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RURAL HOUSING NEEDS AND BARRIERS: THE CASE OF CENTRAL APPALACHIA*

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The nation's housing needs are a subject of major public concern – and rightfully so. The 1970 Census revealed 2.5 million substandard houses in nonmetropolitan areas inhabited by almost 13 million people [22]. Two earlier major government reports presented a picture of unfulfilled housing needs, and the pervasive social, economic, political and institutional obstacles to meeting these needs [7, 15].

Unfortunately, despite the pressing nature of substandard housing illuminated in these reports, few researchers have responded with serious analysis of the problem. Only passing attention to housing needs was given by the President's Poverty Commission [11, 13], even though the quality of housing is widely recognized as a key indicator of economic development and the quality of living [5].

PURPOSE

The objective of this paper is to describe, with the context of related social and economic conditions, the housing situation over the decade 1960-70 in one of the most depressed rural areas of the nation – the 60 counties of the Central Appalachian Region (CAR). Major attention will be given to a review and analysis of federal housing programs in the region from 1967-70, a time period in which program expenditures were available by county.

The social and economic fragmentation of the CAR frustrate most policy prescriptions. Moreover, the CAR is rarely treated as a unit since parts of the

region are in four separate states, and statistical analyses are, consequently, rendered more difficult than for a specific political jurisdiction. Accordingly, policy suggestions based on statewide data often do not apply to the CAR. Therefore, focusing on the core problem area may reveal unique factors related to housing development that would otherwise go unnoticed.

REGIONAL HOUSING NEEDS

The 1960 Census of Housing revealed that 43.8 percent of the region's houses were in either deteriorating or dilapidated condition [18]. The most severe problem was in the 26 Eastern Kentucky counties where 47.5 percent of the housing units were listed as deteriorating or dilapidated. Related figures for the other counties of the CAR were: Virginia, 45.1; Tennessee, 41.8; and West Virginia, 40.3 [18].

The categories of sound, deteriorating, and dilapidated were not used in the 1970 Census because of serious judgmental errors in classification. For example, the Census Bureau has admitted that dilapidated housing in the U.S. as determined by the 1960 Census was understated by at least one-third [10, p. 17]. Nevertheless, standards exist to allow some comparison between housing conditions in 1960 and 1970.

Analyses conducted recently for the Appalachian Regional Commission (ARC) conclude that much of the housing in the CAR is substandard and lacks

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¹ The analysis by Daberkow [5] indicated that this region appeared to be one of the most chronically depressed in the nation.

standard sanitary facilities [20, 21]. A 1968 Model Cities study of Pikeville, Kentucky, concluded that 62.5 percent of the dwelling units had major deficiencies or were ready for clearance – a much higher figure than either the percentage of unsound housing in Pike County in 1960 (43.6) or the 1960 regional average of 43.9 percent unsound housing [16].

Another indicator of adequate housing, the presence of plumbing facilities, shows that a serious

problem persists in the CAR. The 1970 Census of Housing shows that only 63.3 percent of housing units in the region have all plumbing facilities, compared to 92.4 percent for the nation and 83.7 percent for the four states in which the CAR is located. Within the region, Kentucky represents the most pronounced problem in this respect with complete plumbing in only 55 percent of the housing units while the other states are slightly above this figure (Table 1).

Table 1. NUMBER OF HOUSING UNITS, AND HOUSING UNITS WITH ALL PLUMBING FACILITIES, U.S., FOUR STATES, AND CAR, 1970*

	Number of	Housing units with all plumbing facilities	
Region	housing units	Number	%
United States total Four state total	68,418,062 4,433,892	63,249,416 3,712,708	92.4 83.7
Kentucky - 26 counties Tennessee - 18 counties Virginia - 7 counties W. Virginia - 9 counties	163,444 103,217 61,402 119,856	88,836 70,134 36,622 87,692	54.5 67.8 59.8 73.3
CAR 60 counties total	447,919	283,284	63.3

*Source: United States Department of Commerce, Bureau of the Census, Census of Housing, Summaries by State, 1970, Table 2.

Table 2. SUBSTANDARD HOUSING - 1960, UNITS CONSTRUCTED - 1960-70, AND RATIO OF UNITS CONSTRUCTED TO SUBSTANDARD HOUSING: CAR*

	(1) Deteriorating 1960	(2) Dilapidated 1960	(3) Units of housing constructed 1960-70	Ratio of (3) to sum of (1) and (2)
Kentucky - 26 counties Tennessee - 18 counties Virginia - 7 counties W. Virginia - 9 counties	52,830 25,557 18,104 35,050	21,485 11,918 8,863 17,028	32,594 27,338 11,931 13,559	43.9 72.9 44.2 26.0
CAR 60 counties total	131,541	59,294	85,422	44.8

*Source: Compiled from data reported in Census of Housing, 1960 and 1970.

HOUSING CHANGES: 1960-70

Between 1960 and 1970 the number of housing units constructed in the CAR was 85,422 while total units increased by only 56,906 or 14.6 percent, indicating a high proportion of housing replacement in the region. In fact, the units constructed over the decade represent 44.8 percent of the number of deteriorating and dilapidated houses in 1960 (Table

2) and 144 percent of dilapidated units alone.

At first glance, these figures imply that substantial improvement may have occured over the decade. Examining census figures more carefully reveals that the units of housing either destroyed or abandoned total 30,009 for the decade – only 15 percent of the number of deteriorating and dilapidated units in 1960, but roughly 50 percent of

dilapidated units. Thus, in spite of some improvement, a substantial unfulfilled need for adequate housing is reflected by the large number of deteriorating and dilapidated units remaining in the CAR.

THE ADVENT AND ROLE OF MOBILE HOMES

The role of mobile homes in the CAR has increased significantly over the decade. From 1960-70 roughly 14,000 mobile homes were moved into the CAR, representing 16 percent of total housing units constructed in that period [18]. It is not difficult to appreciate the economic and social forces which have contributed to this increased role for mobile homes. Given the low incomes in the region, the mobile home may prove the best alternative for permanent housing.

Other factors which appear to make the mobile home a partial solution to the housing ills of Central Appalachia are low job security and the continuing depopulation of the region which tend to discourage long-term investments in permanent home sites. A major cause of job insecurity in the CAR is the declining employment in the coal industry fostered by increased mechanization in shaft mining and the shift into highly mechanized strip mining. These changes in the coal industry have contributed to unemployment and underemployment and sharpened the concern for stability of income streams.

Further research is needed to investigate the appropriateness of the mobile home as the answer to the region's housing needs. Such a research task must analyze the comparative costs of mobile homes to the consumer as compared to permanent housing as well as the implications for financing public services which depend primarily on property taxation. It is likely that demographic characteristics of the mobile home residents contrast sharply from those of the general populace.

CONSTRAINTS ON HOUSING DEVELOPMENT

The persistence of substandard housing in the CAR has plagued policy makers for the past decade. The ARC in 1967 reported five major obstacles to improved housing [1]:

- 1. Lack of exact information about building occupancies and demolitions.
- 2. The failure of communities to take advantage of federal programs.
- 3. The absence of a capable housing industry to serve parts of the region.

- 4. A shortage of developable land.
- The separation of mineral and surface rights in land titles.

While the 1970 Census provides abundant housing information, many of the above problems require information derived from more extensive primary data. It appears that the shortage of developable land is interrelated with both extensive corporate landownership in the region and the pervasive separation of mineral and surface rights in land titles. Although these problems are frequently cited by community developers in the CAR, obtaining appropriate data requires a search of county tax records and land titles and represents a formidable research effort. The scope of this paper is more limited, but will provide insight into the second and third problem areas listed above.

THE PROBLEM OF EFFECTIVE DEMAND

The demand for housing is primarily a function of income derived from a sufficiently secure source to justify the necessary long-term investment. Hence, both low and fluctuating income streams may frustrate housing development. These conditions may explain most of a community's reluctance to "take advantage of federal programs."

The "effective" demand for housing is further dependent upon the ability to translate a given income flow into expenditures on units of housing consumption. That is, the potential house buyer must be able to meet mortgage requirements such as initial down payments and subsequent amortization rates. Hence, the rules and regulations surrounding the house mortgage industry are major variables influencing "effective" demand. Each of these components will be briefly discussed.

Low Incomes

The prevalence of low incomes and abject poverty engendered by an unstable regional economy provide severe restrictions on house building activity. The percentage of families in the 60 CAR counties with incomes below the Social Security definition of poverty ranges from 15.1 percent in Anderson County, Tennessee, to 61.6 percent in Leslie County, Eastern Kentucky.² Median family incomes range in similar fashion from a low of \$2,407 in Owsley County, Kentucky, to a high of \$8,588 in Anderson County, Tennessee [8, 19]. Table 3 provides a summary of the changing economic status of the region from 1960-70.

²The Social Security definition of poverty is based on family income, family size, and residence status (rural/urban); an individual is considered poor if his personal income or the income of the family to which he belongs inadequately provides for his subsistence. For a rural family of four in 1972, the poverty threshold was \$3,400.

Table 3. MEDIAN FAMILY INCOME, ABSOLUTE NUMBER AND PERCENT OF FAMILIES BELOW THE SOCIAL SECURITY DEFINITION OF POVERTY, 1960-70*

	Mean value of median income per county ^a (1970 \$ values)		of fam Social defin	Absolute number of families below Social Security definition of poverty		Percent of families below Social Security definition of poverty	
CAR portion of state	1960	1970	1960	1969	1960	1969	
Kentucky - 26 counties	2,995 (3,929)	3,909	53,404	52,468	50.1	45.1	
Tennessee - 18 counties	3,208 (4,209)	4,903	26,258	23,274	41.4	32.5	
Virginia - 7 counties	3,372 (4,424)	5,680	26,604	13,895	45.1	28.8	
W. Virginia - 9 counties	4,617 (6,058)	6,190	27,857	22,464	30.6	26.1	
Mean values for 60	(-,)						
counties	3,346 (4,390)	4,756	2,135	1,868	44.0	36.6	
Total number of families below poverty income			128,128	112,101			

^{*}Source: Complied from [8, 19].

These figures indicate that average incomes have increased over the decade for most of the region, although some of the changes appear to be relatively insignificant in real dollars. In fact, Kentucky appears to be no better off than in 1960 and perhaps even worse off. For the 60 counties there are 112,101 families with incomes below the poverty level – only 16,022 fewer than in 1960.

The picture is somewhat brighter for those who are gainfully employed in the region. According to the 1970 Census, the mean wage and salary incomes per worker varies from \$5,440 in Kentucky to \$7,352 in West Virginia. These salary figures are much higher than the mean family income figures, indicating that problems such as unemployment, underemployment, disability and age strongly influence the incidence of poverty and thereby the ability to finance housing.

Mortgage Requirements

The operations of savings and loan associations and private banks in the CAR represent the primary source of funds and financial leverage for housing development (Table 4). On the other hand, they handle a low volume of FHA and VA mortgages and a number restrict themselves to conventional mortgages only.³ Conventional mortgages entail initial down payments which may vary from 5 to 20 percent or

more and are usually amortized over a shorter time period than federally supported mortgages. These requirements are formidable for low income people.

Although the interest rates on mortgages financed by banks and savings and loan associations are comparable to the national average, the average maturity is much shorter averaging 20 years in the CAR, compared to 25.8 for the U.S. on both NEW house construction and for transfers of existing houses [4]. Consequently, monthly payments on a given mortgage for CAR residents is significantly higher while income levels are far below the respective national averages.

FEDERAL ASSISTANCE PROGRAMS

Federal programs attempt to modify both the demand and supply of housing for the benefit of low income people. On the supply side special grants and loans have been provided to nonprofit corporations and cooperatives which serve as sponsors of special housing programs for local communities. Efforts have also been undertaken by ARC and the Office of Economic Opportunity to promote utilization of federal programs by target communities. On the demand side the aim has been (1) to eliminate barriers such as lump-sum down payments and to lengthen the repayment period for house martgages

^aThese figures represent an unweighted mean of median income per county.

³ According to a recent study [4] FHA and VA loans represent only 6.0 percent of total real estate loans in the CAR. It appears that Farmers Home Administration plays a more important role. Insurance companies, on the other hand, have not been active in the region.

Table 4. NUMBER OF HOUSING LOANS OF COMMERCIAL BANKS IN CAR BY SOURCE OF SECURITY, DECEMBER 31.1967*

(in thousands of dollars)

	Secured by residential properties	Insured by FHA	Guaranteed by VA	Not insured or guaranteed by FHA or VA
Kentucky - 26 counties Tennessee - 18 counties Virginia - 7 counties W. Virginia - 9 counties	48,062 36,823 17,957 61,434	1,075 918 898 11,016	306 35 165 1,357	46,681 35,870 16,894 49,061
CAR 60 counties total	164,276	13,907	1,863	148,501

*Source: [4, Appendix G, pp. A-30, A-31]

Table 5. FEDERAL EXPENDITURES ON HOUSING IN CAR BY AGENCY FOR FISCAL 1968-70*

Agency	1968	1969	1970	Total - 3 years
FmHA FHA VA	\$8,623,640 7,497,000 3,633,914	\$ 8,994,770 11,433,860 2,930,775	\$18,706,236 7,609,000 4,885,501	\$36,324,646 26,539,860 11,450,190
Total federal expenditures on housing	19,754,554	23,359,405	31,200,737	74,314,696

^{*}Source: Compiled from data, Executive Office of the President, Office of Economic Opportunity, Federal Outlays (by states) FY 1968, 1969, 1970.

Table 6. TOTAL AND PER CAPITA FEDERAL EXPENDITURES ON HOUSING IN THE CAR, FISCAL YEARS 1968-70*

State	Total expenditures 1968-70	Population 1970	Per capita federal expenditures
Kentucky - 26 counties	\$15,073,541	506,425	\$29.77
Tennessee - 18 counties	24,394,240	304,218	80.19
Virginia - 7 counties	8,509,653	171,241	49.69
W. Virginia - 9 counties	26,036,262	366,913	70.96

*Source: Compiled from data found in [9, 19].

and (2) to provide partial subsidies through a system of interest credits and, to a less degree, rent supplements to low income families.

The programs of the Farmers Home Administration (FmHA) and the Federal Housing Administration (FHA) have provided housing subsidies primarily in the form of variable interest rates as low as one percent to low income families whose mortgage payments can be met only at that interest rate. These agencies appear to be relatively effective in assisting families whose incomes fall in

the range of \$4,000-\$8,000 annually [10]. In the CAR and nation-wide the thrust of federal activity is through the FmHA 502 program for single unit dwellings which accounted for 80 percent of the total number and 90 percent of the dollar volume of loans made in fiscal year 1966 [13]. Multifamily dwelling units have been of limited importance in the CAR.

The major limitation on the effectiveness of federal programs appears to be the large number of families in the region with below poverty level incomes (Table 3). Since federal expenditures on

Table 7. FEDERAL EXPENDITURES FOR HOUSING AS A RATIO OF VARIOUS INDICATORS OF HOUSING NEED, 1968-70*

	Per family below poverty level income 1969	Per unit of housing constructed 1960-70	Per unit of substandard housing 1960	Per unit of dilapidated housing 1960
Kentucky - 26 counties	\$ 287	\$ 463	\$203	\$ 702
Tennessee - 18 counties	1,048	892	651	2,047
Virginia - 7 counties	612	713	316	960
W. Virginia - 9 counties	1,159	1,920	500	1,529

*Source: Calculated from data provided in [8, 9, 18, 19].

housing are only partial subsidies, the programs are not designed to deliver sound housing to low income people. Special efforts such as the "self-help" housing programs of FmHA, which were more directly oriented toward low income families, have not been widely utilized, and appear to be abandoned by FmHA.⁴

Federal Expenditures by Agency

Table 5 illustrates the level and growth of federal spending in the CAR by agency for the period 1968-70, the years in which this data was available on a county basis. The substantial increase in FmHA expenditures is the most noticeable change over this time period.

The Ratio of Federal Expenditures to Various Indicators of Need

The growth of federal spending has occurred in each part of the CAR [9]. Since the population base as well as the need for housing varies significantly by state, several indicators of housing need were used as a basis for comparing federal housing expenditures among the four states. As a first step, the following table illustrates the variation in spending on a per capita basis.

The figures in the last column reveal great disparities from state to state in per capita utilization of federal programs. The nine counties in West Virginia received roughly \$71.00 per person while Kentucky's 26 counties with 38 percent more people received barely \$15 million or only 58 percent as much money in the same three-year period. Stated more simply still, for every dollar spent in Kentucky, \$2.38 was spent in West Virginia. None of the state areas in Central Appalachia fared so poorly as Kentucky as measured by per capita expenditures. The next lowest state, Virginia, received 67 percent

more money per person. Some of this variation may be attributable to the lower levels of income in Kentucky. Differences in leadership of state and local officials are other factors which are difficult to measure but likely influence the extent of federal expenditures. A comparison of expenditures on the basis of other indicators of housing need reveals similar patterns (Table 7).

By every indicator, Kentucky appears to be the least extensive user of federal housing programs, while West Virginia and Tennessee are the most extensive. Expenditures per family in poverty and per unit of housing constructed 1960-70 are highest in West Virginia. Tennessee, on the other hand, has the highest expenditures per unit of substandard housing in 1960.

Federal Expenditures by Income Category

Expenditures by FHA and FmHA in each program category were analyzed to determine more clearly the extent of program utilization among low income people (Table 8).

From the figures in Table 8 it appears that low income families are not major benefactors of federal spending. In spite of the extent of poverty in the CAR, only 2.96 percent of the total FmHA and FHA expenditures were for Very-Low-Income Housing. The bulk of federal spending, 64.23 percent, occurred in the Low-to-Moderate Income category. Table 9 provides similar information by state.

Viewing expenditures in Kentucky alone, the proportion going to Very-Low-Income Housing Loans is slightly more than 12 percent. Table 3 showed that the percentage of families in poverty in 1969 in the Kentucky portion of the CAR was roughly 45 percent. Since Kentucky's share of the Very-Low-Income housing expenditures is 74 percent of the regional total for this category, the figures

⁴ The number of self-help loans reported is 29 in Kentucky, 9 in Tennessee and one in Virginia. No figures are reported for West Virginia [3].

Table 8. FmHA AND FHA EXPENDITURES IN CAR FOR FY 1968-70, BY CATEGORY OF LOAN*

-	Expenditures		
Loan category	Dollars	Percent of total	
VLIHL and LRPH ^a LMIHL ^b RRHL ^c Other ^d	1,863,566 40,383,990 942,020 19,674,930	2.96 64.23 1.49 31.29	
Total	62,864,506	100.00	

^{*}Source: Compiled from data in [9].

Table 9. FmHA AND FHA EXPENDITURE CATEGORY BY STATE - FY 1968-70*

State	Category	Expenditure	As a percent of total FmHA and FHA expenditures for state
Kentucky - 26 counties	VLIHL	\$ 1,387,836	12.3
Totals	LMIHL	9,900,500 11,288,336	87.7 100.0
Tennessee - 18 counties	VLIHL LMIHL RRHL	\$ 202,680 13,143,360	1.5 95.0
Totals	KKAL	493,720 13,839,760	$\frac{3.6}{100.1}$
Virginia - 7 counties	VLIHL LMIHL	\$ 164,060 5,079,710	3.0 91.6
Totals	RRHL	300,000 5,543,770	$\frac{5.4}{100.0}$
W. Virginia - 9 counties	VLIHL LMIHL	\$ 108,990 12,260,420	.9 98.0
Totals	RRHL	148,300 12,517,710	$\frac{1.2}{100.1}$
Total expenditure		43,189,576	

^{*}Source: Compiled from data in [9].

seem to imply that the pattern of expenditure is influenced by housing need among low income families. More significant, however, is the fact that housing loans and expenditures in the Very-Low-Income category represent only 12.3 percent of the total federal effort in Kentucky and less than 3 percent for the CAR.

The Relevancy of Federal Programs for Low Income Families

The above figures illustrate a familiar pattern that has emerged nation-wide which indicates that federal programs have not fulfilled the housing needs of low income people. It appears that the intent of

^aVLIHL refers to "Very Low Income Housing Loans" which is entirely under FmHA and generally refers to income levels below \$3,000. LRPH is "Low Rent Public Housing" which includes only \$576,000 spent in Kentucky.

bLMIHL is "Low to Moderate Income Housing Loans" which is administered under both FmHA and FHA and refers to

families with incomes between \$3,000-\$8,000. The reported expenditures fall predominately under FmHA.

^CRRHL refers to "Rural Rental Housing Loans."

dConsists of an array of other FmHA and FHA programs, among which are Moderate-and-Above-Moderate-Income Housing Loans.

the FmHA enabling legislation was never operationalized on a sufficiently flexible basis to meet this goal. The agency's lending policy has led to a collection write-off rate of only eight-tenths of one percent, resulting in charges of "undue conservation" by critics of FmHA [23].

FmHA regulations state explicitly that "rural housing loans are made only to applicants who are unable to obtain the credit they need from private and cooperative lenders" [3]. Although more than half the families of the region would probably qualify for interest credit to some degree, no interest subsidy can reduce the floor level of actual construction costs. Even if FmHA had adequate funds to cover the maximum interest credit in every case of need, a substantial number of the families in the CAR could not qualify for the program because of inadequate incomes.

Consider, for example, the following cost figures: The lowest cost house which can be constructed under either FHA-235 or FmHA 502, the most widely utilized programs for single family dwellings, lies in the range of \$10,000-\$15,000. In fact, state averages are much higher: \$14,500 for Georgia; \$13,000 for Colorado; and \$15,500 for Vermont [17]. Nevertheless, assuming the \$10,000 loan amortized under the MAXIMUM interest credit subsidy, 5 the lowest possible monthly payment on principal and interest is roughly \$30.00. Adding \$10.00 per month to cover house insurance and taxes (which is probably a minimum figure for most counties), the lowest monthly cost of homeownership under the FmHA 502 program is around \$40.00.

Since FmHA stipulates that recipients of the interest subsidy pay a maximum of 20 percent of adjusted annual family income, these costs could be covered by an adjustment income of \$200 per month, or \$2,400 per year. For a family with four children under 21, participation would require minimum ACTUAL annual earnings of \$4,374. As Table 3 reveals, many families in the region could not qualify for federal assistance, even though conceivably they may be paying a higher rent than the monthly mortgage payment required under FmHA 502.

CONCLUSIONS AND POLICY IMPLICATIONS

Substandard housing plagues most of the CAR in spite of federal efforts to increase both the supply and the effective demand for housing. In view of the recent curtailment of the subsidized portions of FHA and FmHA programs, any effort to provide housing

for low income people must consider alternative financial sources or further program development. It is unlikely that minor adjustments in current legislation can push the cost of housing down to a level that can be financed by poverty level incomes, though easing FmHA restrictions may help. Some FmHA officials urge the reinstatement of a direct grant program for home repair which was taken away by congress in the early 1960's [23].

The housing needs of Central Appalachia will probably remain unrelieved until direct subsidies are utilized, since regional economic conditions do not appear to be improving with sufficient speed to alleviate poverty in the near future. These subsidies could be either in the form of (1) underwriting construction activity to be sold or rented to low income families at below market prices or (2) direct transfers to low income families to provide sufficient income to purchase houses at market prices. The latter could be given special consideration via any guranteed income program being considered by the current administration, and would provide for more efficient program administration and public understanding.

Research Hypotheses

Research is needed to explore the appropriate organizational forms and powers that community groups should assume in meeting housing needs. It may be found that adequate housing can be provided only through the development of new institutional forms at the community level. The methods of establishing legitimacy for various types of organizations and delineating appropriate powers to be exercised by them for problems that must be addressed.

It is clear that additional sources of capital must be channeled into effective financial mechanisms to properly address the problem. The modifications of agencies such as the Federal Land Bank and the production credit associations to providing housing loans are significant steps in the right direction. The effectiveness of these agencies and the appropriate forms that these and newly established financial systems must take to be effective in depressed economic areas should be the concern of researchers.

The determinants of the effective demand for housing as well as the subjective qualities of sound housing are likely to vary significantly by subculture and political jurisdiction. Yet, these factors have not been sufficiently analyzed. Finally, a more extensive

⁵ The maximum interest credit would reduce the effective interest rate to one percent.

approach is needed to examine the degree of flexibility in the housing construction industry in order that sound housing may ultimately be delivered to families at all income levels in such a way that aesthetic quality and tastes are satisfied. A number of these issues could be addressed by appropriate economic analysis.

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