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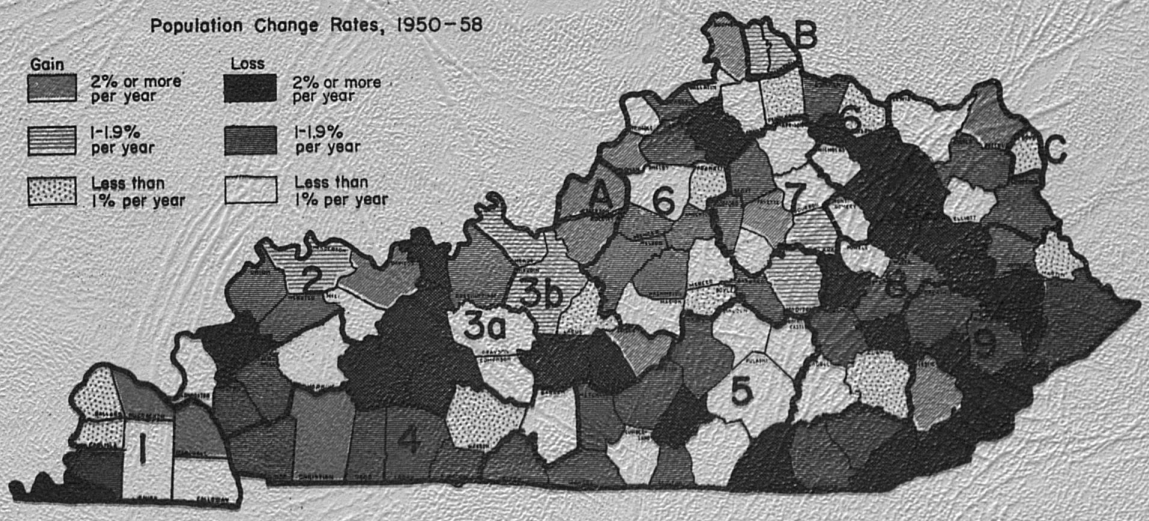
Population Estimates for Kentucky Counties and Economic Areas July 1, 1958



AVERAGE ANNUAL RATE OF POPULATION CHANGE FOR KENTUCKY COUNTIES, BY ECONOMIC AREAS, 1950-58

(Metropolitan Areas: A- Jefferson County, B- Campbell and Kenton Counties, C- Boyd County)

(Economic Areas: 1- The Purchase, 2- Owensboro-Henderson, 3a- Western Coal Fields, 3b- Eastern Pennyroyal and Knobs, 4- Pennyroyal, 5- South Central Knobs, 6- Outer Blue Grass, 7- Inner Blue Grass, 8- Cumberland Plateau Margin, 9- Cumberland Plateau)

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POPULATION ESTIMATES FOR KENTUCKY COUNTIES AND ECONOMIC AREAS

JULY 1, 1958

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The 1958 estimate of Kentucky's population continues to show a small increase since 1950. However, rather marked changes have occurred during this period in certain areas within the state. The estimated total population of Kentucky as of July 1, 1958, was 3,022,000. This is about 50,500 (1.7 percent) more than the 2,971,486 present April 1, 1950, the time of the last census of population. Kentucky is still characterized by considerable out-migration, and the state's net population gain is due to the natural increase (excess of births over deaths) out-numbering those who have moved out of the state. During the 8¼-year period the 637,658 births exceeded the 230,502 deaths by 407,066, but Kentucky's loss through migration approximated 350,000.

The observed net loss through migration continues a trend present in Kentucky since the beginning of the current century.

> "Data collected in the 1950 census of population indicated that nearly a third of the 3,762,315 in the United States whose place of birth was Kentucky were then living outside the state. In contrast, only 351,000 natives of other states were residing in Kentucky. During the 1940-1950 decade alone, Kentucky lost nearly 373,000 residents in its exchange of migrants with other states."[1]

If out-migration continues at the 1950-1958 rate, approximately 424,000 will have migrated during the 1950-1960 decade, and this number is 14 percent greater than that for the 1940-1950 decade.

Two trends which continue are the population gain in urban areas and the population loss in rural areas in the state. During the period 1950-1958, 30 (or 25 percent) of Kentucky's 120 counties registered population gains, but 18 of these counties gained only because their natural increase exceeded their losses due to out-migration. The 12 counties whose natural increase gains were supplemented by in-migration were Jefferson, Campbell, Marshall, McCracken, Daviess, Bullitt, Taylor, Christian, Boone, Oldham, Fayette, and Greenup. Christian county includes Fort Campbell, and an analysis of its population in terms of civilian migration is impossible with the available data. The other 11 counties either include or adjoin centers of industrialization. In 1950 these 11 counties had 35 percent of the state's population, and in 1958 they had 42 percent; combined, they had a population increase of 22 percent between 1950 and 1958.

Thus a picture emerges of population losses due to migration throughout most of the state and marked gains in industrialized urban areas. The net losses of 75 percent of the counties were offset by the net gains of the other

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[1] T. R. Ford, Population Estimates for Kentucky Counties and Economic Areas, July 1, 1957. Progress Report 66, Agricultural Experiment Station, University of Kentucky, Lexington. August 1958.

25 percent to provide the state with a net population gain of 1.7 percent from 1950 to mid-1958.

A more detailed discussion of Kentucky's population changes follows; a description of the method used to estimate the 1958 population is presented in the appendix, page 16.

Population Changes in State Economic Areas

State economic areas are groupings of counties which have similar social and economic characteristics. The boundaries of these areas within each state were drawn by the U. S. Bureau of Census after careful study of such factors as population characteristics, industrial and commercial activity, cultural features, climate, land use, soil types, and other factors related to the production of agricultural and non-agricultural goods.[2] The grouping of counties into relatively few such areas greatly facilitates analysis of changes taking place within the state. Kentucky's 120 counties, for example, were grouped in 1950 into 3 metropolitan and 10 non-metropolitan areas, if areas 3a and 3b are separately considered.[3]

The estimated 1950-1958 population changes in Kentucky's economic areas are presented in Table 1, page 11. Changes in individual counties, alphabetically arranged, are presented in Table 2, page 12.

All three of the state's metropolitan areas had increases in population between 1950 and 1958. The gains were most notable in the Louisville-Jefferson County area and the Campbell-Kenton counties area (part of the Cincinnati metropolitan area); these two areas combined had increases of 24 percent over their 1950 population. Including the Ashland-Boyd County area (part of the Huntington, West Virginia-Ashland metropolitan area), Kentucky's metropolitan areas gained 22 percent during the 1950-1958 period.

During the same time, half of the ten nonmetropolitan areas registered population gains ranging between roughly 5 percent and 11 percent, and half had losses ranging up to 19 percent. The combined losses exceeded the gains, so that the nonmetropolitan areas, as a whole, lost approximately 4 percent of their 1950 population by mid-1958.

The economic area of greatest gain (10.5 percent) was the Eastern Pennyroyal and Knobs Area (Economic Area 3b). The other four, in decreasing order of percentage net gain, were: the Inner Blue Grass (Economic Area 7), 7.8 percent; the Owensboro-Henderson Area (Economic Area 2), 7.1 percent;

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[2]For further discussion and materials pertaining to state economic areas, see Donald J. Bogue, State Economic Areas, Bureau of Census, Washington, D. C., 1951.

[3]Ford, op. cit., pp. 5-6.

the Pennyroyal (Economic Area 4), 5.8 percent; and the Purchase (Economic Area 1), 4.9 percent. All of the counties in the Pennyroyal except Christian had net losses. Reference has been made to the location of Fort Campbell in Christian county, and this should be remembered when considering the Pennyroyal's apparent population gain.

Among the nonmetropolitan areas which experienced net losses of population between 1950 and 1958, the Cumberland Plateau (Economic Area 9) in Eastern Kentucky lost the largest percentage and number (18.6 percent, or 96,000); the other four, in decreasing order of percentage loss, were: the Western Coal Fields (Economic Area 3a), 14.6 percent; the Cumberland Plateau Margin (Economic Area 8), 8.8 percent; the South Central Knobs (Economic Area 5), 8.7 percent; and the Outer Blue Grass (Economic Area 6), 0.1 percent.

Metropolitan Areas

The largest urban center in Kentucky is Louisville in Jefferson county, the only Kentucky county officially included in Metropolitan Area A. This is the only one of Kentucky's thirteen economic areas which gained population by in-migration supplementing its natural increase. The 1950-1958 net increase of approximately 136,100 (representing a gain of 27.8 percent) brought Jefferson county's estimated mid-1958 population to 625,500.

Campbell and Kenton counties are in Metropolitan Area B and are influenced by the population changes in the Cincinnati standard metropolitan area. The 1958 estimate of the area's population was 205,500, which was nearly 23,600 (or 13.0 percent) more than the 1950 population. Campbell county's population increased at an average annual rate of 1.6 percent to 87,200 by mid-1958, while Kenton county's population increased at an average annual rate of 1.5 percent to 118,300 during the same period of time. Campbell county gained through migration as well as natural increase, but Kenton county's gain was due to its natural increase exceeding its net loss from migration.

Boyd county (Metropolitan Area C) is part of the Huntington, West Virginia-Ashland, Kentucky, standard metropolitan area, but its population growth was considerably less during the 8¼-year period than that of the other two metropolitan areas in Kentucky. By July 1958, Boyd county's population was estimated to be 51,400. This is about 1,000 more than the 1950 population and represents a gain during the whole period of only 2.0 percent. The natural increase of 7,302 was enough to make for a net gain in population, although the number of out-migrants was considerable.

Nonmetropolitan Areas

Each of the nonmetropolitan areas lost population through migration between 1950 and 1958, as did more than 90 percent of the 116 individual counties involved.

The Purchase (Economic Area 1),--Of the economic areas having population gains between 1950 and 1958, the Purchase registered the smallest percentage increase--4.9, or an average annual increase of 0.6 percent. The net gain of the area was due to the gains of half the counties exceeding the losses of the other half. McCracken county alone registered an increase in population large enough to more than offset the losses in Calloway, Fulton, Graves, and Hickman

counties. Marshall and McCracken counties, including the urban center of Paducah, attracted migrants during the 8¼ years; Ballard and Carlisle counties had net gains of 7.0 percent and 1.6 percent, respectively, although out-migration occurred from both counties.

Among the counties having net population losses, Fulton had the greatest numerical loss (2,700) and the largest percentage loss (-19.6). Calloway county lost the fewest (900, or 4.4 percent). Graves county's loss of 1,700 exceeded Hickman county's 1,100, but the losses represented 5.4 percent for the former and 14.0 percent for the latter.

Owensboro-Henderson Area (Economic Area 2).--Two counties (Daviess and Henderson) of the five in Economic Area 2 had large enough gains in population to register a 7.1 percent increase between 1950 and 1958 for the area as a whole. Daviess county, which includes the urban center of Owensboro, had the greatest numerical and percentage increase during the 8¼ years, viz., more than 10,000 or 17.8 percent; part of the gain was through in-migration. Henderson county's net population gain was due to the natural increase exceeding the migration loss. McLean county's net loss of almost 400 was 4.0 percent of its 1950 population; Union and Webster counties, farthest from Daviess county and bordering the Western Coal Fields area, had net population losses between 1950 and 1958 of 12.0 percent and 14.4 percent.

The Western Coal Fields (Economic Area 3a).--The population loss of 14.6 percent between 1950 and 1958 in Economic Area 3a was second only to that of the Cumberland Plateau Area in eastern Kentucky, the other coal-mining area in the state. Each of the area's twelve counties registered net losses during the 8¼-year period, ranging from 4.1 percent in Livingston county to 28.6 percent in Ohio county.

Four of the counties (Hopkins, Livingston, Edmonson, and Grayson) had declines of between 2 percent and 8 percent of their 1950 populations; three counties (Caldwell, Lyon and Breckinridge), between 11 percent and 13 percent; and five (Butler, Hancock, Muhlenberg, Crittenden, and Ohio), between 21 percent and 29 percent.

Eastern Pennyroyal and Knobs (Economic Area 3b).--The northeastern boundary of Economic Area 3b adjoins the Louisville-Jefferson county metropolitan area, and the military installation of Fort Knox is included in the area. These two factors affected considerably the population changes in this area since 1950. During this time the area as a whole had an increase of 10.5 percent in population. Five of the seven counties had gains; Bullitt, 42.8 percent; Hardin, 15.6 percent; Larue, 7.0 percent; Meade, 13.7 percent; and Taylor, 22.7 percent. Green and Hart counties had losses of 16.7 percent and 22.7 percent, respectively. Only two counties, Bullitt and Taylor, gained through migration. Inferences regarding the probable number of migrants entering or leaving Hardin county are beclouded by the fact that the military personnel at Fort Knox constituted approximately half of the county's total population in 1958. The county of greatest percentage gain was Bullitt, which borders Jefferson county, the two counties of heavy percentage loss were Green and Hart, both located at the greatest distance (within the economic area) from the Louisville-Jefferson county area. Taylor county, which showed considerable population gain during the same period, is also far removed from the metropolitan area; however, it includes Campbellsville, the site of a number of small industries.

Pennyroyal (Economic Area 4).--The 1958 estimate of the Pennyroyal area's population was 181,300, approximately 10,000 (5.8 percent) more than its 1950 population. Fort Campbell is located in the area's Christian county, and its personnel are considered residents of the county (and area) by the Bureau of Census. There is every reason to believe, however, that most of the gain in total population has been due to an increase in the military personnel stationed there, and that as far as civilian population is concerned the area had no appreciable increase. Five of the other six counties lost population, with losses ranging from 0.7 percent (Barren) to 15.4 percent (Todd). Warren county had a net increase of 0.9 percent. The numerical increase was approximately 400, and it is known that since 1950 there was an increase of nearly 600 in the college student enrollment in Warren county. Consequently, it appears that even Warren county might have lost population during the 8¼ years if college students had not been counted as county residents. With the exception of Christian county, all the counties in the area lost population through migration between 1950 and 1958.

South Central Knobs, or Eastern Highland Rim (Economic Area 5).--All 12 counties in the South Central Knobs area showed net losses of population for the 8¼ years since 1950. The population of the area declined from 195,332 in 1950 to 178,300 by mid-1958, representing a loss of 8.7 percent. The least percentage loss was 2.1 (Cumberland county), and the greatest was 19.5 (Russell county). Arranged in categories of percentage loss, the counties appear in the following order:

Less than 5 percent--Cumberland, Wayne, Rockcastle
5 percent to 10 percent--Casey, Lincoln, Pulaski
10 percent to 15 percent--Adair, Allen, Clinton, Metcalfe, Monroe
Over 15 percent--Russell

Outer Blue Grass (Economic Area 6).--Twenty-six counties are similar enough with respect to several characteristics to be designated Economic Area 6. The geography of the area is unique in that it nearly encircles an economic area having an industrialized center (Lexington). Furthermore, the southern counties are in the center of the state, while the northern counties border the Ohio River. Consequently, a diversity of factors has produced various patterns of population change among the counties of the area. As a unit, the Outer Blue Grass area lost almost 4,000 persons between 1950 and 1958, or 1.2 percent of its 1950 population. This amount is the excess of the losses of 19 counties over the gains of 7 counties. Of the 7 which gained, 6 are adjacent to areas of increasing industrialization. Mason and Pendleton counties had increases of less than 1 percent; Franklin, Boyle, and Madison counties had increases of 5 percent to 10 percent; Oldham county gained 19.8 percent; and Boone county, adjoining the Campbell-Kenton metropolitan area, showed a gain of 62.5 percent as the population changed from 13,118 in 1950 to 21,300 by mid-1958. Among these counties of net population increases, however, only two (Oldham and Boone) gained through migration.

The 19 counties having net losses during the 8¼-year period, classified according to percentage loss are:

Less than 5 percent--Shelby, Gallatin, Montgomery, Trimble, Grant
5 percent to 10 percent--Carroll, Marion, Nelson
10 percent to 16 percent--Anderson, Bracken, Garrard, Henry, Nicholas, Spencer, Washington
19 percent to 28 percent--Bath, Fleming, Owen, Robertson

Inner Blue Grass (Economic Area 7).--A substantial (7.8 percent) gain from about 206,000 in 1950 to about 222,000 in 1958 was registered by the Inner Blue Grass area as a unit. However, net gains appeared only in the counties of Fayette (Lexington) and Clark, which adjoin each other, and only Fayette county gained through migration.

The other six counties of the area had net losses ranging from 1.6 percent (Jessamine) to 8.9 percent (Woodford). When past population estimates of these counties are considered, there is a trend of decreasing losses among them in keeping with the influence observed elsewhere of industrialized centers upon nearby counties.

Cumberland Plateau Margin (Economic Area 8).--As its name suggests, this area is the beginning of the more mountainous section of the state and is consequently characterized by a sparseness of developed population centers. Its economy is based primarily upon small-scale farming, lumbering, and limited coal mining in some areas.

Loss of population from the Cumberland Plateau Margin area as a whole occurred at an average annual rate of about 1 percent. The 1958 population estimate of about 216,000 in the area is approximately 21,000 (8.8 percent) less than the 1950 population.

During the 8¼ years 2 of the 17 counties in the area had net gains of population. They were Greenup (17.9 percent) and Clay (3.4 percent). Greenup county adjoins the Huntington, West Virginia-Ashland metropolitan area and also is near an atomic energy plant in Ohio. Approximately 6 percent of Greenup county's net increase in population was due to an in-migration since 1950. No other county in the Cumberland Plateau Margin gained population through migration.

There is an odd distribution of the percentage losses among the other 15 counties. Eight counties (Carter, Elliott, Jackson, Laurel, Lawrence, Lee, Lewis, and Powell) had losses ranging from 1 percent to 15 percent, the average being 7.6 percent. Seven counties (Estill, Magoffin, Menifee, Morgan, Owsley, Rowan, and Wolfe) had losses ranging from 15 percent to 30 percent, the average being 22.7 percent.

Cumberland Plateau (Economic Area 9).--The Cumberland Plateau (in eastern-most Kentucky) is a mountainous area, and in the southern part coal mining is the most important industry. Population changes are closely tied to the changes in the area's economic conditions, but they are also affected by the rather high fertility rate of the area. Economic Area 9 experienced the greatest loss (18.6 percent) of any of Kentucky's economic areas. The population decreased from approximately 516,000 in 1950 to an estimated 420,000 by mid-1958. Two of the 14 counties registered population gains: Leslie, 17.8 percent and Martin, 1.7 percent. However, both of these counties had losses due to

migration. Among the other 12 counties, Knox had the least percentage loss of population (9.1 percent), and Bell county had the greatest (28.1 percent). Six counties (Breathitt, Johnson, Knott, Knox, Pike, and Whitley) had losses ranging from 9.1 percent to 15.1 percent with an average of 12.7 percent; the other 6 (Bell, Floyd, Harlan, Letcher, McCreary, and Perry) had losses ranging from 21.6 percent to 28.1 percent, with an average loss of 25.6 percent.

Implications of Rapidly Changing Populations

> Population statistics are useful not only because they provide needed information about the numbers and characteristics of the residents, but also because they reflect the social and economic conditions of a given area. Our social institutions must constantly adjust to population changes if serious problems are to be avoided, and a careful study of population trends may indicate what kinds of adjustments should be made. Without adequate preparation, the social institutions in an area that is rapidly gaining population may be unable to meet the demands for service. On the other hand, institutions in areas losing population at a rapid rate frequently face critical problems of financing or staffing programs designed to meet the needs of a larger population.[4]

Kentucky's counties can be classified into groups which gained or which lost population between April 1950, and July 1958. A more meaningful comparison of population changes is possible if each of the two groups is subclassified into ranges of average annual percent change. The cover figure portrays the counties as their annual percent change averages more than 2 percent, between 1 and 2 percent, or less than 1 percent.[5] Counties having the highest rates of change, whether of gain or loss, are those most likely to be faced with complicated problems of social change.

Twelve counties had average annual gains of more than 2 percent, 7 averaged between 1 and 2 percent, and 11 averaged less than 1 percent. The 12 counties having the highest average annual percentages of change are Boone, Bullitt, Christian, Daviess, Fayette, Greenup, Jefferson, Leslie, McCracken, Marshall, Oldham, and Taylor. All but Leslie county have had population increases due in part to in-migration of persons from other areas. Boone county's numerical increase of 8,200 is far from the largest in the state, but its percentage increase (62.5) is.

Twenty-five counties had average annual losses of more than 2 percent, 38 averaged between 1 and 2 percent, and 27 averaged less than 1 percent. Of

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[4] Ibid., p. 12.

[5] Shelby and Pendleton counties had a loss and a gain, respectively, of less than 50 and therefore appear as having no change in Table 1; they are represented in the cover figure, however, as having less than 1.0 percent change.

the first 25, 11 actually averaged 3 percent or more annual loss. They were Bell, Crittenden, Harlan, Letcher, McCreary, Magoffin, Menifee, Morgan, Ohio, Perry, and Robertson. Eight of the 11 counties are in Economic Areas 8 or 9, and in 5 the major economic enterprise is coal-mining.

The overall picture of population changes in Kentucky between 1950 and 1958 is one of (a) declines in most counties, (b) gains in a scattered quarter of the counties, and (c) gains through in-migration in a dozen of the counties, most of which are areas of industrialization near the Ohio river.

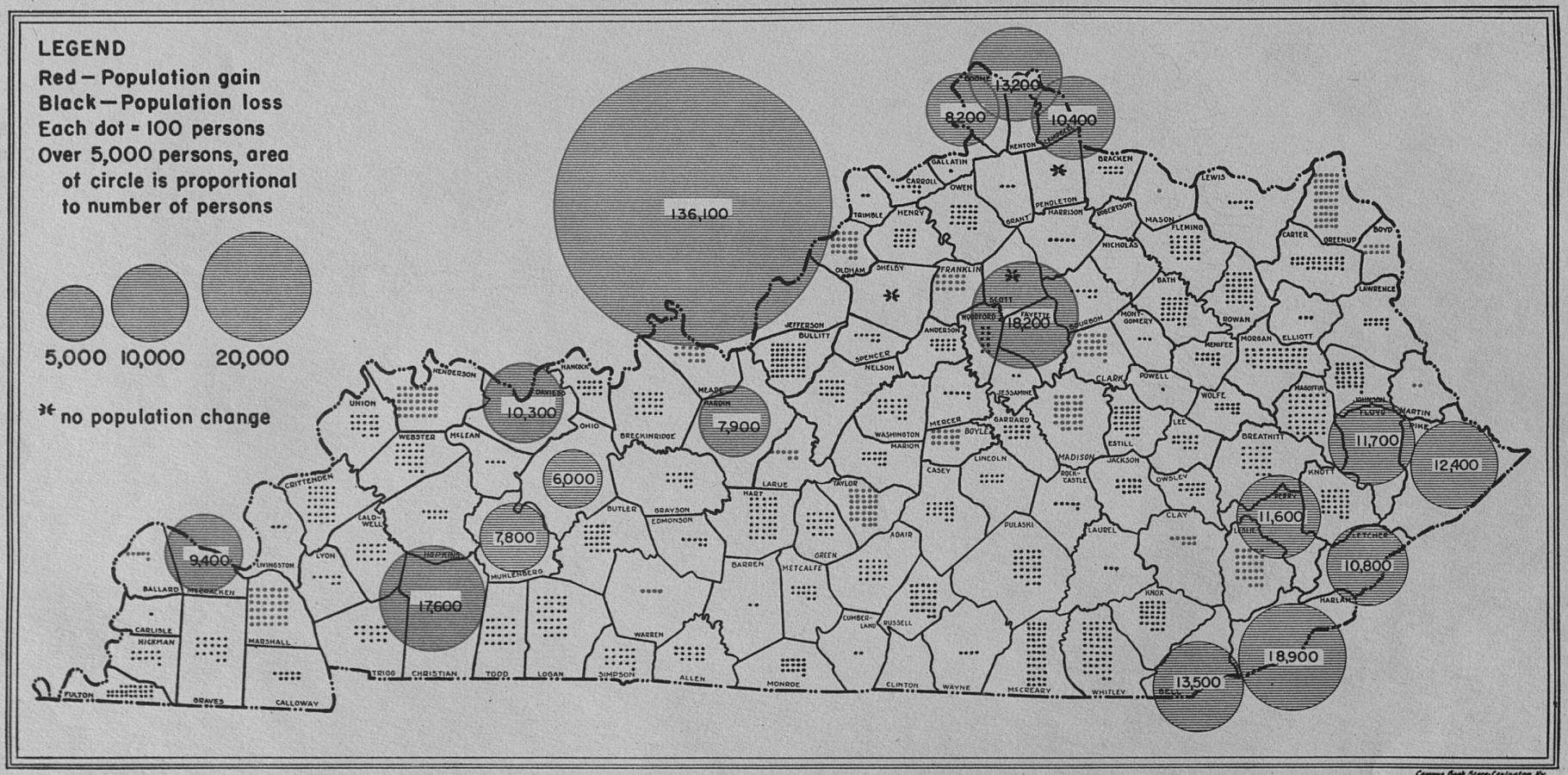

Figure 1. Population Change by Counties, 1950–1958

Table 1.--Estimated Population Changes in Kentucky Economic Areas: April 1, 1950 to July 1, 1958

Area	Census Population April 1, 1950*	Estimated Population July 1, 1958 (nearest hundred)	Net Change 1950-1958 (nearest hundred)	Percent Change 1950-1958	Average Annual Percent Change
Kentucky	2,971,486	3,022,000	+ 50,500	+ 1.7	+ 0.2
Metropolitan Area					
A. Jefferson County	489,400	625,500	+136,100	+27.8	+ 3.4
B. Campbell-Kenton Counties	181,935	205,500	+ 23,600	+13.0	+ 1.6
C. Boyd County	50,370	51,400	+ 1,000	+ 2.0	+ 0.2
Economic Area					
1. The Purchase	151,264	158,700	+ 7,400	+ 4.9	+ 0.6
2. Owensboro-Henderson	129,773	139,000	+ 9,200	+ 7.1	+ 0.9
3a. Western Coal Fields	191,004	163,200	- 27,800	-14.6	- 1.8
3b. Eastern Pennyroyal and Knobs	123,090	136,000	+ 12,900	+10.5	+ 1.3
4. Pennyroyal	171,440	181,300	+ 9,900	+ 5.8	+ 0.7
5. South Central Knobs	195,332	178,300	- 17,000	- 8.7	- 1.1
6. Outer Blue Grass	328,809	324,900	- 3,900	- 1.2	- 0.1
7. Inner Blue Grass	206,081	222,100	+ 16,000	+ 7.8	+ 0.9
8. Cumberland Plateau Margin	236,905	216,100	- 20,800	- 8.8	- 1.1
9. Cumberland Plateau	516,083	420,100	- 96,000	-18.6	- 2.3

*Corrected for underenumeration.

Table 2.— Provisional Estimated Population Changes in Kentucky Counties, April 1, 1950 to July 1, 1958

County	Census Population April 1, 1950*	Estimated Population July 1, 1958 (nearest hundred)	Net Gain or Loss 1950-1958 (nearest hundred)	Percent Change 1950-1958	Average Annual Change (percent)
All Counties	2,971,486	3,022,000	+50,500	+ 1.7	+ 0.2
Adair	17,754	15,700	- 2,000	-11.3	- 1.4
Allen	13,886	12,500	- 1,400	-10.1	- 1.2
Anderson	9,054	7,700	- 1,400	-15.5	- 1.9
Ballard	8,601	9,200	600	+ 7.0	+ 0.8
Barren	28,683	28,500	- 200	- 0.7	- 0.1
Bath	10,493	8,300	- 2,200	-21.0	- 2.5
Bell	48,106	34,700	-13,500	-28.1	- 3.4
Boone	13,118	21,300	8,200	+62.5	+ 7.6
Bourbon	17,891	17,200	- 700	- 3.9	- 0.5
Boyd	50,370	51,400	1,000	+ 2.0	+ 0.2
Boyle	20,670	22,300	1,600	+ 7.7	+ 0.9
Bracken	8,460	7,600	- 900	-10.6	- 1.3
Breathitt	20,173	17,900	- 2,300	-11.4	- 1.4
Breckinridge	15,659	13,700	- 2,000	-12.8	- 1.6
Bullitt	11,449	16,300	4,900	+42.8	+ 5.2
Butler	11,400	9,000	- 2,400	-21.1	- 2.6
Caldwell	13,296	11,800	- 1,500	-11.3	- 1.4
Calloway	20,283	19,400	- 900	- 4.4	- 0.5
Campbell	76,799	87,200	10,400	+13.5	+ 1.6
Carlisle	6,246	6,300	100	+ 1.6	+ 0.2
Carroll	8,586	7,900	- 700	- 8.2	- 1.0
Carter	22,773	20,100	- 2,700	-11.9	- 1.4
Casey	17,617	15,900	- 1,700	- 9.6	- 1.2
Christian	42,664	60,300	17,600	+41.3	+ 5.0
Clark	19,045	21,100	2,100	+11.0	+ 1.3
Clay	23,398	24,200	800	+ 3.4	+ 0.4
Clinton	10,707	9,300	- 1,400	-13.1	- 1.6
Crittenden	10,900	7,900	- 3,000	-27.5	- 3.3
Cumberland	9,386	9,200	- 200	- 2.1	- 0.3
Daviess	57,763	68,100	10,300	+17.8	+ 2.2
Edmonson	9,459	8,800	- 700	- 7.4	- 0.9
Elliott	7,156	6,900	- 300	- 4.2	- 0.5
Estill	14,804	12,000	- 2,800	-18.9	- 2.3
Fayette	101,466	119,700	18,200	+17.9	+ 2.2
Fleming	12,065	9,700	- 2,400	-19.9	- 2.4

*Corrected for underenumeration.

Table 2 (Continued)

County	Census Population April 1, 1950	Estimated Population July 1, 1958 (nearest hundred)	Net Gain or Loss 1950-1958 (nearest hundred)	Percent Change 1950-1958	Average Annual Change (percent)
Floyd	54,147	42,400	-11,700	-21.6	- 2.6
Franklin	26,120	27,600	1,500	+ 5.7	+ 0.7
Fulton	13,770	11,100	- 2,700	-19.6	- 2.4
Gallatin	3,997	3,900	- 100	- 2.5	- 0.3
Garrard	11,117	9,700	- 1,400	-12.6	- 1.5
Grant	9,883	9,600	- 300	- 3.0	- 0.4
Graves	31,577	29,900	- 1,700	- 5.4	- 0.7
Grayson	17,212	16,000	- 1,200	- 7.0	- 0.8
Green	11,354	9,500	- 1,900	-16.7	- 2.0
Greenup	25,117	29,600	4,500	+17.9	+ 2.2
Hancock	6,058	4,700	- 1,400	-23.1	- 2.8
Hardin	50,767	58,700	7,900	+15.6	+ 1.9
Harlan	72,540	53,600	-18,900	-26.1	- 3.2
Harrison	13,827	13,300	- 500	- 3.6	- 0.4
Hart	15,452	12,000	- 3,500	-22.7	- 2.8
Henderson	30,949	34,400	3,500	+11.3	+ 1.4
Henry	11,483	9,900	- 1,600	-13.9	- 1.7
Hickman	7,832	6,700	- 1,100	-14.0	- 1.7
Hopkins	39,119	38,200	- 900	- 2.3	- 0.3
Jackson	13,229	11,300	- 1,900	-14.4	- 1.7
Jefferson	489,400	625,500	136,100	+27.8	+ 3.4
Jessamine	12,549	12,300	- 200	- 1.6	- 0.2
Johnson	24,075	21,000	- 3,100	-12.9	- 1.6
Kenton	105,136	118,300	13,200	+12.6	+ 1.5
Knott	20,554	17,900	- 2,700	-13.1	- 1.6
Knox	30,702	27,900	- 2,800	- 9.1	- 1.1
Larue	10,035	10,700	700	+ 7.0	+ 0.8
Laurel	26,042	25,700	- 300	- 1.2	- 0.1
Lawrence	14,543	13,400	- 1,100	- 7.6	- 0.9
Lee	8,825	7,500	- 1,300	-14.7	- 1.8
Leslie	15,732	18,500	2,800	+17.8	+ 2.2
Letcher	39,966	29,200	-10,800	-27.0	- 3.3
Lewis	13,646	12,900	- 700	- 5.1	- 0.6
Lincoln	18,835	17,800	- 1,000	- 5.3	- 0.6
Livingston	7,229	6,900	- 300	- 4.1	- 0.5

Table 2 (Continued)

County	Census Population April 1, 1950	Estimated Population July 1, 1958 (nearest hundred)	Net Gain or Loss 1950-1958 (nearest hundred)	Percent Change 1950-1958	Average Annual Change (percent)
Logan	22,503	19,600	- 2,900	-12.9	- 1.6
Lyon	6,888	6,100	- 800	-11.6	- 1.4
McCracken	49,480	58,900	+ 9,400	+19.0	+ 2.3
McCreary	16,837	12,400	- 4,400	-26.1	- 3.2
McLean	10,098	9,700	- 400	- 4.0	- 0.5
Madison	31,413	34,300	+ 2,900	+ 9.2	+ 1.1
Magoffin	13,991	9,900	- 4,100	-29.3	- 3.6
Marion	17,391	16,200	- 1,200	- 6.9	- 0.8
Marshall	13,475	17,100	+ 3,600	+26.7	+ 3.2
Martin	11,821	12,000	+ 200	+ 1.7	+ 0.2
Mason	18,624	18,700	+ 100	+ 0.5	+ 0.1
Meade	9,521	10,800	+ 1,300	+13.7	+ 1.7
Menifee	4,846	3,600	- 1,200	-24.8	- 3.0
Mercer	14,749	14,100	- 600	- 4.1	- 0.5
Metcalfe	9,926	8,700	- 1,200	-12.1	- 1.5
Monroe	13,888	12,500	- 1,400	-10.1	- 1.2
Montgomery	13,138	12,800	- 300	- 2.3	- 0.3
Morgan	13,759	9,900	- 3,900	-28.3	- 3.4
Muhlenberg	32,775	25,000	- 7,800	-23.8	- 2.9
Nelson	19,724	18,000	- 1,700	- 8.6	- 1.0
Nicholas	7,584	6,700	- 900	-11.9	- 1.4
Ohio	21,009	15,000	- 6,000	-28.6	- 3.5
Oldham	11,102	13,300	+ 2,200	+19.8	+ 2.4
Owen	9,835	7,600	- 2,200	-22.4	- 2.7
Owsley	7,394	6,100	- 1,300	-17.6	- 2.1
Pendleton	9,692	9,700	0	0.0	0.0
Perry	47,129	35,500	-11,600	-24.6	- 3.0
Pike	82,077	69,700	-12,400	-15.1	- 1.8
Powell	6,877	6,800	- 100	- 1.5	- 0.2
Pulaski	38,796	36,000	- 2,800	- 7.2	- 0.9
Robertson	2,902	2,100	- 800	-27.6	- 3.3
Rockcastle	14,050	13,500	- 600	- 4.3	- 0.5
Rowan	12,825	9,700	- 3,100	-24.2	- 2.9
Russell	13,847	11,100	- 2,700	-19.5	- 2.4
Scott	15,256	14,000	- 1,300	- 8.5	- 1.0

Table 2 (Continued)

County	Census Population April 1, 1950	Estimated Population July 1, 1958 (nearest hundred)	Net Gain or Loss 1950-1958 (nearest hundred)	Percent Change 1950-1958	Average Annual Change (percent)
Shelby	18,049	18,000	- 0	0.0	0.0
Simpson	11,760	10,200	- 1,600	-13.6	- 1.6
Spencer	6,215	5,500	- 700	-11.3	- 1.4
Taylor	14,512	17,800	3,300	+22.7	+ 2.8
Todd	12,991	11,000	- 2,000	-15.4	- 1.9
Trigg	9,749	8,300	- 1,400	-14.4	- 1.7
Trimble	5,198	5,000	- 200	- 3.8	- 0.5
Union	15,031	13,200	- 1,800	-12.0	- 1.5
Warren	43,090	43,500	400	+ 0.9	+ 0.1
Washington	12,896	11,200	- 1,700	-13.2	- 1.6
Wayne	16,640	16,200	- 400	- 2.4	- 0.3
Webster	15,932	13,600	- 2,300	-14.4	- 1.7
Whitley	32,224	27,500	- 4,700	-14.6	- 1.8
Wolfe	7,680	6,500	- 1,200	-15.6	- 1.9
Woodford	11,298	10,300	- 1,000	- 8.9	- 1.1

Appendix

How the 1958 Population was Estimated

A basic procedure used in the preparation of 1958 population estimates for Kentucky counties and economic areas is one developed by the Population and Housing Division of the United States Bureau of the Census, and is known as the migration-and-natural-increase method.[1] Reduced to its fundamentals, this method involves adding births and subtracting deaths from the most recent census population (in this case, the 1950 census) to obtain the natural increase in each area. Then the amount of net migration that has occurred since the census is calculated and either added to or subtracted from the total, depending upon whether there has been a net gain or a net loss through migration. Since migratory movements of the population are not registered in the United States as they are in some European countries, the extent of migration must be estimated. This is done by first estimating migration rates for children of elementary school age. The expected number of school age children, assuming no migration, is determined by computing the number of survivors of a particular age group enumerated in 1950. The difference between the number of survivors and the reported number of children attending school is attributed to migration, which allows the computation of a migration rate for this age group, or cohort. This rate can be converted by an appropriate factor to a migration rate for the total population. The conversion factor is a ratio of the migration rate for the total population to that of the school age population. One of the major technical difficulties of this estimation method is that this ratio is thought to vary from time to time and place to place.

In order to obtain the final 1958 estimate of the population of Kentucky, its economic areas, and its counties the trend-line method of estimation was used. On the assumption that population changes usually are gradual rather than dramatic, the trends of change in each of the standard economic areas were derived by plotting the corrected 1950 census populations and the estimates for 1953 through 1958. A regression analysis provided a population trend-line for each area; where the trend was obviously curvilinear, a curve was drawn in such a way as to minimize, within limits of the technique, the average variation of the estimates. The resulting trend-line estimates for the standard economic areas were summed to give a population estimate for the state, viz., 3,022,000.

On the assumption that a given area's percentage of the state's total population varies less over time than does its actual population, trend-lines were established for the standard economic areas' percentages of the state's population for 1950, 1953-1958. The results of the trend-line estimates of percentages were applied to the trend-line estimate of the state's population, thereby giving estimates of the 1958 population for each of the areas. For example, the trend-line estimate of Area A's 1958 percentage of the state's population was 20.7, and

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[1] For details of the method, see the Bureau of Census publication "Illustrative Example of a Method of Estimating the Current Population of Subdivisions of the United States," prepared by Benjamin Greenburg. Current Population Reports--Population Estimates (Series P-25, No. 133) Washington, D. C., March 16, 1956.

the resulting estimate of Area A's 1958 population was 625,500.

The same procedure was used to determine the counties' 1958 percentages of their respective standard economic area's population; the results were applied to the previously determined area-populations, and 1958 populations for the individual counties were thereby determined.

This method does not estimate migration as such; rather, only total populations are estimated. However, a separate source of knowledge of the natural increase, changes in institutional, college, and military populations between 1950 and 1958 permit an inference of gross changes due to civilian migration.

Measures of Population Changes

Changes in population are most usually described in terms of absolute numbers and/or the percentage a numerical gain or loss is of a base figure. The base figures used here are the 1950 census populations which have been corrected for underenumeration. When the percentage change is divided by the 8¼ years between April 1, 1950, (when the last census was taken) and July 1, 1958, an average annual percent change is derived. This figure is useful for comparative purposes when it is remembered that it does not imply a steady yearly gain or loss at a given rate; a county making a great gain in population during part of the period but losing it by mid-1958 would register no net change and consequently no average annual percent change. In short, the dynamics of population changes during the period covered are not revealed by the data presented herein.

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