

# BLACK-WHITE HOUSING QUALITY DIFFERENTIALS IN THE UNITED STATES, 1970<sup>1</sup>

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## INTRODUCTION

It is well known that adequate housing in the United States is not available for every household. For the United States as a whole, 63.1% of the housing was rated as "sound"<sup>2</sup> in 1950, this increased to 74.0% by 1960 (U. S. Bureau of the Census, 1953:5 and 1962:5). The 1970 Census of Housing did not provide data on housing quality comparable to that reported in 1950 and 1960. Specifically, the 1970 quality of housing was based on adequacy of plumbing facilities and crowdedness (instead of plumbing and structural condition). According to the 1970 Census of Housing, the category that was almost comparable to 1950 and 1960 provided an adequate housing percentage of 86.2 (U.S. Bureau of the Census, 1973:7). Regional breakdown of the data reveals wide differences among regions and divisions of the United States with regard to housing quality. Table 1 provides the contrasting data. The states having the largest percentage of "sound" quality housing were in the Pacific Division, with the states in the East South Central Division having the smallest percent of sound quality housing (Table 1).

## OBJECTIVE OF THE STUDY

The objective of this study is to determine if there was a significant difference in the quality of housing for whites and blacks of equal income in 1970. Many changes occurred in the area of housing quality and racial discrimination after the 1960 Census. New housing policies and programs were implemented and laws against discrimination were more strictly enforced. However, in spite of these developments there still seem to exist differences in quality of housing for blacks and whites. It is the purpose of this paper, then, to test the hypothesis that in 1970 there were differences in the quality of housing units rented or owned by blacks and whites in the same income brackets.

## DATA AND ANALYSIS

The data for this study were obtained from the Census of Housing: 1970 Metropolitan Housing Characteristics, United States and Regions. Specifically, the following tables were used in the compilation of data.

1. "Income in 1969 of families and primary individuals in owner and renter occupied housing units: 1970," for whites and Negroes.

2. "Plumbing facilities by persons per room for owner and renter occupied housing units: 1970," for whites and Negroes.

Definitions and explanations of basic concepts used in this study are those adopted by the U. S. Bureau of the Census as stated in the 1970 Census of Housing reports.<sup>3</sup>

## Descriptive Statistics

The percent of good quality housing units and poor quality housing units occupied by white and black owners and renters at each level of income are presented in Table 2.<sup>4</sup> The figures in Table 2 are based upon the total number of occupied housing units in the 1970 Census for owners and renters, total and blacks. The Census provides statistics for 63,445,192 housing units, of these, 39,885,545 were occupied by owners and 23,559,647 by renters. The total number of housing units occupied by blacks was 4,646,701, of these, 2,567,761 were occupied by owners and 2,078,940 by renters.

In general, Table 2 shows a direct relationship between income level and quality of housing for owners and renters for both blacks and whites. It should be pointed out, however, that the percentage of whites tends to be greater than blacks in the case of owners occupying "good" quality housing while the reverse is true for renters of this same quality. Conversely, in the case of owners and renters occupying housing of "poor" quality, the percentages for blacks tend to be higher than whites. This implies that blacks occupy housing units of less quality than those of whites.

## Inferential Statistical Analysis

In order to ascertain the significance of the observed differences between blacks and whites, a two-way analysis of variance was applied to the data in Table 2. Table 3 summarizes these results. The null hypothesis tested stated that there were no differences in the 1970 quality of housing units rented or owned by blacks and whites in the same income category. The hypothesis was rejected in three cases (good quality, owner; good quality, renter; and poor quality, owner) and accepted in the case of renters occupying poor quality housing units.

To assess the contribution of income to these significant housing differences, an analysis of variance for contrasts was performed. Table 4 provides a summary of the significant results which indicate differences in housing quality

for blacks and whites in the following income levels: (1) over \$6,999 for plumbing facilities in owned housing units; (2) above \$6,999 for ratio of crowdedness in owned housing units; and (3) below \$7,000 for plumbing facilities in rented housing units.

TABLE 1. PERCENTAGE OF HOUSING OF SOUND QUALITY IN REGIONS AND DIVISIONS OF THE UNITED STATES, 1950, 1960 AND 1970

Region and Division	1950 <sup>a</sup>	1960 <sup>b</sup>	1970 <sup>c</sup>
Northeast	78.0	80.6	95.6
New England	73.9	78.7	94.9
Middle Atlantic	79.2	81.2	95.8
North Central	61.2	74.5	92.9
East North Central	66.1	77.1	93.8
West North Central	50.9	68.6	90.7
South	44.6	63.4	73.3
South Atlantic	48.8	67.2	73.3
East South Central	32.7	53.0	61.2
West South Central	47.6	64.8	81.2
West	78.4	81.8	94.2
Mountain	62.3	74.8	87.6
Pacific	83.6	83.9	96.7
U. S. Total	63.1	74.0	86.2

Source: U. S. Bureau of the Census, 1953, 1962, and 1973, Tables 1.

<sup>a</sup>"With hot running water, private toilet and bath, and not dilapidated."

<sup>b</sup>"Sound with all plumbing facilities."

<sup>c</sup>"With all plumbing facilities."

TABLE 2. PERCENTAGE OF WHITE AND BLACK OWNER AND RENTER OCCUPIED HOUSING UNITS OF GOOD QUALITY AND POOR QUALITY BY INCOME LEVELS, UNITED STATES: 1970

Income \$1,000	Good				Poor			
	Owner		Renter		Owner		Renter	
	White	Black	White	Black	White	Black	White	Black
< 2	5.03	5.01	4.41	10.68	0.77	2.39	0.77	4.31
2-	2.79	2.34	2.25	4.98	0.27	0.80	0.28	1.54
3-	2.67	2.32	2.28	4.83	0.21	0.66	2.23	1.29
4-	2.61	2.31	2.30	4.39	0.17	0.53	0.18	0.92
5-	2.88	2.44	2.53	4.27	0.16	0.42	0.16	0.67
6-	3.15	2.52	2.58	3.83	0.13	0.33	0.13	0.47
7-	11.69	7.14	6.90	8.04	0.28	0.54	0.23	0.72
10-	17.18	7.23	6.15	5.32	0.18	0.24	0.11	0.27
15-	11.33	3.72	2.65	1.58	0.07	0.05	0.03	0.06
25+	3.56	0.56	0.63	0.22	0.02	0.03	0.01	0.02

Source: Compiled and computed from U. S. Bureau of the Census, 1972, Tables A-4 and A-14.

TABLE 3. ANOVA FOR QUALITY OF HOUSING UNITS OCCUPIED BY BLACKS AND WHITES, OWNERS AND RENTERS: 1970

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Squares	Computed F
<u>Good Quality, Owner</u>				
Due to income	230.370	9	25.597	4.074**
Due to color	37.264	1	37.264	5.931*
Residual	56.547	9	6.283	
Total	324.181	19		
<u>Good Quality, Renter</u>				
Due to income	91.405	9	10.156	4.392**
Due to color	11.951	1	11.951	5.168*
Residual	20.813	9	2.313	
Total	124.169	19		
<u>Poor Quality, Owner</u>				
Due to income	3.492	9	0.388	3.449*
Due to color	0.696	1	0.696	6.182*
Residual	1.013	9	0.113	
Total	5.201	19		
<u>Poor Quality, Renter</u>				
Due to income	12.044	9	1.339	1.939
Due to color	1.885	1	1.885	2.731
Residual	6.211	9	0.690	
Total	20.140	19		

\*Significant at 0.05    \*\*Significant at 0.025

TABLE 4. ANOVA FOR THE QUALITY OF HOUSING UNITS OCCUPIED BY BLACKS AND WHITES  
OF DIFFERENT INCOME LEVELS, RENTERS AND OWNERS, 1970

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Squares	Computed F*
	<u>Less than \$2,000</u>			
Plumbing, renters	6,017,209.00	1,16	6,017,209.00	5.79
	<u>\$2,000 - \$2,999</u>			
Plumbing, renters	973,182.25	1,16	973,182.25	6.01
	<u>\$3,000 - \$3,999</u>			
Plumbing, renters	814,506.25	1,16	814,506.25	8.07
	<u>\$4,000 - \$4,999</u>			
Plumbing, renters	500,910.06	1,16	500,910.06	8.06
	<u>\$5,000 - \$5,999</u>			
Plumbing, renters	314,440.56	1,16	314,440.56	7.81
	<u>\$6,000 - \$6,999</u>			
Plumbing, renters	160,200.06	1,16	160,200.06	6.25
	<u>\$7,000 - \$9,999</u>			
Plumbing, owners	1,148,648.01	1,16	1,148,648.01	8.11
Room density, owners	6,109,181.70	4,16	1,527,295.42	10.78
	<u>\$10,000 - \$14,999</u>			
Plumbing, owners	611,325.62	1,16	611,325.62	17.61
Room density, owners	2,458,895.80	4,16	614,723.95	17.70
	<u>\$15,000 - \$24,999</u>			
Plumbing, owners	3,622,360.60	1,16	3,622,360.60	58.04
Room density, owners	14,132,362.00	4,16	3,533,090.50	56.61
	<u>\$25,000 or more</u>			
Plumbing, owners	562,500.00	1,16	562,500.00	45.52
Room density, owners	2,186,341.50	4,16	546,585.38	44.24

\*All computed F ratio values are at least significant at the .05 level. For a complete analysis of variance see Al-Marayati, 1977, Tables III through XII, pp. 28-37.

## FOOTNOTES

<sup>1</sup> The research on which this paper is based is a part of MAFES Population Project No. 4004. The authors gratefully acknowledge the contribution of Dr. Rose M. Rubin.

<sup>2</sup> In 1950 and 1960, quality of housing was measured by its "structural condition" ("dilapated" or "not dilapated") and "plumbing facilities." The term "sound" was introduced to express this quality. See (U. S. Bureau of the Census, 1954:XIV and XV and 1962); and (Bird, 1973:3). According to these criteria, the term "sound housing" refers to "housing with no defects or only slight defects" and "which has hot and cold running water, flush toilet and bathtub (or shower) inside the structure for the exclusive use of the occupants" (U. S. Bureau of the Census, 1962:XXIV).

<sup>3</sup> A Housing Unit is a house, an apartment, a group of rooms, or a single room occupied or intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants do not live and eat with any other persons in the structure and which have either (1) direct access from the outside of the building or through a common hall or (2) complete kitchen facilities for the exclusive use of the occupants. "Income" is the sum of the amounts reported in 1969 "for wages and salary income, net self-employment income, Social Security or railroad retirement income, public assistance or welfare income, and all other income." Persons per room is the number of persons in a housing unit divided by the number of rooms in the unit. Plumbing Facilities denotes "units which have hot and cold piped water inside the structure as well as a flush toilet and a bathtub or shower inside the structure for the exclusive use of the occupants of the unit." "Race" refers to the race of the head of the household occupying the housing unit. "Housing quality" in this study, was classified as good if the units had all "plumbing facilities and a ratio of 1.0 or more rooms per person. Housing units were classified as poor quality housing units if they lacked one or more enumerated plumbing facilities and/or had a ratio of less than 1.0 rooms per person."

<sup>4</sup> The percentages in the table are obtained by dividing the figures for whites and blacks by their relevant total.

## REFERENCES

- Al-Marayati, Mahdi  
1977 "Housing Quality Differentials Between Whites and Blacks in the United States: 1970." Unpublished M.A. Thesis, Mississippi State University.
- Bird, Ronald  
1973 Inadequate Housing and Poverty Status of Households, Areas Served by Farmers Home Administration Programs, 1970, By States. Statistical Bulletin No. 520, June. Washington, D.C.: Rural Development Service, U. S. Department of Agriculture.
- U. S. Bureau of the Census  
1953 County and City Data Book, 1952, (A Statistical Abstract Supplement). Washington, D.C.: U. S. Government Printing Office.
- U. S. Bureau of the Census  
1962 County and City Data Book, 1962, (A Statistical Abstract Supplement). Washington, D.C.: U. S. Government Printing Office.
- U. S. Bureau of the Census  
1972 Metropolitan Housing Characteristics. Final Report HC(2). Washington, D.C.: U. S. Government Printing Office.
- U. S. Bureau of the Census  
1973 County and Data Book, 1972, (A Statistical Abstract Supplement). Washington, D.C.: U. S. Government Printing Office.