100	3	60	76	85	87
Median rent.....	\$355	(X)	(X)	(X)	(X)	(X)
2 bedrooms.....	93,700	49	69	85	93	96
Less than \$300.....	7,100	4	85	95	97	98
\$300 to \$349.....	12,400	6	83	93	96	97
\$350 to \$399.....	20,800	11	76	90	95	98
\$400 to \$449.....	19,700	10	67	85	93	97
\$450 to \$499.....	16,400	9	54	77	88	93
\$500 to \$549.....	8,700	5	63	79	88	93
\$550 or more.....	8,600	4	63	80	90	95
Median rent.....	\$417	(X)	(X)	(X)	(X)	(X)
3 bedrooms or more.....	8,300	4	83	93	97	99
Less than \$300.....	(Z)	(Z)	100	100	100	100
\$300 to \$349.....	(Z)	(Z)	98	100	100	100
\$350 to \$399.....	200	(Z)	100	100	100	100
\$400 to \$449.....	1,100	1	82	98	100	100
\$450 to \$499.....	1,600	1	67	83	95	97
\$500 to \$549.....	1,700	1	92	97	99	100
\$550 or more.....	700	2	86	93	96	98
Median rent.....	\$536	(X)	(X)	(X)	(X)	(X)

X Not applicable.

Z Indicates less than fifty or less than one-half percent.

Table 2. Absorption Rates for Apartments Completed, by Geographic Area: 1983

(Privately financed, nonsubsidized, unfurnished apartments in buildings with five units or more. Data may not add to total due to rounding)

Geographic areas	Total		Percent absorbed after--			
	Number	Percent	3 months	6 months	9 months	12 months
United States, total.....	191,500	100	69	85	92	96
Inside SMSA's.....	153,100	80	66	83	92	95
In central city.....	76,800	40	69	86	94	97
Not in central city.....	76,200	40	62	80	89	93
Outside SMSA's.....	38,400	20	82	93	96	99
Northeast.....	3,500	2	73	83	86	87
Midwest*.....	41,100	21	86	94	97	98
South.....	115,100	60	63	81	91	95
West.....	31,800	17	69	88	94	96

*Formerly North Central.

Table 3. Absorption Rates for Apartments Completed, by Presence of Air-Conditioning and Swimming Pool, for the United States: 1983

(Privately financed, nonsubsidized, unfurnished apartments in buildings with five units or more. Data regarding air conditioning and swimming pool are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding)

Characteristics	Total		Percent absorbed after--			
	Number	Percent	3 months	6 months	9 months	12 months
Unfurnished total.....	191,500	100	69	85	92	96
Air conditioning:						
Included in rent.....	116,800	61	68	84	92	96
Available at extra cost.....	61,300	32	69	87	93	96
Not available.....	10,400	5	78	90	95	97
Not reported.....	2,900	2	65	78	88	95
Swimming pool:						
Included in rent.....	127,200	66	61	81	91	95
Available at extra cost.....	2,400	1	95	97	99	100
Not available.....	59,000	31	84	93	96	98
Not reported.....	2,900	2	66	77	88	95

Table 4. Absorption Rates for Cooperative and Condominium Apartments Completed, by Number of Bedrooms and Geographic Region: 1983

(Privately financed, nonsubsidized, apartments in buildings with five units or more. Data regarding number of bedrooms are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding.)

Characteristics	Total		Percent absorbed within--			
	Number	Percent	3 months	6 months	9 months	12 months
Total.....	111,800	100	66	81	88	91
Bedrooms:						
None.....	2,100	2	77	83	88	90
1 bedroom.....	18,400	16	67	78	85	89
2 bedrooms.....	78,700	70	65	81	88	91
3 bedrooms or more.....	12,600	11	69	81	89	92
Region:						
Northeast.....	8,200	7	55	69	77	84
Midwest*.....	11,500	10	66	78	85	90
South.....	69,700	62	68	84	91	93
West.....	22,400	20	63	76	83	87

*Formerly North Central.

Table 5. Absorption Rates for Condominium Apartments Completed, by Sales Class and Number of Bedrooms, for the United States: 1983

(Privately financed, nonsubsidized, apartments. Data regarding number of bedrooms and asking price are collected at the initial interview, i.e., 3 months following completion. Data are not seasonally adjusted. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Item	Total		Percent absorbed within--			
	Number	Percent	3 months	6 months	9 months	12 months
Total.....	110,000	100	66	80	88	91
Price classes:						
Less than \$40,000.....	4,500	4	74	83	89	91
\$40,000 to \$49,999.....	11,100	10	82	90	94	96
\$50,000 to \$74,999.....	34,000	31	66	84	91	94
\$75,000 to \$99,999.....	32,900	30	64	83	91	94
\$100,000 or more.....	27,400	25	58	68	77	81
Median asking price.....	\$79,000	(X)	(X)	(X)	(X)	(X)
Number of bedrooms:						
Less than 2.....	20,000	18	67	79	85	89
2.....	77,600	71	65	81	88	91
3 or more.....	12,400	11	69	80	88	92

X Not applicable.

Table 6. Absorption Rates for Furnished Apartments Completed, by Rent Class and Number of Bedrooms, for the United States: 1983

(Privately financed, nonsubsidized, furnished apartments in buildings with five units or more. Data regarding asking rent and bedrooms are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Item	Total		Percent absorbed within--			
	Number	Percent	3 months	6 months	9 months	12 months
Total.....	4,700	100	76	95	98	99
Rent class:						
Less than \$300.....	1,300	28	74	94	97	100
\$300 to \$349.....	1,800	38	83	93	99	100
\$350 to \$399.....	800	17	88	100	100	100
\$400 to \$449.....	300	6	86	100	100	100
\$450 to \$499.....	100	2	52	92	98	100
\$500 or more.....	400	9	29	91	91	91
Median rent.....	\$329	(x)	(x)	(x)	(x)	(x)
Bedrooms:						
None.....	900	19	71	96	100	100
1 bedroom.....	2,700	57	81	94	98	100
2 bedrooms.....	1,000	21	71	99	100	100
3 bedrooms or more.....	100	2	7	54	54	54

X Not applicable.

Table I. Standard Error of Estimated Totals: January to December 1983 Completions

(1 standard error)

Estimated total	Standard error	Estimated total	Standard error
5,000.....	890	75,000.....	3,550
10,000.....	1,260	100,000.....	4,130
15,000.....	1,550	150,000.....	5,160
20,000.....	1,790	250,000.....	6,900
25,000.....	2,010	350,000.....	8,440
35,000.....	2,380	450,000.....	9,870
50,000.....	2,870	600,000.....	11,900

Table II. Standard Error of Estimated Percentages: January to December 1983 Completions

(1 standard error)

Base of percentage	Estimated percentage					
	98 or 2	95 or 5	90 or 10	80 or 20	75 or 25	50
5,000.....	2.5	3.9	5.3	7.1	7.7	8.9
10,000.....	1.8	2.7	3.8	5.0	5.4	6.2
15,000.....	1.4	2.2	3.1	4.1	4.4	5.1
20,000.....	1.2	1.9	2.7	3.6	3.8	4.4
25,000.....	1.1	1.7	2.4	3.2	3.4	4.0
35,000.....	0.9	1.5	2.0	2.7	2.9	3.4
50,000.....	0.8	1.2	1.7	2.2	2.4	2.8
75,000.....	0.6	1.0	1.4	1.8	2.0	2.3
100,000.....	0.6	0.9	1.2	1.6	1.7	2.0
150,000.....	0.5	0.7	1.0	1.3	1.4	1.6
250,000.....	0.4	0.5	0.8	1.0	1.1	1.3
350,000.....	0.3	0.5	0.6	0.8	0.9	1.1
450,000.....	0.3	0.4	0.6	0.7	0.8	0.9
600,000.....	0.2	0.4	0.5	0.6	0.7	0.8

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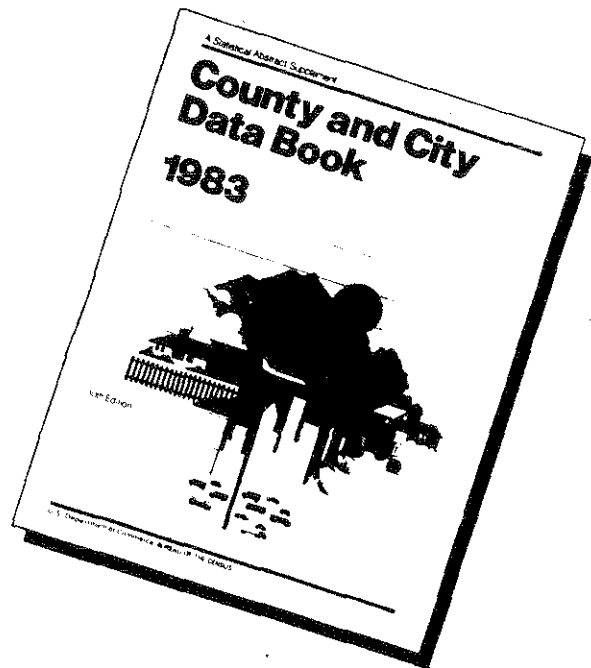
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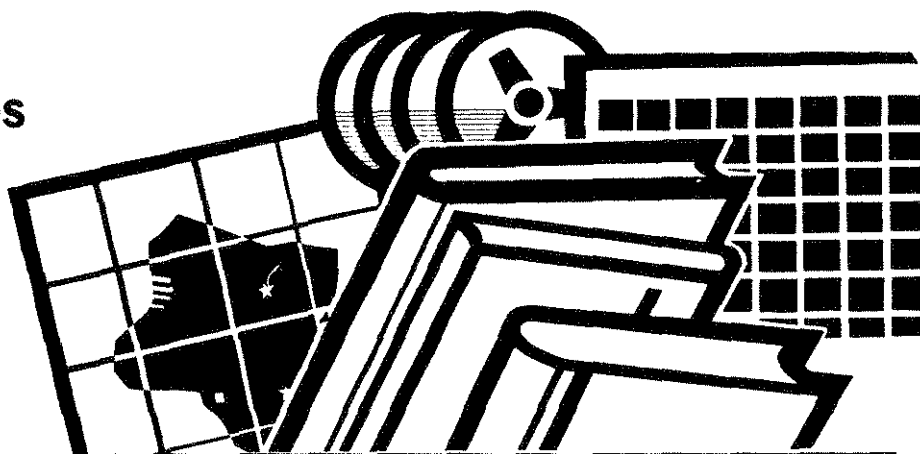
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