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Financing Low-Cost Minimum-Standard Housing in Rural Tennessee

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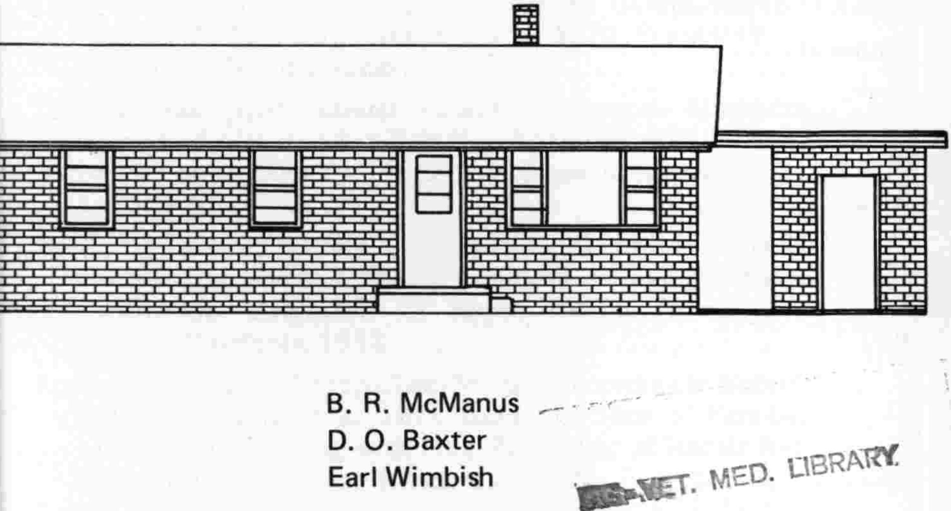

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by B. R. McManus, D. O. Baxter and Earl Wimbish*

INTRODUCTION

Over the years, many rural residents have frequently experienced difficulty in obtaining financing for low cost rural homes. Although many of the existing lending institutions finance rural housing, low income rural residents are often unable to take advantage of such programs because of family income and home cost relationships. Many rural residents feel that the lack of suitable financing for construction, purchase, and improvement of homes is caused by limitations and restrictions imposed by lenders and governmental programs and policies. The low and fluctuating incomes of many rural families further complicate the problem.

Lenders, on the other hand, contend that it is impossible to offer loans to fulfill all the low cost housing needs for all rural families and make a normal profit at the same time. The following statement from **An Economic Analysis of the Housing and Urban Development Act of 1968** indicates part of the reason why.[1]

> The national shortage of low income housing is not due to mysterious malfunctioning of the housing market. Certainly there are discriminations and other external influences, but as a mechanism for equating supply and demand the market is working about as it should. The trouble is that housing suppliers simply find it impossible to reduce cost enough to place satisfactory housing within the reach of lower income families while making such housing a profitable investment. Given our national income distribution, building and operating cost, and alternative investment opportunities, the market cannot satisfy the demand for low income housing without some form of direct or indirect subsidy. The profit is simply not there.

It is evident that not all families can afford even minimum standard housing. Rural families with low and fluctuating incomes cannot hope to make the total mortgage payments needed for minimum standard housing at current market interest rates. For these

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[1] Robert P. O'Block, **An Economic Analysis of the Housing and Development Act of 1968,** Graduate School of Business Administration, Harvard University, Boston, Massachusetts, 1970, p. 1.

families, a large gap exists between their incomes and the cost of adequate housing. Until a way is found to bridge this gap, many of these individuals will continue residing in houses that do not meet minimum quality standards.

OBJECTIVES

The objectives of this study were to: 1) ascertain the perceived availability of financing for rural low cost housing, 2) determine the relationship between family income and quality of present housing, and 3) estimate the amount of annual subsidy needed to provide minimum standard new brick veneer homes for rural low income families living in homes with poor feasibility of repair ratings.

DATA

Data for this study were obtained from a sample of 1,624 households, selected by a random block sampling technique, from 68 rural counties in Tennessee. For a county to be included in the study, at least 60 percent of its population had to be classified as rural according to the 1970 Census. All urban areas with populations over 2,500, public lands, and uninhabitable areas were excluded from the sample areas for each county in the survey. Data were obtained through personal interview using a prestructured questionnaire during 1972. Income data were obtained for 1971. Homes with an estimated value of $17,500 or over were excluded from the study.

Building, lot, water, and waste facilities costs were estimated for 1972 by consulting with Farmers Home Administration personnel at the state office and were adjusted to 1971 and 1976 using construction cost indexes.[2]

LOAN AVAILABILITY

Many individuals have inadequate knowledge concerning resources available to them for acquiring adequate housing. Some of these individuals may still be unable to acquire loans even if they were knowledgeable. Each household head was asked where he could borrow funds to finance a new home. Listed in Table 1 are different lending institutions and the number and percent of household heads who perceived that they would be able to borrow at each. Almost half (47 percent) of the household heads reported that they thought they would be unable to obtain loans offered by present lending institutions.

[2]The Boeckh index for residences was used to make the adjustment. **Survey of Current Business**, Department of Commerce, Bureau of Economic Analysis, July, 1977, pp. 5-10.

Table 1. Lending institutions from which rural residents perceived they could obtain home financing, Tennessee, 1972

Lending institutions	Household heads Number	Percent
Farmers Home Administration	308	19
Federal Land Bank	22	2
Production Credit Association	17	1
Savings and Loan Association	74	5
Federal Housing Authority	7	0*
Commercial banks	340	21
Other	76	5
UNABLE TO BORROW MONEY	780	47
Total	1,624	100

*Less than 0.5 percent.

The Farmers Home Administration is the primary lender for rural home loans, and the only lender which makes interest credit loans. Other important lenders are commercial banks, saving and loan associations, and in recent years the Federal Land Bank and Production Credit Associations.

Many housing authorities believe that low interest or interest credit loans could be used to help alleviate substandard housing conditions in rural areas. Even though these low interest loans would not place standard housing within the reach of all low income rural families, they would benefit many individuals. Low interest loans could be extended to qualifying rural Tennesseans for the purpose of building minimum standard low cost houses. By extending low interest housing loans to rural families, the effect would be subsidization of incomes. An institution or agency would be needed to administer and facilitate the delivery of financing to appropriate families.

RURAL HOME LOANS

The Farmers Home Administration or similar agency could control and administer the flow of funds from a subsidizing institution to low income rural residents interested in borrowing to build modest cost homes. The agency could be responsible for establishing and administering regulations for making these loans. At the present time the Farmers Home Administration operates under a set of regulations which would be ideal for adaptation to new provisions. These existing regulations, along with family income, influence whether a family is eligible and whether the loan extended is full repayment or interest credit.

Full Repayment Loans

The lending agency could extend full repayment loans to low income rural residents who are capable of paying for the full cost of housing but with a maximum annual income determined by current guidelines. Interest rates for new loans change from time to time depending on the money market.

To qualify for a full repayment loan, rural residents would need to meet certain criteria. The family receiving the loan would need to earn sufficient income to pay the principal plus interest. Full repayment loans would be extended only to those families who are unable to obtain home financing at reasonable rates and terms from private sources. The house financed would be located in the countryside or in a rural town. In addition, the head of the family receiving the loan would need a good credit reference.

Assume that a low income rural family spend no more than 20 percent of its annual adjusted income on housing each year for interest, principal, taxes, and insurance. Define the family's annual adjusted income to be its gross income minus 5 percent minus $300 for each child in the household less than 18 years of age. This adjusted income figure is then multiplied by 20 percent in order to arrive at the amount of family income allocated for interest, principal, taxes, and insurance.

The procedure to be used in granting full repayment loans may be illustrated as follows: suppose that a family of four, which includes two children under 18 years of age, receives an assumed income of $9,500 per year. Assume further that the lending institution extends the family a full repayment housing loan at an interest rate of 8 percent for a 33-year repayment period. Shown in Example One are the computations for a family of four receiving $9,500 income. The lending agency could extend this particular family a full repayment loan on a rural home with annual costs of no more than $1,685 per year.

Example One

$9,500	Annual income for a family of four
− 475	Deduct 5 percent of annual income
$9,025	
− 600	Deduct $300 for each child less than 18 years of age
$8,425	Adjusted family income
× 0.20	
$1,685	The amount the family could afford to spend on housing per year for interest, principal, taxes, and insurance.

Interest Credit Loans

The lending agency would extend interest credit loans to those low income rural residents who could not afford to pay for the full cost of housing on present incomes. The interest rate paid on interest credit loans would depend on family size and income. The interest rate charged on these loans would range down to a minimum of 1 percent for a 33-year repayment period.

To qualify for an interest credit loan, low income rural residents would meet all requirements for full repayment loans; however, there would be a reduced maximum income that a rural family can earn per year and qualify for an interest credit loan. At the time of the survey, this maximum family income allowable was assumed to be \$8,500.[3]

The procedure for interest credit housing loans for a family of four with two children under 18 years of age may best be understood by observing Example Two. The family would be unable to qualify for a full repayment loan because costs for such a house would be \$1,131 per year. This low income family could receive a loan subsidized \$585 per year at an interest rate of 1 percent, thereby allowing the family to purchase the house for \$546 per year.

Example Two

\$3,505	Annual income for a family of four
− 175	Deduct 5 percent
\$3,330	
− 600	Deduct \$300 for each child less than 18 years of age
\$2,730	Adjusted family income
X 0.20	
\$ 546	The amount the family could afford to spend on housing per year
1,131	Annual costs for the house at 8 percent interest with a 33-year repayment period including taxes and insurance
− 546	The amount the family could afford to pay on housing per year
\$ 585	Subsidy per year

Welfare Housing

Some families have incomes so low that they cannot qualify for the interest credit loans at even the lowest interest rate of 1 percent. Upgrading the quality of housing in which they live would require direct gifts, grants, or other welfare type contributions.

[3] This amount could change from time to time when conditions warrant such an administrative ruling.

The family discussed in Example One received adequate income to finance a new home at 8 percent interest and was granted a full repayment loan. The family discussed in Example Two received adequate income to finance a new home at 1 percent interest and was granted a 1 percent interest credit loan. Families receiving incomes adequate to finance new homes at interest rates between 1 percent and 8 percent would also be granted interest credit loans at effective interest rates consistent with family income. Rural families whose incomes are inadequate to even qualify for interest credit loans would need assistance through welfare housing of some nature.

COST OF MINIMUM STANDARD NEW BRICK VENEER HOUSING

The total cost of a home consists of the building cost, plus the cost of the homesite, including the cost of water and waste facilities. Estimated home costs for different size families are shown in Table 2. For simplication, the building cost of each size house was obtained by multiplying the square footage of the houses by the estimated cost per square foot. Also included in Table 2 are the size of families and the minimum amount of living space required for each.[4] The estimated cost per square foot for the construction of a brick veneer home in rural Tennessee was $10.02 (1971).[5] By multiplying this cost figure by the minimum square feet of living space required for each size family, the building cost of houses was obtained. The estimated cost of a homesite in rural Tennessee was $1,822 (1971).[6] Structure and homesite costs were added in order to arrive at the total cost of the different size homes excluding interest.

ANNUAL REPAYMENT

The annual costs[7] of each size home was calculated for a 33-

[4] The minimum amount of living space required for different size rural families was obtained from Farmers Home Administration, Nashville, Tennessee.

[5] An estimated 1972 cost of $11 per square foot for the construction of a minimum standard brick veneer home in rural Tennessee was obtained from the Farmers Home Administration, Nashville, Tennessee. This cost per square foot was adjusted to 1971 and 1976 by using the Boeckh index referenced in footnote 2.

[6] An estimated 1972 cost of $2,000 for a homesite including water and waste facilities in rural Tennessee was obtained from the Farmers Home Administration, Nashville, Tennessee. This cost was adjusted to 1971 and 1976 by using the Boeckh index.

[7] Annual costs include interest, principal, property taxes, and insurance. Property taxes and insurance were assumed to be $70 plus 7 cents per square foot for 1971 and were assumed to be $100 plus 10 cents per square foot for 1976.

Table 2. Estimated construction costs[a] of various size brick veneer homes in rural areas of Tennessee, 1971 and 1976

Family size	Minimum amount of living space required for the families	1971				1976			
		Cost per square foot	Structure cost	Cost of homesites including water and waste facilities	Cost of homes excluding interest	Cost per square foot	Structure cost	Cost of homesites including water and waste facilities	Cost of homes excluding interest
	--sq. ft.--	---dollars---							
One person	480	10.02	4,810	1,822	6,631	14.30	6,864	2,601	9,465
A couple	672	10.02	6,733	1,822	8,555	14.30	9,610	2,601	12,210
Family with 1 child	864	10.02	8,657	1,822	10,479	14.30	12,355	2,601	14,956
Family with 2-4 children	960	10.02	9,619	1,822	11,441	14.30	13.728	2,601	16,329
Family with 5-6 children	1,056	10.02	10,581	1,822	12,403	14.30	15,101	2,601	17,702
Family with 7 or more children	1,152	10.02	11,543	1,822	13,365	14.30	16,474	2,601	19,074

[a]The estimates for the structure, homesite, and cost of homes excluding interest were rounded to the nearest dollar after computations for reporting in the table.

year repayment period at an interest rate of 8 percent and at 1 percent, Table 3. Any family able to finance a new home at or above 8 percent interest was considered capable of paying the full cost of minimum standard housing and should qualify for a full repayment housing loan. Families unable to finance a new home at an interest rate of 1 percent were assumed to be subsidized for the full cost of the home. For example, in 1971 a couple would pay $860 annually to purchase a new home at an interest rate of 8 percent and $423 annually to purchase a new home at an interest rate of 1 percent. A couple able to pay $860 or more annually for a home should be able to qualify for a full repayment housing loan. A couple able to pay from $423 to $860 annually could qualify for an interest credit housing loan, whereas under the assumptions of this study a couple unable to pay $423 annually would be subsidized for the full cost of housing.

Table 3. Estimated construction and annual costs[a] of various size brick veneer homes in rural areas of Tennessee, 1971 and 1976

Family size	Minimum amount of living space required for the families	1971			1976		
		Estimated cost of homes	Annual cost 8%, 33 years	Annual cost 1%, 33 years	Estimated cost of homes	Annual cost 8%, 33 years	Annual cost 1%, 33 years
	-- sq. feet --	dollars					
One person	480	6,631	679	340	9,465	970	486
A couple	672	8,555	860	423	12,210	1,228	603
Family with 1 child	864	10,479	1,042	505	14,956	1,485	721
Family with 2-4 children	960	11,441	1,131	546	16,329	1,614	779
Family with 5-6 children	1,056	12,403	1,221	587	17,702	1,743	838
Family with 7 or more children	1,152	13,365	1,311	628	19,074	1,872	897

[a]Annual costs include interest, principal, property taxes, and insurance. Property taxes and insurance were assumed to be $70 plus 7 cents per square foot for 1971 and were assumed to be $100 plus 10 cents per square foot for 1976. The estimates were rounded to the nearest dollar after computations for reporting in the table.

The incomes families would need to receive annually in order to purchase minimum standard new homes are listed in Table 4. To re-emphasize, families whose annual incomes are high enough to finance new homes at interest rates of 8 percent and higher were considered capable of paying the full cost of minimum standard housing and should be able to qualify for a full repayment housing

Table 4. Estimated annual income required[a] to purchase various size minimum standard brick veneer homes in rural areas of Tennessee at 8 percent and 1 percent interest rates with a 33-year repayment period, 1971 and 1976

Family size	1971 Annual income required to purchase homes		1976 Annual income required to purchase homes	
	8%, 33 years	1%, 33 years	8%, 33 years	1%, 33 years
	dollars			
One person	3,574	1,789	5,105	2,558
A couple	4,526	2,226	6,463	3,174
Family with 1 child	5,800	2,974	8,132	4,111
Family with 2 children	6,584	3,505	9,126	4,732
Family with 3 children	6,900	3,821	9,442	5,047
Family with 4 children	7,216	4,137	9,758	5,363
Family with 5 children	8,005	4,668	10,753	5,989
Family with 6 children	8,321	4,984	11,068	6,305
Family with 7 or more children	9,111	5,516	12,063	6,932

[a]The estimates were rounded to the nearest dollar after computations for reporting in the table.

loan. Families whose annual incomes are adequate to finance new homes at interest rates of 1 percent up to 8 percent could qualify for an interest credit housing loan and under the assumptions of this study families whose incomes are inadequate to finance new homes at an interest rate of 1 percent would be subsidized for the full cost of housing. For example, in 1976 a couple needed to receive $6,463 income annually in order to have financed a new home at an interest rate of 8 percent or $3,174 income annually in order to have financed a new home at an interest rate of 1 percent. A couple receiving $6,463 income or more annually would qualify for a full repayment loan. A couple receiving $3,174—$6,463 income annually would qualify for an interest credit housing loan and a couple receiving less than $3,174 income annually would be subsidized for the full cost of housing.

FAMILY CLASSIFICATION

Families in the survey were classified according to family income and feasibility of dwelling repair ratings, Table 5. In addition, those families occupying dwellings with poor feasibility of repair ratings were classified according to family income and size, Appendix Tables 1 and 2. The families occupying dwellings with poor feasibility of repair ratings were further classified into three groups. These three groups of families are referred to as no subsidy, partial subsidy,

Table 5. Classification of rural Tennessee homes according to 1971 family income and 1972 feasibility of dwelling repair ratings

1971 Family income	1972 feasibility of dwelling repair ratings[a] High	Moderate	Poor	Total	Percent
	----------------number	----------------			
None	3	4	3	10	1
Less than $1,000	7	30	40	77	6
$1,000–$1,999	29	104	111	244	20
$2,000–$3,999	58	146	71	275	24
$4,000–$5,999	96	84	33	213	18
$6,000–$7,999	80	56	8	144	12
$8,000–$9,999	65	58	6	129	11
$10,000–$14,999	49	26	2	77	6
$15,000 or more	18	6	0	24	2
Total number	405	514	274	1,193	
Percent	35	43	22		100

[a]The feasibility of dwelling repair ratings was assigned by the field enumerators according to the general condition of the entire structure.

and full subsidy. The purpose of dividing the families into the three groups was to identify those families needing financial assistance in purchasing a home.

The no subsidy group consists of those families concentrated in the higher income brackets. Because of their income levels, these families should be able to finance new homes without a subsidy and are excluded from subsidy considerations in this study. Through the use of full repayment loans, these families should be able to secure adequate housing.[8]

The partial subsidy group consists of those families who receive moderate levels of income. Due to moderate incomes, these families are unable to pay for the full cost of housing. Extensive use of subsidy programs is required in order to place adequate housing within the reach of this group. If interest credit housing loans are granted to families in the partial subsidy group, they should be able to build new homes because the overall cost involved would be divided between the subsidizing agency and homeowner. An evaluation of the partial subsidy group was undertaken to determine the cost of housing to be paid by a subsidy and the cost to be paid by the families.

The full subsidy group consists of those families concentrated in the lower income brackets. Household heads in this group are

[8]There were 274 dwellings classified with a poor feasibility of repair and 20 (7 percent) of these dwellings were occupied by families with incomes sufficiently high to acquire minimum standard new housing.

usually underemployed, unemployed, retired, or disabled. An unusually large percentage of the family's income must be spent on food and clothing leaving small amounts for housing. As a result, families in the full subsidy group would be financially unable to purchase new homes even with the assistance of an interest credit housing loan. One way to provide adequate housing for these families would be in the form of grants.

SUBSIDY ESTIMATION

Twenty-two percent of the families in the survey occupied homes classified in the poor feasibility of repair category. Houses assigned a high and moderate feasibility of repair ratings were considered to be in good to average condition. Families would not be encouraged to abandon these dwellings. Only the families who occupied houses assigned a poor feasibility of repair rating were considered for housing subsidy.

The amount of subsidy needed to provide minimum standard new brick veneer housing depends upon family income, family size, number of families needing subsidy, and the cost of housing including lot, water, and waste disposal facilities. In this study family income was obtained for 1971 while data for the other three variables were obtained for 1972. In adjusting 1971 income to 1976 income the index for total personal income was used.[9] The costs of structure and lot including water and waste disposal facilities were adjusted from 1972 to 1971 and 1976 by using the Boeckh cost indexes for small residential construction.[10] The numbers of families needing subsidy in 1971 and 1976 were estimated by assuming a linear relationship between 1969 and 1976.[11] Family size was assumed to remain constant for all the years for converting the study data to aggregate data for rural Tennessee. It was assumed that families were evenly distributed within each income category of the study data and the families were proportioned accordingly respective to housing cost and income needed to purchase such housing. Based on these assumptions, subsidy requirements were estimated.

[9] **Federal Reserve Bulletin,** Board of Governors of the Federal Reserve System, Washington, D. C., No. 1, Vol. 63, January, 1977, p. A46.

[10] **Survey of Current Business,** Bureau of Economic Analysis, U.S. Department of Commerce, No. 7, Vol. 57, July, 1977, pp. 5-10.

[11] Population data for 1969 were taken from **Characteristics of the Population,** 1970 U. S. Census, Tennessee, Vol. 1, Part 44, pp. 44-44 and 44-45; and 1975 population data were taken from **Population Estimates and Projections,** U.S. Department of Commerce, Bureau of the Census, Series P-25, No. 690, issued May, 1977, Table 1, pp. 9-17.

AMOUNT OF SUBSIDY

The amount of subsidy required to alleviate substandard housing conditions within the partial subsidy group was estimated based on family income, family size, and the loan rules of this study. The total annual subsidy for this partial subsidy group was estimated to be $19,516 for 1971 and $38,549 for 1976, Table 6.

Families in the full subsidy group must be subsidized for the full cost of housing because their incomes were inadequate to finance minimum standard housing even with the assistance of a 1 percent interest credit loan. It would require an estimated total of $189,245 per year subsidy for 1971 and $228,262 for 1976 to provide the families in the full subsidy group with minimum standard low cost new housing, Table 6.

For both groups it would require an estimated annual subsidy of $208,761 for 1971 and $266,811 for 1976 to provide new homes for those families who occupy substandard housing and receive inadequate income to purchase minimum standard housing. The survey included 1,624 households, but data on the condition of dwellings and incomes were obtained on 1,193. The 1,193 households represent .371883 percent of the total number households in rural Tennessee (320,800).[12] Based on this sample, it would require an estimated annual subsidy of $56 million for 1971 and $72 million for 1976 to provide new homes for those families in rural Tennessee who occupy substandard housing and receive inadequate income to purchase minimum standard housing. The annual subsidy could be reduced by providing more adequate or new housing for those families at higher income levels thereby permitting the movement of lower income level families into the vacated housing.

[12] Computations from the 1970 U. S. Census reveal that there were 320,800 households in rural Tennessee.

Table 6. **Estimated annual subsidy to provide minimum standard housing for families requiring full subsidy and partial subsidy, rural Tennessee residents, 1971 and 1976**

Family size	Family income[a]	Families[b]	Average annual subsidy per family[c]	Total annual subsidy
	-dollars-	-number-	-----------dollars	------------
Full subsidy, 1971				
1	< 1,789	33.53	679	22,767
2	< 2,226	60.37	860	51,918
3	< 2,974	26.39	1,042	27,498
4	< 3,505	20.53	1,131	23,219
5	< 3,821	18.93	1,131	21,410
6	< 4,137	14.07	1,131	15,913
7	< 4,668	9.34	1,221	11,404
8	< 4,984	3.49	1,221	4,261
9	< 5,516	8.28	1,311	10,855
Total		194.93		189,245
Average			971	
Partial subsidy, 1971				
1	1,789–3,574	7.044	281	1,980
2	2,226–4,526	19.419	260	5,051
3	2,974–5,800	13.39	290	3,888
4	3,505–6,584	10.76	349	3,753
5	3,821–6,900	4.52	383	1,729
6	4,137–7,216	.93	408	379
7	4,668–8,005	2.66	508	1,351
8	4,984–8,321	1.51	348	525
9	5,516–9,111	1.72	500	860
Total		61.953		19,516
Average			315	
TOTAL, 1971				208,761
Full subsidy, 1976				
1	< 2,558	31.53	970	30,584
2	< 3,174	46.71	1,228	57,360
3	< 4,111	24.60	1,485	36,531
4	< 4,732	18.26	1,614	29,472
5	< 5,047	13.63	1,614	21,999
6	< 5,363	12.20	1,614	19,691
7	< 5,989	7.70	1,743	13,421
8	< 6,305	3.07	1,743	5,351
9	< 6,932	7.40	1,872	13,853
Total		165.10		228,262
Average			1,383	

Table 6. Continued . . .

Family size	Family income[a]	Families[b]	Average annual subsidy per family[c]	Total annual subsidy
	-dollars-	-number-	------------dollars	------------
Partial subsidy, 1976				
1	2,558– 5,105	7.07	246	1,739
2	3,174– 6,463	35.29	404	14,241
3	4,111– 8,132	20.47	330	6,755
4	4,732– 9,126	11.63	433	5,032
5	5,047– 9,442	8.95	498	4,459
6	5,363– 9,758	2.75	580	1,594
7	5,989–10,753	4.28	535	2,288
8	6,305–11,068	1.92	470	902
9	6,932–12,063	2.08	740	1,539
Total		94.44		38,549
Average			408	
TOTAL, 1976				266,810

[a]Families with incomes specified in this column corresponding to each respective family size are unable to make full payments for housing under the Farmers Home Administration rules and regulations.

[b]Fractional families were used as the adjusted sample representing a portion of the population. Additional digits were used in the subsidy calculations.

[c]The subsidy was expressed to the nearest cent to reduce the multiplicative error when computing the total annual subsidy.

SUMMARY

For many rural families, a large gap exists between their incomes and the cost of adequate housing. Many of these families will continue living in low quality houses until their relative incomes increase or lower cost means are found for providing housing for them.

Almost half of the household heads reported that they thought they would be unable to obtain loans offered by present lending institutions.

Families in the survey were classified, according to family income and feasibility of dwelling repair ratings. The families were classified further according to family income and family size for those families occupying dwellings with poor feasibility of repair ratings. Based on this information along with housing costs, debt repayment, and subsidization guidelines, subsidy requirements were estimated. It was estimated that an annual subsidy of $56 million for 1971 and $72 million for 1976 would be necessary to provide new homes for those families who occupied substandard housing and received inadequate income to purchase minimum standard housing in rural Tennessee with new homes.

Appendix Table 1. Group classification according to 1971 family income and size of families occupying housing with poor feasibility of repair ratings, rural Tennessee residents, 1972

Family income	Family Size One	Two	Three	Four	Five	Six	Seven	Eight	Nine/more	Totals
					number of families[a]					
None	0	1	1	0	0	1	0	0	0	3
Less than 1,000	13	11	7	6	3	0	0	0	0	40
1,000-1,999	20.53 < $1,789 > $1,789 5.47	46	14	7	5	7	3	0	3	111
						Full Subsidy				
2,000-3,999	1.57 <$3,574 >$3,574 .43	2.37 <$2,226 >$2,226 18.63	4.39 <$2,974 >$2,974 4.61	7.53 <$3,505 >$3,505 2.47	10.93 <$3,821 >$3,821 1.07	6	5	3	3	71
				Partial Subsidy						
4,000-5,999	0	.79 < $4,526 > $4,526 2.21	9 < $5,800 > $5,800 1	8	3	.07 <$4,137 >$4,137 .93	1.34 < $4,668 > $4,668 2.66	.49 <$4,984 >$4,984 .51	2.28 <$5,516 >$5,516 .72	33
	No Subsidy									
6,000-7,999	0	0	4	.29 <$6,584 >$6,584 .71	.45 <$6,900 >$6,900 .55	0 < $7,216 >$7,216 0	0	1	1	8
8,000-9,999	1	3	1	0	0	1	0 <$8,005 >$8,005 0	0 <$8,321 >$8,321 0	0 <$9,111 >$9,111 0	6
10,000-14,999	0	0	1	1	0	0	0	0	0	2
15,000 or more	0	0	0	0	0	0	0	0	0	0
Totals	42	85	47	33	24	16	12	5	10	274

[a]Fractional families were used as the adjusted sample representing a portion of the population. Additional digits were used in the subsidy calculations.

Appendix Table 2. Group classification according to family income adjusted to 1976 basis and size of families occupying housing with poor feasibility of repair ratings, rural Tennessee residents, 1972

Family income	One	Two	Three	Four	Five	Six	Seven	Eight	Nine/more	Totals
	Family Size									
	number of families[a]									
None	0	1	1	0	0	1	0	0	0	3
Less than 1,000	8.10	6.86	4.86	3.74	1.87	0	0	0	0	25.43
1,000-1,999	21.84	15.41	6.09	3.99	1.75	1.73	.74	0	.74	52.27
	1.59	23.44			**Full Subsidy**					
	<$2,558	<$3,174								
2,000-3,999			12.27	8.41	7.40	6.79	3.49	.74	3.00	87.74
	>$2,558	>$3,174								
	4.12	16.47								
	2.95		.38	2.12	2.61	2.68	3.47			
	<$5,105		<$4,111	<$4,732	<$5,047	<$5,363	<$5,989			
4,000-5,999		18.82						2.26	2.26	53.65
	>$5,105		>$4,111	>$4,732	>$5,047	>$5,363	>$5,989			
	2.39		.64	3.67	2.37	1.25	.02			
		0	**Partial Subsidy**					.07	1.4	
		<$6,463						<$6,305	<$6,932	
6,000-7,999	0		14	5.24	5.48	1.05	2.24			31.52
		>$6,463						>$6,305	>$6,932	
		0						.42	1.6	
			.07	2.72	1.1	.45				
			<$8,132	<$9,126	<$9,442	<$9,758				
8,000-9,999	1	3					2.02	1.5	.12	15.51
			>$8,132	>$9,126	>$9,442	>$9,758				
			.93	2.11	.42	.06				
	No Subsidy						0	0	.36	
							<$10,753	<$11,068	<$12,063	
10,000-14,999	0	0	1	1	1	1				4.88
							>$10,753	>$11,068	>$12,063	
							0	0	.52	
15,000 or more	0	0	0	0	0	0	0	0	0	0
Totals	42	85	47	33	24	16	12	5	10	274

[a]Fractional families were used as the adjusted sample representing a portion of the population. Additional digits were used in the subsidy calculations.

(1.8M/9-78)