

THE IMPACT OF HIGH RENT EXPENDITURES ON OTHER CONSUMER EXPENDITURES

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ABSTRACT

Housing and other expenditures of renter households in the 1973 U.S. Bureau of Labor Statistics Survey of Consumer Expenditures were analyzed to ascertain the impact of high rent expenditures on other consumer expenditures. The impact of high health care and transportation expenditures on spending was also examined. Multiple regressions of expenditures on income, family size, age, education and occupation were run. The "predicted" expenditure levels obtained show little evidence of household tradeoffs among expenditure categories when analyzed by variations in income, family size and age. Regressions of expenditures on predicted expenditures, and on residuals of housing, health care and transportation expenditures also reveal little tradeoff among expenditure categories in response to high levels of housing, health care or transportation expenditures. Households seem to deal with high levels of spending in these areas by dissaving rather than cutting back in other spending areas.

For over 100 years, the rule of thumb for family housing expenditures was that no more than 25 percent of income should be spent on housing (Feins and Lane, 1981). This rule was originally based on observations of renters by Ernst Engel, who stated that the rent-income ratio was constant over different income levels (Feins and Lane, 1981). Kengott found that laborers in Lowell, Massachusetts in 1875 spent a week's wages for a month's rent (Feins and Lane, 1981). In contrast, Herman Schwabe in the 1860's stated the principal known as Schwabe's Law: "As income rises, housing expenditures increase at a lower rate." (Feins and Lane, 1981, p. 9). This means that the percentage of income devoted to housing is lower for higher income families. Later, mortgage lenders used the 25 percent rule (Feins and Lane, 1981). Government rental assistance programs often have used 25 percent as the appropriate percentage of income for low-income households.

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Morris and Winter (1978) suggest that the level of housing expenditures reflects the attempt by a family to meet quality norms, although obviously at lower income levels these norms may not be attainable without assistance. For instance, David (1962) finds that low-income renters with larger families sacrificed quality in an attempt to obtain more adequate space.

A study of recent homebuyers in Lincoln, Nebraska found that half said they were making some sacrifice in food spending as a result of buying their homes (Hinkle and Combs, 1983). About 21 percent said they were decreasing medical expenditures, 52 percent were decreasing transportation expenditures and 59 percent were decreasing clothing expenditures. About 62 percent reported sacrificing vacations because of the home purchase. Only 2.7 percent reported making a large sacrifice in food spending, whereas 13.8 percent reported making a large sacrifice in vacations (Hinkle and Combs, 1983).

The purpose of this paper is to ascertain the impact of high housing expenses on other household expenditures. If a household is spending a higher-than-average proportion of income on housing, it must be spending a lower-than-average proportion of income on some other consumption categories, or saving less. To simplify the analysis, only renters are examined in this article. (For an analysis of home owners, see Hanna [1985].) Renters should have more flexibility in adjusting their housing expenditures, although sometimes lenders may allow a longer period of nonpayment of the mortgage than typical landlords will allow nonpayment of rent.

Economic theory would suggest that expenditures on a specific good depend on consumer preferences, prices, and income. Some people spend more than others on a product because they have stronger preferences for that item. For housing, the prevalence of social norms limits the variability in expenditure levels resulting from variation in preferences. If Schwabe's law holds, low-income households spend a higher proportion of income on housing than high-income households. This is a plausible relationship. Because there are minimum standards needed for survival and mandated by society, low-income households must spend a high proportion of income on housing.

With the permanent income theory (Friedman, 1957), a household will try to maintain housing and other expenditures at a constant proportion of expected lifetime income, despite transitory changes in current income. Households with temporarily low current income will spend a relatively high proportion of current income on current consumption. If the permanent income theory is correct, relatively high housing expenditures will not necessarily have an impact on a household's other consumer expenditures.

Another possible explanation for relatively high housing expenditures is a high price of housing. For most goods, prices at one point in time do not vary substantially. One would not try to explain differences in consumption of oranges on a particular date in one area by differences in price. However, the cost of housing may vary considerably between long-term residents and new residents of an area. This can be true for owner-occupied housing. Two

families occupying identical houses may have substantially different monthly costs depending on when they purchased their homes and what the mortgage interest rate was when they bought their homes. It may be true to a lesser extent for rental housing. Some rental units have long-term leases and some cities have rent control laws. It may be true even without long-term leases and rent control laws. Landlords may be less likely to impose rent increases on reliable long-term tenants. People who have just moved to an area often have difficulty in finding rental bargains.

Regardless of the reason for variation in the proportion of income devoted to housing, one would expect that households with high proportions of income devoted to housing would either devote a lower proportion of income to other consumption categories, or save a lower proportion of income. The pattern of sacrifices in the other categories has implications for public policies on housing assistance, land use and rent control, as well as financial counseling.

THE MODEL

In this paper, the concept of excess housing expenditure is operationalized as the amount above the mean expenditure level of households with similar income and household characteristics. A regression of housing expenditure on demographic variables is run, and the regression coefficients are used to calculate "predicted" value of expenditure for each sample household. Only income and other household characteristics are included in the regression, as geographic variables may influence housing expenditures through price, rather than income variables. The difference between actual and predicted housing expenditure is the residual. It is hypothesized that other expenditures may be influenced by the residuals.

For each consumption expenditure category, a regression is run on demographic variables, so that the "predicted" expenditure level for households can be obtained. An estimate of the impact of the housing residual on expenditure for food is made by regressing actual food expenditures on predicted food expenditure and linear and quadratic variables for positive and negative housing residuals. Similar regressions are run for other consumption categories.

It is assumed that in the short run, housing expenditures are a constraint with which a household must deal. There may also be a constraint on transportation expenditures for workers who choose to live far from their jobs in order to reduce housing costs. The same procedure used to define excess housing costs is also used to define excess transportation costs. Health care costs may also pose a constraint, so excess health care costs are defined in the same way.

METHODS

Expenditure Categories

Expenditure categories are defined broadly to ensure that few households had zero expenditures, so ordinary least squares regressions would not be biased. The food category includes all food purchases, including food away from home. The housing category

includes rent plus insurance, property taxes, fuel and other utilities, repairs, improvements, furnishings and equipment. One advantage of using a relatively broad category for housing is that comparability problems are reduced. For instance, one family may rent a house which includes major appliances and some furniture, while another may rent a house with nothing in it. Some rental units include utilities in the rent, while others do not.

Transportation includes expenditures for all forms of transportation. Health care includes all medical insurance premiums, plus all expenditures for doctors, dentists, hospitals, medicines, etc. Clothing is combined with jewelry into one category. All other consumption expenditures are lumped together. Important components of the Other category include alcohol, tobacco, insurance, gifts, vacations, recreation and education.

The Sample

The data for this analysis are from the public use tape file from the expenditure data collected in the quarterly interview component of the 1972-73 Consumer Expenditure Survey of the U.S. Bureau of Labor Statistics (BLS). The same procedures can be applied to the 1980-81 data tapes when they become available for researchers outside of the BLS. Because rents, transportation costs and health care costs all increased substantially between 1973 and 1981, a comparison would be of great interest. This paper will provide benchmark information, facilitating comparison with the 1981-1982 BLS data to provide information on the changing role of housing, transportation and health care expenditures in family budgets.

For this paper, only the 1973 portion of the sample is included. It was more recent and, therefore, more relevant to current issues. Only households renting their homes all year are included. There are 3,690 renters of the 10,106 households in the 1973 interview file.

Treatment of Households with Zero Income

One difficult issue in analyzing expenditures is treatment of households with zero or negative incomes. These households often have their own businesses and have losses in some years. They are different from unemployed and poverty-level households, who typically have some income from government programs. In this sample, 189 of the renter households had zero or negative incomes. Their expenditures were similar to those of the households with positive incomes. The mean total expenditure level for households with zero or negative incomes (\$8,150) is significantly higher than the mean for households with positive incomes (\$7,273). It seemed appropriate to exclude the zero and negative income households from this analysis, as inclusion in the regressions would obfuscate the relationships between income and expenditures.

RESULTS

Descriptive Statistics

The means, standard deviations, the fifth percentiles, the medians and the 95th percentiles for six expenditure categories are presented for renters with positive incomes (Table 1). The median percentage of income devoted to housing is 28 percent, but clearly rents are a burden for some households, with the 95th percentile being 122 percent of income. Twenty percent of renters spent 50 percent or more of income on housing.

Table 1. Means and Standard Deviations of Expenditures for Renters with Household Income Greater than Zero, 1973 U.S. BLS Survey of Consumer Expenditures (N=3,496).

Variables	Mean	SD	5th Percentile	Median	95th Percentil
Food	\$1,279	\$1,007	\$95	\$1,060	\$3,160
Housing	2,246	1,547	420	1,940	5,110
Transportation	1,199	1,548	0	670	4,635
Health Care	325	421	0	190	1,030
Clothing, Jewelry	523	590	25	370	1,510
Other Con.	1,704	1,953	75	1,210	4,795
Total	7,276	4,845	1,635	6,320	15,630
Gross Income	8,601	7,683	1,220	7,180	20,500
Food % of Inc.	29%	203	2%	15%	56%
Housing % of Inc.	80%	1,025	7%	28%	122%
Trans. % of Inc.	45%	846	0%	8%	60%
Health % of Inc.	6%	846	0%	3%	16%
Clth. % of Inc.	14%	211	0%	5%	23%
Other % of Inc.	45%	841	2%	17%	57%
Total % of Inc.	219%	2,944	44%	88%	280%

Regressions of Expenditures on Demographic Variables

In order to define the "predicted" expenditure levels for households, stepwise regressions for each expenditure category were run on income, income squared, income cubed, mean family size for the year, family size squared, age of head, age squared, and dummy variables for education and the head's occupation. Only variables significant at the .01 level were entered into the regressions. The dummy variables for retired, service occupations, and unemployed did not enter any of the regressions. The independent variables account for 22 to 44 percent of the variance in the dependent variables (Table 2).

All other things equal, households headed by a blue-collar worker spend \$290 less and households headed by a clerical or sales worker spend \$166 more on housing than households headed by workers with other occupations. The coefficients for the blue-collar variable for transportation and for other consumption total \$404, suggesting that

blue-collar households spend more for these categories. About 72 percent of this extra spending is made up by lower spending on housing. There are no negative coefficients for the clerical/sales variable and the positive coefficients for housing, health care, and clothing and jewelry total to \$359. The self-employed and the professional/managerial variables also have no negative coefficients.

Table 2. Regressions of Expenditures on Demographic Variables,
Renters with Incomes Greater Than Zero, 1973
U.S. BLS Survey of Consumer Expenditures (N=3,226)

Variable	Food	Housing	Transportation	Health Care	Clothing	Other
Income	0.069	0.102	0.153	0.026	0.027	0.180
Inc. Sq.	-4.558E-07		-2.748E-06	-1.257E-03	4.612E-07	
Inc. Cu.		-2.848E-12	1.494E-11		-3.642E-12	-5.528E
Fam. Size	223.895	235.200		84.930	53.262	-76.849
Fam.Size Sq.		-16.709		-8.372		
Age	40.573	-26.397	-12.677	4.584		
Age Sq.	-0.340	-0.225			-0.024	
Ed. 1-9		299.939				-276.260
Ed. 9-11		505.534				
Ed. 12		712.151				
Ed. 13-15		894.582		116.553	73.382	
Ed. > 15		1174.689		88.420	92.611	327.061
Blue Collar		-289.563	191.318			212.204
Self				180.425		739.290
Prof., Mgr.						290.257
Clerical,Sales		165.710		80.628	112.591	
Constant	-737.008	978.019	660.688	-241.785	137.112	249.131
Adj. R Sq	0.406	0.376	0.223	0.225	0.305	0.444

(All variables significant at .01 level.)

Education has a strong impact on housing expenditures. The omitted category is "no education/education reported." The coefficients for each education dummy variable indicate how much spending is for households headed by someone of that educational level relative to households in the no education category. Housing expenditures increase steadily with education of the head of household, with households headed by a college graduate spending \$1,175 more than households headed by a person with no education. This may be a permanent income effect (Friedman, 1957). People with more education tend to have higher lifetime income expectations than people with less education who are at the same level of current income. Only one of the education variables has a negative coefficient. The grade 1-9 variable has a -\$276 impact on other consumption.

For mean values of the independent variables, the income elasticities are: food, .41; housing, .39; transportation, .79; health

care, .75; clothing and jewelry, .57; and other consumption, .90. For a renter household with average characteristics, a decrease in income would produce the smallest percentage decrease in food and housing, a somewhat larger decrease in clothing and jewelry, and larger percentage decreases in health care, transportation, and other consumption.

The effect of income on expenditures is shown in Table 3 for a household with a mean household size of four during the year, a 40-year-old head having a 12th grade education and a blue-collar occupation. Food expenditures increase with income almost linearly over income ranges representing most households, with the rate of increase declining slightly as income increases. Housing expenditures also increase with income in a roughly linear manner. At what was the poverty (low-income) threshold for a family of four in 1973, (\$4,540), (USDC, 1977, p.480) predicted housing expenditures amount to 41 percent of income. Predicted housing expenditures drop to 25 percent of income at an annual income of \$9,500. At \$20,000 income, predicted housing expenditures amount to only 17 percent of income.

Table 3. Predicted Expenditures by Income, for Family of Four, Head Aged 40, Blue Collar, with 12th Grade Education

Income	Food	Housing	Transp.	Health Care	Clothing	Other	Total	Total/Income
\$0	\$790	\$1,398	\$154	\$78	\$205	\$308	\$2,932	---
2,000	925	1,602	450	130	261	667	4,034	202%
4,000	1,057	1,805	725	180	321	1,025	5,113	128%
6,000	1,186	2,008	979	230	383	1,384	6,169	103%
8,000	1,310	2,210	1,213	279	449	1,741	7,203	90%
10,000	1,432	2,412	1,429	327	518	2,097	8,214	82%
12,000	1,549	2,613	1,626	373	590	2,452	9,203	77%
14,000	1,663	2,813	1,805	419	664	2,806	10,170	73%
16,000	1,773	3,013	1,967	464	741	3,157	11,115	69%
18,000	1,880	3,211	2,113	507	820	3,507	12,038	67%
20,000	1,982	3,408	2,244	550	901	3,854	12,939	65%
22,000	2,082	3,604	2,359	592	984	4,198	13,819	63%
24,000	2,177	3,798	2,461	632	1,069	4,540	14,678	61%
26,000	2,269	3,990	2,549	672	1,156	4,878	15,515	60%
28,000	2,357	4,181	2,625	711	1,244	5,213	16,331	58%
30,000	2,442	4,370	2,688	748	1,333	5,544	17,126	57%

Expenditures increase with income for all the expenditure categories, although the proportion of income devoted to each category declines with income. The eighth column of Table 3 is the total of the predicted expenditures for each income level. For a family of four, the predicted expenditures amount to more than income for incomes less than \$6,000, then the proportion decreases below 100 percent as income increases. Low-income households are liquidating assets or borrowing to maintain spending at adequate

levels. At higher income levels, increasing portions of income go to taxes and savings.

Predicted expenditures are also presented by age of head in Table 4, for a four-person family with an annual income of \$8,601 and a head who had a blue-collar job and a 12th grade education. Housing expenditures decrease with age, falling from 29 percent of income at age 20 to 25 percent at age 60, then increase slightly after age 60. Older people are more likely to have resided in an area long enough to find lower cost rental housing, and landlords may not increase rents as much for long-term tenants as they would for new, younger tenants. The total of predicted expenditures falls from 88 percent of income at ages 20 through 35, to 82 percent of income at age 80. The low food expenditures for the younger ages might result from the smaller requirements of very young children, as family size is held constant in Table 4. Predicted transportation expenditures and clothing expenditures decline steadily as age increases. Other consumption does not vary by age.

Table 4. Predicted Expenditures by Age of Head, for Households With \$8,601 Income, Family Size of Four, Head Blue-Collar, With 12th Grade Education.

Age	Food	Housing	Transp.	Health Care	Clothing	Other	Total	Total/ Income
20	\$944	\$2,528	\$1,534	\$202	\$498	\$1,848	\$7,554	88%
25	1,070	2,447	1,470	225	493	1,848	7,553	88%
30	1,180	2,377	1,407	247	486	1,848	7,545	88%
35	1,272	2,318	1,343	270	479	1,848	7,531	88%
40	1,347	2,271	1,280	293	470	1,848	7,509	87%
45	1,406	2,234	1,217	316	459	1,848	7,480	87%
50	1,447	2,209	1,153	339	448	1,848	7,445	87%
55	1,471	2,196	1,090	362	435	1,848	7,403	86%
60	1,478	2,193	1,026	385	422	1,848	7,353	85%
65	1,469	2,202	963	408	407	1,848	7,297	85%
70	1,442	2,222	900	431	391	1,848	7,234	84%
75	1,398	2,254	836	454	373	1,848	7,164	83%
80	1,338	2,296	773	477	355	1,848	7,086	82%

Predicted expenditure by family size for a family with an annual income of \$8,601, with a 40-year-old head who has a blue-collar job and a 12th grade education, are presented in Table 5. Total spending increases with family size, from 82 percent of income for a one-person household, to 107 percent of income for a nine-person household. Large families do not seem to completely compensate for increased need for food by cutting back on other spending. Food expenditure as a proportion of income increases from 13 percent for a one-person household to 34 percent for a nine-person household. Predicted food spending for a family of four (\$1,795) is almost the same as the 1973 U.S. Department of Agriculture low-cost food budget for a family of four with young children (USDA, 1974).

Predicted food spending for a family of six (\$2,243) is about \$450 lower than the USDA low cost food budget.

Table 5. Predicted Expenditures by Family Size, for Family With \$8,601 Income, Head Blue-Collar, Aged 40, With 12th Grade Education.

Family Size	Food	Housing	Transp.	Health Care	Clothing	Other	Total	Total/Income
1	\$1,123	\$2,086	\$1,280	\$234	\$416	\$1,925	\$7,064	82%
2	1,347	2,271	1,280	293	470	1,848	7,509	87%
3	1,571	2,422	1,280	336	523	1,771	7,904	92%
4	1,795	2,541	1,280	363	576	1,694	8,249	96%
5	2,019	2,625	1,280	372	629	1,618	8,544	99%
6	2,243	2,677	1,280	365	683	1,541	8,788	102%
7	2,467	2,695	1,280	341	736	1,464	8,982	104%
8	2,691	2,679	1,280	301	789	1,387	9,127	106%
9	2,914	2,630	1,280	243	842	1,310	9,221	107%

Predicted housing expenditures increase with family size up to a size of seven, then decline slightly. As a proportion of income, housing expenditures increase with family size from 24 to 31 percent. Obviously, large, moderate-income families must accept low quality housing in order to obtain enough space, because they cannot afford both quality and space. The difference in predicted housing spending between a six and a four-person family amounts to only \$11 per month, which would be unlikely to be sufficient to allow a family to find an equal quality dwelling with one or two additional bedrooms.

Analysis of Residuals

Based on the regression coefficients, predicted expenditure levels are calculated for each household, and the residuals (actual minus predicted expenditure) are calculated for housing, transportation and health care expenditures. New variables are calculated as shown below, where "p" refers to positive residuals, "n" refers to negative residuals, and "Sq" refers to the square of the residual.

Excess housing expenditures:

$Dhsp = \text{actual} - \text{predicted housing, if } >0, \text{ else}=0$

$DhspSq = Dhsp \times Dhsp$

Low housing expenditures:

$Dhns = \text{actual} - \text{predicted housing, if } <0, \text{ else}=0$

$DhnsSq = Dhns \times Dhns$

Excess transportation expenditures:

$Dtp = \text{actual} - \text{predicted transportation, if } >0, \text{ else}=0$

$DtpSq = Dtp \times Dtp$

Low transportation expenditures:

$Dtn = \text{actual} - \text{predicted transportation, if } <0, \text{ else}=0$

$DtnSq = Dtn \times Dtn$

Excess Health Care Expenditures:

$Dhlp = \text{actual-predicted health care, if } >0, \text{ else}=0$
 $DhlpSq = Dhlp \times Dhlp$
 Low Health Care Expenditures:
 $Dhln = \text{actual-predicted health care, if } <0, \text{ else}=0$
 $DhlnSq = Dhln \times Dhln$

The main hypothesis, that nonhousing expenditures are influenced by excess expenditures for housing, transportation and health care, is tested with a step-wise regression run for each expenditure on its predicted expenditure and appropriate residual variables defined above. A similar regressions is run for housing as a function of predicted housing and transportation and health care residuals. The results (Table 6) generally contradict the idea that excess housing expenditures are offset by sacrifices in other expenditures.

Table 6. Regressions of Expenditures on Predicted Expenditures and Residuals of Housing, Transportation, and Health Care Expenditures, Renters with Incomes Greater Than Zero, 1973 BLS data.

Variable	Food	Transportation	Health Care	Clothing	Other Consumption	Housing
Predicted Exp.	1.016	1.055	1.060	0.985	1.119	1.058
Dhsp	-0.130		0.036		0.149	
DhspSq	1.477E-5			2.674E-5	2.108E-5	
Dhsn					-0.443	
DhsnSq		-6.237E-5	-1.233E-5	-5.626E-5	-2.440E-4	
Dtp						
DtpSq						
Dtn						0.157
DtnSq			-4.602E-5		-2.453E-4	
Dhlp	0.181					
DhlpSq				4.626E-5		8.957E-4
Dhln		0.727				0.879
DhlnSq					-2.294E-3	
Constant	24.762	49.783	-7.568	5.346	-67.144	33.088
Adj. R Sq.	0.415	0.232	0.243	0.380	0.489	0.389

(All variables significant at the .01 level.)

To illustrate the regression results in Table 6, assume that excess housing expenditures (reflected in the Dhsp and DhspSq variables) equal \$2,000 (5.7 percent of households had excess of \$2,000 or more). That level of excess housing expenditures would be associated with a \$201 decrease in spending for food. This extra spending for food is computed as follows:

The coefficient for Dhsp in the food regressions (-0.130) is multiplied by the assumed excess housing expenditure (\$2,000), for a product of -\$260. The coefficient for DhspSq (1.477E-5, or 0.00001477) is multiplied by \$2,000 squared for a product of \$59. The total effect of an excess housing expenditure

of \$2,000 on food expenditure is -\$201.

The net effect of excess housing expenditures on food spending is negative for all levels of excess housing expenditure up to \$8,802, which is exceeded by less than 0.1 percent of the sample. The maximum impact on food spending is at a \$4,401 level of excess housing expenditure, which produces a decrease of \$286 in predicted food spending.

Excess housing expenditures have no impact on transportation expenditures. Excess housing expenditures of \$2,000 are associated with health care expenditures being \$72 higher, clothing and jewelry expenditures being \$106 higher, and other consumption being \$382 higher.

Spending less than the predicted amount on housing (Dhsn and DhsnSq) is associated with lower spending for transportation, health care and clothing and jewelry. If housing expenditures are \$1,000 lower than predicted, other consumption is \$197 higher, but if housing expenditures are \$2,000 lower than predicted, other consumption is \$90 lower.

Excess transportation expenditures (Dtp and DtpSq) are not significantly associated with any of the expenditures. Lower transportation expenditures (Dtn and DtnSq) are associated with lower spending for health care, other consumption and housing. Spending \$1,000 less than predicted on transportation (15.4 percent had this level or below) is associated with \$46 lower spending on health care, \$244 lower spending on other consumption and \$157 lower spending on housing.

Excess health care expenditures (Dhlp and DhlpSq) are associated with higher spending on food, clothing and jewelry and other consumption. An excess health care expenditure of \$500 (6.5 percent had at least this level) is associated with \$90 more food spending, \$12 more clothing spending and \$22 more housing spending. Lower-than-expected health care expenditures (Dhln and DhlnSq) are associated with lower spending on transportation, housing and other consumption. Spending \$300 less than predicted on health care (10.1 percent had this level or below) is associated with \$218 lower spending on transportation, \$264 lower spending on housing, and \$206 lower spending on other consumption.

DISCUSSION

The expenditure regressions in Table 2 reveal a limited degree of tradeoffs. The income elasticities provide the strongest evidence of sacrifice of other spending to make rent payments. A decrease in income from the mean would result in relatively greater sacrifices in nonhousing spending than in housing. The only sacrifice that might be a concern for public policy is that of health care--the higher income elasticity for health care suggests that renters might limit trips to the dentist in order to make their rent payments.

The residual regressions do not reveal much of a pattern of tradeoffs. There seems to be no tradeoff between housing and transportation despite studies that have shown that housing prices

and site-rents tend to decline with distance from the central business district (Heilbrun, 1981).

The only result that strongly suggests a sacrifice in response to excess spending is the relationship between excess housing expenditure and lower food spending. Even this relationship, although statistically significant, is not substantial, with the sacrifice in food consumption amounting to only ten percent of the excess housing spending for most of the households with excess housing spending.

The overall results indicate a pattern of some households spending at high levels relative to income, and other households spending at low levels relative to income. Most tradeoffs among spending categories appear to have been swamped by the simple phenomenon that some years some households will spend at high levels relative to income. Obviously, many households deal with low current incomes by dissaving: either borrowing or liquidating assets. The elimination from the analysis of households with zero or negative incomes apparently is not sufficient to reduce the impact of households with abnormally low incomes on the analysis.

Analyzing the 1980-81 BLS data may produce very different results, given the large increases in rents and transportation and health care costs between 1973 and 1981. It may be appropriate to use a measure of permanent income rather than current income in predicting consumption expenditures.

Because this study is exploratory, extreme caution should be exercised in drawing conclusions. As a very tentative conclusion, the results cast doubt upon the relevance of the 25-percent-of-income rule for rental assistance programs. There is little evidence of sacrifice in other spending resulting from exceeding what is average for one's income level. With further analysis of more recent data, implications for financial counseling, housing policy, and lending practices might be obtained.

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