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RECENT TRENDS IN HOUSING CONDITIONS AMONG THE URBAN POOR

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ABSTRACT

In this paper we examine the trends in housing conditions among the urban poor over the last decade, relate these trends to the economic environments of the cities, and compare the poor to other income groups. We find that there has been a substantial decrease in "housing independence" -- among the poor, the percentage of family heads who live with their parents has risen, and the percentage of family heads who are also household heads has fallen. In addition, the incidence of homeownership among the poor has decreased, and the incidence of multiple-family-unit households has increased. These same trends also show up among higher-income families, although they are typically smaller in magnitude.

This paper provides little evidence for the popular hypothesis that changes in housing attributes over the last decade are predominantly related to changes in housing markets. Including a variety of economic variables does little to explain the trends in housing circumstances of different income groups.

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I. Introduction

There has been increasing discussion in recent years about housing markets in American cities, much of it focused on the problem of homelessness. Although there is substantial controversy about the causes of homelessness, many analyses suggest that changes in housing availability and housing prices are a major factor.[1] However, while homelessness is clearly a serious public concern, the homeless compose only a small fraction of the low-income population in American cities. If housing has indeed become less obtainable, then even those poor households that have access to shelter might have experienced serious deterioration in their housing conditions.

A number of arguments have been presented as to why low-income housing may have become less obtainable in recent years. On the supply side, it is claimed that the supply of low-cost housing has been lowered by increased arson and abandonment, by the conversion and gentrification of many city areas, and by the decline in government funds for programs that either build or subsidize low-income housing.[2] On the demand side, the higher poverty rates of the 1980s, combined with flat or declining real income among some low-income groups, may have decreased the ability of low-income households to purchase housing.[3] In either case, both of these arguments are consistent with the evidence that the proportion of income spent on housing has been growing, especially among low-

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[1] See for instance Hartman (1986), Freeman and Hall (1987), or Institute of Medicine (1988).

[2] See Dolbeare (1983), Hartman (1986), Institute of Medicine (1988), and Joint Center for Housing Studies (1988).

[3] See U.S. Department of Commerce (1988).

income families.[4]

The purpose of this paper is to examine the trends in housing conditions among the urban poor over the last decade, to compare the poor to other income groups, and to relate these trends to the economic environments of the cities. Specifically, we will try to determine the extent to which changes in various indices of housing quality are due to changes in the economic circumstances of households, and to changes in overall city-wide economic conditions and housing markets, including the availability of government-assisted housing programs.

Section II describes the data used in the paper, Section III presents results, and the final section concludes. Our major findings are: (i) Poor families have become increasingly less likely to be "housing independent" over the past decade. That is, they are more likely to live in households with other family units, with especially large increases in the tendency for children to reside in their parents' household; (ii) Among the urban poor, there is a significant trend towards decreased homeownership; (iii) There is no trend toward increases in the overall size of low income households; decreases in the size of family units have offset the propensity of more family units to live together; (iv) Changes in household income, in city housing markets and economic conditions, and in government housing programs explain some aspects of these trends. But even with these variables controlled for, significant unexplained trends in housing conditions continue to exist. (v) The trends in housing conditions for poor families are also present among near-poor and upper-income families. However, the quantitative magnitude of the trends is smaller for these groups.

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[4] See U.S. Government Accounting Office (1985) and Joint Center for Housing Studies (1988).

In short, during the last decade there has been decreased ownership and decreased housing independence among poor family units. However, these trends are not well explained by overall changes in urban economic environments and they are not limited to low-income households. Apparently, one must look to larger demographic and social changes to explain recent changes in the housing consumption of low-income families.

II. Data

Our strategy for constructing a data set is driven by two fundamental problems. The first is that housing is a multidimensional commodity. There is no single variable that summarizes housing quality. Because of this, we will focus on a set of variables that describes different aspects of housing conditions. This can produce complex results; during a given time period there may be some housing attributes that have deteriorated and others that have simultaneously improved.

The second problem is that the available data are far from ideal for the analysis we want to undertake. In a better world, we would have panel data on urban individuals that included extensive information on their housing situation. In fact, the data sets that track individuals over time (such as the Panel Study of Income Dynamics) ask few questions about housing conditions. Moreover, the number of observations in such data are sufficiently small that one cannot obtain very precise information on low-income housing consumption on a city-by-city basis.

The data set that has historically provided the most extensive information on urban housing conditions is the Annual Housing Survey (AHS), which surveys households in a specific set of cities. Unfortunately, while the AHS was

conducted annually through the 1970s, this practice was discontinued after 1980. One additional AHS was completed in 1983, and this is the last survey currently available. Thus, changes in housing conditions over the 1980s, the very time period with which we are concerned, simply cannot be studied with the AHS.[5] Thus, we do not use the AHS data, although we will refer to a few results from it below.

The data set we utilize is the Current Population Survey (CPS), which is conducted annually on a random sample of the total U.S. population. The CPS is not a longitudinal sample, hence we cannot follow a given family over time. Instead, we choose to aggregate across poor, near-poor, and upper-income family units within cities in each year, and use the resulting city means as our basic unit of observation.[6] Since the CPS sample exceeds 50,000 households, this is large enough to obtain reliable estimates by income group within the 8 largest SMSAs.[7] We collect this information from the CPS across the 11-year period 1977 to 1987, which gives us 88 city-year observations on each housing attribute for each income category.[8]

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[5] An additional problem is that the AHS does not survey the same set of cities each year. It rotates cities in its sample, so that one can make comparisons only across three and four year time periods for a given city. Few cities can be compared across an identical set of years.

[6] We weight observations with the CPS sampling weights. We have estimated the models in this paper using both weighted and unweighted city means. There is no difference in substantive results.

[7] These SMSAs are New York, Los Angeles, Chicago, Philadelphia, Detroit, Washington, D.C., Houston, and Boston. We will use the term SMSA interchangeably with the word city in this paper, and will always be referring to the larger metropolitan area.

[8] The CPS is typically assumed to undercount low-income families, particularly those who are not permanently settled, such as the homeless. While the CPS sample weights attempt to at least partially correct for this problem, our data for poor families may be based on a sample of the most stable among the poor. To the extent that we find deterioration in housing conditions

Before describing the housing attributes we examine, a few terms must be defined carefully. A family consists of a married couple or single parent and all of their unmarried childless children who reside with them. (This includes minor as well as adult children.) An unrelated individual is an individual who does not live with either a spouse or with any unmarried children, and who is not an unmarried child living with parents. We refer to either a family or an unrelated individual as a family unit. A household is composed of all family units that live together in a single dwelling. Thus, households may contain any combination of families and/or single individuals. If a family unit lives alone, then the household is synonymous with the family unit, and the head of the household is also the head of the family unit. However, if multiple family units live together, then the head of the primary family unit is the household head, and the heads of the other family units are family heads but not household heads.[9]

Although we are primarily interested in changes in the housing conditions among poor families and individuals in our eight cities, we may better understand changes in housing conditions among poor family units if we compare them with other income groups. Thus, we look at three groups, Family units are said to be poor if their total income in the previous year was below the

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among this group, it probably underestimates the true nature of the problem.

[9] The head of a family prior to 1980 is the husband or father, if present, and the mother only if no husband is present. After 1980 it is the person designated as head, male or female. The head of the household is defined in the CPS as "the person regarded by the members as the household head." In cases where this definition is unclear, it is the person in whose name housing is owned or rented. The primary family unit in the household is the family unit containing the household head.

relevant official government poverty line[10]; near-poor if their total income in the previous year was between one and two times the relevant poverty line; and upper-income if their total income in the previous year exceeded twice the relevant poverty line.[11] Appendix Table 1 shows the mean number of observations in each of our eight cities for each income group over the 11 year time period.

We turn now to the housing attributes of family units and households. The main problem with the CPS is the relative dearth of data on housing quality. In particular there are no measures of the actual physical size or characteristics of a dwelling (other than whether it is a single or multiple unit dwelling.)[12] Thus, we will necessarily focus on a non-complete set of housing quality indicators. The five housing attributes which we use as measures of housing conditions are:

(1) The number of family units per household. When multiple family units share living quarters one might expect greater stress, more crowding, and less independence for each family unit. This includes such situations as married children remaining with their parents, elderly parents living with their children's family, and unrelated roommates living together. For each income group, this measure is based on the number of family units per household in the

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[10] Poverty lines vary with family size and with the age of the family head. Thus, single persons and differently-sized families face different poverty lines.

[11] Note that income category is defined on the basis of the income of the family unit and not the total household. Thus, one may find poor individuals or families living with nonpoor individuals or families in the same household.

[12] There is evidence that physical quality of housing improved between the mid-1970s and early 1980s. Data in the Annual Housing Survey indicates that the percent of households living in "inadequate housing" (defined by a composite measure of plumbing, heating, wiring systems, etc.) decreased among both owners and renters between 1974 and 1983. See Joint Center for Housing Studies (1988).

households which contain family units that fall into the given income category.

(2) The number of persons per household. This is a pure measure of crowding in a household. (In contrast to measure (1) it tells us nothing about the configuration of family units across households.) Of course, it would be preferable to control for size of family dwelling; if dwelling size is expanding increases in persons per household may not signal a deterioration of housing conditions. Unfortunately, we lack information on dwelling size in our data set. However, given that the stock of housing changes only very slowly over time, it is probably reasonable to assume that dwelling size is largely constant over a 10-year period.[13]

(3) The percent of family unit heads who are also household heads. This is a measure of "housing independence" within an income group. When this number decreases, it implies that fewer family units have primary control over their housing space. In comparison to measure (1), which simply counts the number of family units in households where families of a given income level reside, this measure looks at the relationship between family units within the household.

(4) The percent of family unit heads who live in households in which the household head is a parent of the family unit head. This number indicates how many married children or single parents are sharing housing with their parents, another measure of housing independence. (Recall from above that childless unmarried children living with their parents are counted as part of the same family unit.) Note that this measure is based on a subset of the family units

[13] Data available from 1980 to 1984 indicate that median square feet per housing unit decreased over those years by 3.6 percent. (U.S. Bureau of the Census, 1988. pp.692, Table 1228.)

in measure (3) who are not household heads.

(5) The percent of households that own their dwelling. Clearly, all rental housing is not necessarily "bad", and all owner-occupied housing is not necessarily "good." Nevertheless, self-ownership is often considered a signal of better housing quality. For purposes of constructing this variable, all family units in a given income category that live in a house owned by one of the families or individuals in the household are counted as residing in "owned" housing, while all family units in rental housing are "renters."[14]

Table 1 presents the means for these six attributes for each income group across all 8 cities and over all 11 years. The table indicates that both number of family units per household and number of persons per household decline as family income rises. Only 47 percent of the heads of poor family units are also the head of their household, indicating a great deal of shared household arrangements. Among upper income households, 71 percent of family unit heads are also household heads. Not surprisingly, the percent of children who head their own family unit but live in a household headed by their parents is much higher among poor (5 percent) than upper-income households (0.3 percent). Household homeownership increases dramatically with income, as only 30 percent of poor family units live in housing owned by someone in the household, but 63 percent of households containing upper-income family units include homeowners.

III. ECONOMETRIC STRATEGY AND RESULTS

As noted above, we use the CPS tapes to collect city-specific means on

[14] Note that non-owners include not only renters, but people who live in multiple rooming situations such as nursing homes, dormitories, and boarding houses. In our data, renters compose over 95 percent of the "non-owned" category.

each of these five attributes for each of the three income groups for each of the 11 years. Let A_{it} denote the value of attribute A in city i in year t for a given income group.[15] Then, for this income group we can estimate how this attribute changes over time by estimating the equation

$$(1) \quad A_{it} = \alpha_o + \alpha_1 T + c_i + \epsilon_{it}$$

where T is a time trend, c_i is a "city effect", ϵ_{it} is a random error term, and α_0 and α_1 are parameters. The coefficient α_1 measures the average time trend in attribute A across cities.

Now suppose that housing attributes are affected by households' economic position and/or by the economic environment and housing market of the surrounding city. If X_{it} is a vector of variables that controls for these factors, then the relative importance of each factor can be obtained by estimating the equation

$$(2) \quad A_{it} = \beta_o + \beta_1 T + \Phi X_{it} + c_i + \epsilon_{it},$$

where Φ is the parameter vector associated with X_{it}. The time coefficient, β_1, in equation (2) measures the time trend in attribute A that remains unexplained

[15] For notational simplicity, we suppress the income group subscript in the equations below.

by the control variables in X.[16]

Table 2 presents the results from estimating equation (1) for each income group and for each of our five housing attributes.[17] Note that city effects have been included in all regressions, although they are not reported.[18] The results in column (1) indicate that there has been a positive trend in the number of family units per household in each income group and this trend is statistically significant. Quantitatively, the trend is not very large -- during the 11-year period, the average low-income household increased by only 0.01 family units each year.

Consider next the results in column (2) of Table 2. Surprisingly, they suggest that the number of persons per household shows no significant change in poor or near-poor households. Taken together with the column (1) results, this implies that family units are becoming smaller, and the decrease in the size of the average family unit has offset the increase in the number of family units per household, so that overall household size remained largely constant over this time period. In contrast, among upper-income households, the number of persons per household has significantly decreased, even though the number of family units per household is also going up. Among this group, the decline in

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[16] Both equations (1) and (2) impose a linear time trend, rather than allowing time effects to vary over the years. The estimated coefficients from these equations (as reported below in Tables 2 and 3), have all been re-estimated allowing year-specific time effects. In almost no case do the results vary significantly from those obtained using a single linear time trend.

[17] All regression results reported in this paper are based on weighted OLS, where the weights correct for the potential heteroskedasticity induced by differences in city size.

[18] As one might expect, the city-specific effects vary significantly for all dependent variables and account for a large amount of the explanatory power of these regressions. This is discussed further below.

family unit size is not only offsetting, but is actually dominating the growing number of family units per household.

Column (3) indicates that the percent of family unit heads who head their own household declined by about 0.4 percentage points each year among poor and near-poor households. The decline has been even faster among upper-income households (0.7 percentage points per year), although the starting base is much higher for this group than for poorer households, as we saw in Table 1 and as the intercepts in Table 2 confirm. Column (4) of Table 2 shows that the percent of family unit heads who live in a household headed by one of their parents increased substantially among the poor, by over 0.6 percentage points a year, implying an increase of almost 7 percentage points over the 11 year period. Similar trends are visible among near-poor and upper-income family units, but the magnitude of the annual increase was much smaller.

Column (5) indicates that the incidence of homeownership did not change significantly within the upper income group over this time period. Among near-poor, there was a small but not highly significant tendency for ownership to fall. However, among the poor, there was a quantitatively important and statistically significant trend toward decreases in ownership. The percent of poor family units living in dwellings owned by someone within the household fell by about 0.33 percentage points per year, a cumulative decline of over 3 percentage points during our sample period.

Two overall conclusions emerge from Table 2. First, there is evidence in the data that poor and near-poor family units have seen some deterioration in their housing independence. They are more likely to live together with other family units (particularly with parents). They are also less likely to own their housing. Second, however, these trends are not confined to low-income

families. Upper-income families exhibited similar trends, although the magnitudes are smaller.

In effect, the results of Table 2 measure the trends in housing attributes, but do not explain them. We next turn to an attempt to relate the changes documented in Table 2 to changes in the economic environments facing households. As suggested by the discussion surrounding equation (2) above, this requires that we select an appropriate set of control variables to include in the vector X. We focus on three groups of variables.

First, we include four indicators of city housing market conditions. (1) City-specific average annual mortgage rates indicate the cost of borrowing in the city. (2) An index of new owner-occupied housing prices by city divided by the overall city-specific CPI provides a measure of the relative cost of new owner-occupied housing versus other consumer purchases. (3) An index of rental prices by city divided by an overall city-specific CPI measures the relative cost of renting.[19] (4) The availability of government housing assistance in each city is calculated from the CPS. Unfortunately, there are no sources providing annual city-specific data on such items as number of subsidized rental units or public housing units. Therefore, we tabulate the percent of family units within our sample in each city, year, and income group who report receiving either a rent subsidy or who report living in public housing.

Note that variables (2) and (3) provide relatively inadequate measures of the price of housing to owners and renters. The price of newly-constructed

[19] City-specific mortgage rates, new home prices, and rental prices are all available from the publication U.S. Housing Markets, published by Advance Mortgage Company in the early 1980s, and by Lomas and Nettleton more recently. These are intra-industry data provided regularly by selected mortgage companies.

dwellings may be only imperfectly related to purchase prices in the relevant housing market for low-income households. Furthermore, economic theory suggests that the relevant price variable for home ownership is the "user cost" of housing, which depends not only on the purchase price, but also on the depreciation rate of the dwelling, property tax rates, the expected rate of price appreciation, and other variables as well.[20] Unfortunately, we know nothing about the nature and quality of the stock of housing, the extent of housing conversion or abandonment, or other variables that would let us calculate a better measure of housing ownership costs. Similarly, average rental prices in a city will only imperfectly describe the full cost of housing for renters in a particular income category. However, lacking more satisfactory measures of city-specific housing costs, we assume the variables used here will be correlated with actual owner and rental costs in each city's housing market.

Second, in addition to measuring specific housing market conditions in a city, we also want to characterize its overall economic environment. We do this using the city-specific unemployment rate in each year.[21]

Third, we want to control for changes in the demographic and economic situation of households over time and across cities. We do this with two variables. For each city, year, and income group, we calculate the average real income of family units. We also estimate the percent of the sample that is black in each city, year, and income group. This allows for the possibility that housing patterns differ between races, a phenomenon that might be attributed to the effects of both past and current housing discrimination.

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[20] See Rosen (1985).

[21] Published regularly by the Bureau of Labor Statistics for large SMSAs.

Using these six variables, together with a time trend, an intercept, and city-specific effects, we can estimate equation (2) for each income group and each housing attribute.[22] Table 3 presents the regression estimates for poor family units. The first column shows the results for number of family units per household. Higher relative rental prices increase the number of family units per household, and increased availability of government assistance decreases family units per household. Increased family income decreases shared living arrangements. Inclusion of these variables explains much of the increase over time in family units per household among the poor; the estimated time trend coefficient is smaller than its counterpart in Table 2 and only marginally significant.

The results for persons per household in column (2) are somewhat more puzzling. The only control variable that is significant at conventional levels is average income among poor family units, which has a positive effect on number of persons per household, not the expected negative sign. We conjecture that this result is due to demographic changes that occured during our sample period. Specifically, an increasing number of poor family units were composed of single individuals. Single individuals tend to have both lower incomes and (obviously) smaller family size. Thus, persons per household may well show a positive correlation with income, which is not causal, but related to underlying demographic changes. In any case, the remaining time trend in this regression is positive and significant, while the general data showed no time trend in Table 2.

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[22] Because the housing market variables are not available by city for 1977 to 1979, or in 1981, our regressions will be estimated on 56 observations, rather than the 88 used for Table 2.

Column (3) presents results for the percent of poor family unit heads who head their own household. A higher relative price of renting decreases this percentage, while higher average income and increases in government assistance both increase household headship. Interestingly, the time trend toward less household headship among family unit heads is still statistically significant; indeed, it is twice as large as its counterpart in Table 2. In other words, although some of the control variables are significant, they do little to explain the negative trend in household headship among family heads.

The results in column (4) indicate that the probability of family heads living with their parents is almost completely unaffected by any of the control variables. The positive time trend in this variable remains quantitatively large and statistically significant in this regression.

Column (5) looks at the determinants of homeownership among the poor. Since those who receive rent subsidies or reside in public housing cannot be in self-owned housing by definition, this variable is excluded from the regression in column (5). Higher unemployment rates reduce the incidence of homeownership, but the other control variables are insignificant and do not do a good job of explaining the downward trend in low-income homeownership. The time trend coefficient indicates an annual decrease in homeownership rates that exceeds one percentage point a year.

Two overall conclusions emerge from the results in Table 3. First, there are a number of economic variables that do seem to affect the housing attributes of poor families. Most importantly, declining real income levels among poor family units during the 1980s, the rising relative cost of renting, and the declining availability of government housing have all significantly affected the housing conditions of the poor. Second, despite the fact that these

control variables are statistically significant in some equations, in general they do not perform very well in explaining trends over time. Indeed, a comparison of Tables 3 and 2 indicates that for four out of five attributes, the absolute value of the time coefficient increases when the control variables are included.

The corresponding set of parameter estimates for near-poor and upper income family units are presented in Appendix Tables 2 and 3. Results for near-poor family units are quite similar to those for poor family units. The availability of public housing assistance, family income levels, and the relative price of renting seem to influence many of the housing attributes of this income group in the same way that they influenced the poor. However, just as we found in Table 3, inclusion of these control variables leaves the time trends on housing attributes for near-poor families largely unexplained. Likewise, among upper-income households (Appendix Table 3), very few of the control variables have any influence on housing attributes. Thus, the results for the other two income groups reinforce our findings regarding the poor: some of the control variables do appear to affect housing attributes, but they do not appear to explain the time trends in these attributes over the past decade.

Although the focus of our analysis is the set of variables reported in the tables, it should be noted that the city effects (which are included in all regressions but not reported) are typically quantitatively large and statistically significant. There are, for example, large differences in the rates of homeownership among poor families across cities; Philadelphia has a rate of homeownership among the poor that is almost three times the rate in New York City. In general, including city effects almost doubles the explanatory power

of these regressions, as measured by the adjusted R^2 statistic. These differences between cities are clearly related to historical differences in tastes, demographics, and housing markets, and are not well explained by year-to-year changes in economic or demographic variables.

Finally, we turn to the question of whether there are any other data that would confirm or reject our findings. As stressed above, the Annual Housing Survey cannot be used to analyze recent housing market developments. Nevertheless, it would be interesting to compare AHS results from the mid-1970s to 1983 to see if they tell a story similar to the CPS in the 1980s. The AHS definitions of attributes are different than those in the CPS, but we can examine a few reasonably similar measures for the cities of New York and Chicago.[23] Table 4 shows the data for a set of low-income households (see the notes to Table 4), calculated from printed AHS tabulations.

Table 4 indicates that New York and Chicago show at least somewhat similar trends to those we have tracked in the CPS. Both cities had sharp increases in the percentage of households with multiple family units. Both also experienced moderate increases in the number of persons per household. These are consistent with the CPS results indicating increased crowding among family units (although among just the poor, the CPS does not show changes in persons per household.) New York shows a trend away from ownership for low-income families. Chicago shows an actual increase in ownership between 1975 and 1980, but little change between 1980 and 1983. Clearly, the results in Table 4 cannot be used for close comparisons -- they cover an earlier time period, look at only two cities, and the implied time trends do not have standard errors attached.

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[23] Among the eight cities in our sample, none of the other six are included in the AHS in a similar set of years.

Still, there is nothing in these figures that would tend to cast doubt on our assessments based on CPS data.

IV. Conclusions

This paper started with the notion that growing homelessness in U.S. cities might be a symptom of much more widespread housing problems among non-homeless but low-income households. The results of our research indicate that the housing patterns of poor and near-poor families have indeed changed over the past 11 years. There has been a substantial decrease in "housing independence"; among the poor, the percentage of family heads who live with their parents has risen, and the percentage of family heads who are also household heads has fallen. In addition, the incidence of homeownership among the poor has decreased, and the incidence of multiple-family-unit households has increased.

However, we hasten to note that these findings do not necessarily imply that housing conditions for the poor have deteriorated. They must be tempered by three additional findings in this work. First, our evidence indicates that while more family units are living together, overall household size is not increasing. One might hypothesize that there may be more strain in an equivalently-sized household composed of multiple family units versus a single family, but this is not something we can deduce from our data. The effects of more family units dwelling together on household well-being and behavior deserves more extensive research.

Second, the same trends visible among low-income families also show up among higher-income families. In other words, upper-income urban families are also showing a decline in homeownership, and a decrease in housing indepen-

dence. These trends among upper-income families, although statistically significant, are typically small in empirical magnitude, implying they are not terribly important at a macro level. However, they suggest that the changes in the housing attributes that we see among low-income families are not just the result of lack of income, but reflect larger trends.

Finally, this paper has provided little evidence for the popular hypothesis that changes in housing attributes over the last decade are predominantly related to changes in housing markets and in the economic conditions facing urban residents. Including a variety of economic variables does little to explain the trends in housing circumstances of different income groups. In fact, inclusion of such control variables actually results in larger and more significant unexplained time trends for several of the attributes that we investigate. Of course, as noted above, the data that are available to characterize urban housing markets and the general economic opportunities available to the urban poor are far from ideal. It is certainly possible that better data would result in different conclusions. But the results of this paper suggest that on the basis of available data, one must seriously contemplate the possibility that changes in housing choices among families and individuals reflect changes that may be associated with broad social and cultural developments. Certainly the results of this research indicate the importance of future work that more closely investigates why more children are living with their parents and why more family units are moving in together.

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TABLE 1

Mean Values for Housing Attributes Among Income Groups: 1977-1987

	Poor	Near-Poor	Upper-Income
Number of family units per household	1.29 (.57)	1.17 (.52)	1.09 (.51)
Number of persons per household	2.95 (1.98)	2.75 (1.96)	2.69 (1.62)
Percent of family heads who are household heads	46.8	56.9	70.6
Percent of family heads whose parent is household head	5.0	1.3	.3
Percent in owned housing	30.0	44.0	62.9

Source: Current Population Survey (CPS). Based on mean values in 8 largest SMSAs, weighted by CPS sampling weights.

Income Groups: Poor: Family income less than poverty line.
Near-Poor: Family income between 1 and 2 times poverty line.
Upper-Income: Family income above 2 times poverty line.

TABLE 2

Time Trends in Housing Attributes by Income Group: 1977-1987
(City effects included in all regressions)

	Housing Attributes				
	Number Family Units per Hshld (1)	Number Persons per Hshld (2)	% Fam Heads also Hshld Heads (3)	% Fam Heads Living with Parents (4)	% Living in Owned Hsg (5)
Poor					
Constant	1.117*	2.684*	52.609*	.325	16.952*
	(.013)	(.058)	(1.510)	(.600)	(1.317)
Time	.010*	.007	-.374*	.635*	-.333*
	(.001)	(.007)	(.175)	(.070)	(.153)
Adj. R^2	.833	.561	.367	.550	.848
Near-Poor					
Constant	1.071*	2.605*	60.095*	.225	27.291*
	(.007)	(.035)	(.890)	(.174)	(1.103)
Time	.008*	-.004	-.401*	.125*	-.101
	(.001)	(.004)	(.102)	(.020)	(.127)
Adj. R^2	.850	.496	.602	.394	.931
Upper-Income					
Constant	1.050*	2.583*	71.212*	.046	42.808*
	(.004)	(.024)	(.722)	(.074)	(1.015)
Time	.004*	-.016*	-.673*	.034*	.049
	(.0004)	(.002)	(.074)	(.008)	(.105)
Adj. R^2	.842	.795	.837	.172	.934

Source: CPS, observations on 8 largest SMSAs (88 observations in each regression). See text for full description of housing attributes. See Table 1 for income group definitions.

Standard errors in parentheses.

* Significant at 10% level or above.

TABLE 3

Regressions on Housing Attributes Among Poor Family Units: 1980, 1982-1987
(City effects included in all regressions)

Variables	Housing Attributes				
	Number Family Units per Hshld (1)	Number Persons per Hshld (2)	% Fam Heads also Hshld Heads (3)	% Fam Heads Living with Parents (4)	% Living in Owned Hsg (5)
Constant	.906*	1.818	26.164	-15.715	27.422
	(.325)	(1.332)	(31.198)	(16.721)	(30.210)
Avg Income of Poor Families	-.018*	.092*	3.605*	.256	-.435
	(.007)	(.031)	(.718)	(.385)	(.691)
% Black	.001	-.006	-.014	.098	.103
	(.002)	(.007)	(.154)	(.082)	(.146)
% in Public or Rent-subsidzd Hsg	-.005*	-.004	.467*	-.042	———
	(.002)	(.009)	(.219)	(.117)	
Index of New Home Prices/CPI	.166	-.625	-22.262	-1.179	18.825
	(.200)	(.821)	(19.260)	(10.323)	(16.118)
Index of Rental Cost/CPI	.801*	-.217	-66.063*	3.936	-18.595
	(.475)	(1.944)	(45.556)	(24.417)	(42.888)
Avg Mortgage Rate	.011*	-.009	-.396	.479*	.269
	(.005)	(.021)	(.485)	(.260)	(.463)
Unemployment Rate	-.002	.016	.297	.096	-.794*
	(.004)	(.016)	(.363)	(.195)	(.351)
Time	.006*	.037*	.749*	.915*	-1.160*
	(.004)	(.016)	(.371)	(.199)	(.360)
Adjusted R^2	.854	.720	.644	.463	.900

Standard errors in parentheses.

*Significant at 10% level or above.

See notes to Table 2. 56 observations in each regression.

TABLE 4

Housing Attributes Among Poor Households: Annual Housing Survey, New York and Chicago

	% Living in Owned Hsg (1)	# Persons per Household (2)	% Households with Multiple Family Units (3)
New York			
1976	18.24	1.92	3.77
1980	18.38	2.10	5.58
1983	16.82	2.15	6.31
Chicago			
1975	29.97	2.01	4.46
1980	32.43	2.08	7.27
1983	32.76	2.31	8.03

Source: AHS tabulations, SMSA totals, all races.
Note: Poor households defined as follows:
(a) All families below $5000 for 1975 and 1976.
(b) All families below $5000 plus 2/3 of families below $7000 for 1980.
(c) All families below $7000 plus 1/2 of families below $10,000 for 1983.

APPENDIX TABLE 1

Mean Number of Family Units in Each City and Each Income Group, 1977-1987

	Poor	Near-Poor	Upper-Income
New York	458	691	1023
Los Angeles	304	674	1054
Chicago	191	366	911
Philadelphia	141	295	591
Detroit	124	210	559
Washington, DC	143	253	751
Houston	74	155	344
Boston	83	205	455

Source: Annual CPS tapes. See Table 1 for income group definitions.

APPENDIX TABLE 2

Regressions on Housing Attributes Among Near-Poor Family Units: 1980, 1982-1987 (City effects included in all regressions)

	Housing Attributes				
Variables	Number Family Units per Hshld (1)	Number Persons per Hshld (2)	% Fam Heads also Hshld Heads (3)	% Fam Heads Living with Parents (4)	% Living in Owned Hsg (5)
Constant	1.150*	-.146	-60.388*	-6.017	-28.293
	(.215)	(.720)	(16.700)	(5.470)	(28.570)
Avg Income of Near-Poor Families	-.001	.052*	1.670*	-.024	.581*
	(.003)	(.010)	(.223)	(.073)	(.376)
% Black	-.002-	.0001	.260*	.028	.233
	(.002)	(.006)	(.130)	(.043)	(.226)
% in Public or Rent-subsidzd Hsg	-.005*	-.005	.508*	-.136*	———
	(.003)	(.009)	(.212)	(.069)	
Index of New Home Prices/CPI	.082	.215	6.050	2.085	1.957
	(.116)	(.387)	(8.978)	(2.941)	(14.516)
Index of Rental Cost/CPI	.118	1.461*	47.578*	14.068*	37.569
	(.273)	(.914)	(21.222)	(6.951)	(36.569)
Avg Mortgage Rate	-.001	-.005	.772*	.037	.890*
	(.003)	(.009)	(.218)	(.071)	(.372)
Unemployment Rate	-.004*	-.010	.146	.117*	.055
	(.003)	(.009)	(.216)	(.071)	(.369)
Time	.008*	-.008	-.354*	.059	-.609*
	(.002)	(.007)	(.175)	(.057)	(.291)
Adjusted R^2	.861	.733	.814	.285	.944

Standard Errors in Parentheses.

*Significant at 10% level or above.

See notes to Table 2. 56 observations in each regression.

APPENDIX TABLE 3

Regressions on Housing Attributes Among Upper-Income Family Units: 1980, 1982-1987
(City effects included in all regressions)

Variables	Housing Attributes				
	Number Family Units per Hshld (1)	Number Persons per Hshld (2)	% Fam Heads also Hshld Heads (3)	% Fam Heads Living with Parents (4)	% Living in Owned Hsg (5)
Constant	1.073*	1.294*	14.350	-.602	15.689
	(.115)	(.454)	(15.634)	(2.353)	(21.071)
Avg Income of Upper Income Families	-.001*	.006*	.304*	.002	.202*
	(.0005)	(.002)	(.077)	(.012)	(.106)
% Black	-.001	.002	-.108	-.003	-.103
	(.001)	(.005)	(.191)	(.029)	(.265)
% in Public or Rent-subsidzd Hsg	.005	-.004	-.346	.075	———
	(.005)	(.020)	(.696)	(.105)	
Index of New Home Prices/CPI	.074*	-.280	-15.075*	-.607	8.352
	(.056)	(.219)	(7.521)	(1.132)	(10.425)
Index of Rental Costs/CPI	.147	1.190*	48.788*	.862	6.912
	(.138)	(.545)	(18.747)	(2.822)	(26.026)
Avg Mortgage Rate	.001	.006	.449*	.007	.248
	(.002)	(.006)	(.217)	(.033)	(.277)
Unemployment Rate	-.001	.001	.307*	-.004	.015
	(.001)	(.005)	(.188)	(.028)	(.260)
Time	.004*	-.022*	-.969*	.034*	-.835*
	(.001)	(.005)	(.163)	(.024)	(.224)
Adjusted R^2	.813	.850	.874	-.081	.955

Standard Errors in Parentheses.

*Significant at 10% level or above.

See notes to Table 2. 56 observations in each regression.