A Demographer's Perspective on Housing Affordability in the United States at the End of the 20th Century

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Executive Summary

Overview

This paper is intended to supplement the more systematic review of housing affordability in the United States authored by Jack Goodman for the Millennial Housing Commission (Goodman, 2001). I have made every effort to avoid duplication between the two papers. In the first part of my paper I try to fill in some gaps by analyzing data recently released from the 2000 Census short form and the 2000 Census Supplementary Survey. These data sets, because of their large number of cases, allow for greater attention to be paid to regional and sub-population variation in affordability measures, two areas not covered in Goodman's otherwise thorough review. I focus particularly on state differences in high cost burdens for renters and owners, as well on certain other differentials, often by age group and by race/Hispanic origin, that are related to differences in housing affordability.

In the second part of the paper I report on three ongoing areas of research at Harvard's Joint Center for Housing Studies in which I am involved that shed light on emerging housing affordability trends in the United States. The first relates to income differentials among households broken down by age and race/Hispanic origin, and to the age and race/Hispanic origin composition of trends in low-income owner and renter household growth that took place in the last half of the 1990s. The second describes recent projections of future expected owner and renter household growth by age and race/Hispanic origin that show the growing importance of minority household growth. The third focuses on the rapid turnover in occupancy of the older housing stock by age, family type, and race/Hispanic origin that took place in the 1990s. Recent differentials in housing turnover by age of the housing stock points to the likely direction of future trends in turnover that should have significant consequences for the emergence of affordable housing opportunities through filtering. All three research projects are joined together by the use of a cohort perspective to understand and describe the trends.

Direct Measures of Housing Affordability

Housing analysts identify renter households that spend 30 percent or more of their income on rent and utilities (gross rent) as having a high housing cost burden (see Goodman, 2001). While we still await the release of 2000 Census long form data on income, housing costs, and housing characteristics that will allow for measurement of detailed differentials in housing affordability across U.S. housing markets and sub-populations, a unique data source collected in conjunction with the 2000 Census can give a preview of some of what we expect to find in the Census. The 2000 Census Supplementary Survey is a pretest of a plan to collect long-form data with a large annual survey of 3 million households called the American Community Survey, scheduled to be fully implemented in 2003. In 2000, this survey was sent to approximately 750,000 households in 1,200 counties. The first wave of data released from this survey in the

summer of 2001 contained summary tables for states in the share of household income spent on gross rent and similar data on certain owner costs for owner occupied units.

Throughout the country, a large share of renters are high cost burdened, with the vast majority of states having 35 percent or more of their renter households in this high-burden category (Figure 1). The West is the most expensive place for renters according to this measure, while the Midwest is the least. Although cost burden data are not yet available for 2000 broken down by income of household, 1990 Census data suggest that the vast majority of lower income renters (between 60 and 80 percent of those who are in the bottom half of the household income distribution for renters) spend 30 percent or more of their income on gross rent (Table 1). Such high shares with high cost burdens will most certainly characterize the 2000 data as well, with the fraction of lower income renter households that are high cost burdened likely to have further increased in many states during the 1990s.

Comparing the 2000 Supplementary Survey tabulations with similar 1990 Census results on high cost burdened renter households shows that a little more than half of the states increased their share with high renter cost burdens during the 1990s, while the remainder decreased (Figure 2). For increasing states, rents rose faster than average incomes, while in decreasing states, income growth outpaced rent increases. States with increasing rent burdens tended to be located in fast population growth regions where in-migration put additional pressure on rental housing markets. These include Nevada, Arizona, Florida, Oregon, Washington, Idaho and the Carolinas. States with decreasing high cost burdens were slower growing, and include Pennsylvania, Ohio, Michigan, Mississippi, Minnesota, Wisconsin and the Dakotas. Three of the four most populous states in 2000 had high cost burden levels for renter households that are above the national average share (California, New York and Florida). Fully 12 of the 14 states with above average shares in the high cost category in 2000 saw an increase in their burdens between 1990 and 2000.

Similar calculations of the share of income spent on housing can be made for owner occupied units. While a "30 percent or more" level for owners might be judged to be less "burdensome" than for renters because of tax benefits and equity appreciation that are not figured into the equation, the state comparisons do allow us to identify places where owner cost burdens are higher and have been increasing. Once again, states in the West have the highest levels of 30 percent or more of household income spent on owner housing, with states in the Midwest being the lowest (Figure 3). These regional contrasts are more extreme than they were for renters. Overall, significantly lower shares of owners in every state spend 30 percent of more of their monthly incomes on average monthly housing expenses compared to renters. Owners tend to be older, have fewer minorities, are better educated, contain more dual-income households, etc. than renters, and are therefore in higher income brackets which can help explain why fewer owner households spend 30 percent or more of their income on housing.

Comparing owner cost burdens in 2000 with those in 1990 shows that, except for a handful of states, those with a high cost burdens increased throughout the country (Figure

4). Once again, some of the greatest increases were in states that experienced the greatest population growth from in-migration. These include Florida, Nevada, Washington and Oregon, but they also include states with other influences (second homes in Hawaii, and the effect of rapidly increasing owner costs in New York City). Virtually all of the states with a below average share spending 30 percent or more on owner housing in 1990 increased their share in 2000, although most of these states still remained below the national average at the end of the decade.

There is a strong direct relationship between the share with high owner and the share with high renter cost burdens across states (Figure 5). The highest burdens are found in Hawaii, California, Nevada, Arizona, New Mexico, Florida, Washington, Oregon, and New York. Both owner and renter household growth in these nine states took place at a pace that was, on average, almost twice as large as owner and renter household growth in the country as a whole (U.S. Census Bureau, 2001).

In each of these states a high demand for housing during the 1990s had boosted housing production to be sure, but not without housing costs going up faster than incomes. We might speculate that the high demand for owner housing in these fast growth states was perhaps directly responsible for the increased renter cost burdens in these states as well. Faced with limitations on available land for new housing construction in booming housing markets, builders and developers will build what will return the highest profit. In the 1990s this was housing for owner occupancy. Under such conditions, new rental units might be built but at levels insufficient to fully meet new demand and are often built for the higher rent market niche where profits are greater.

Indirect Indicators of Trends and Differentials in Housing Affordability

Already released 2000 Census short form data do allow us to examine trends in headship and ownership rates in more demographic detail. Data can be further broken down by age and race/Hispanic origin. Some analysts have argued that rental affordability is directly related to household headship rates for young adults - the higher the rental cost burdens the lower the headship rates. Faced with high rents, potential renter heads will choose to double up with roommates or to remain at home in the parental household. On the ownership side, the proposition is that high cost burdens would lead to depressed ownership rates for young adults.

These hypotheses need to be qualified, however, in several respects. One might equally argue that high rates of household formation (say, because of the arrival of new migrants) might lead to rising rents (and therefore rising rental cost burdens) in places where increasing demand for rental units is not being met by an adequate supply side response. And places where owner demand is increasing and the cost of owner housing is also increasing might not see a decline in the ownership rates of young adults at all. Rather, such a scenario might lead to an elevation ownership rates as household heads are now more motivated to move into homeownership quickly in order to cap future increases home prices and to reap the benefits of anticipated future equity growth.

Furthermore, ownership rates could even rise without any increase in owner household formation whatsoever, simply as a result of declining rates of renter household formation and lowered headship rates as renters become squeezed out in expensive housing markets.

In examining the relationship between changing housing affordability and headship and ownership rates of young adults, our findings show that on the renter side, it does indeed appear that rising rent burdens are associated with declining headship rates, although the relationship is not especially strong (Figure 6). States with the largest increases in high rent burdened households showed the largest declines in headship rates of 25-34 year olds (Utah, Nevada, Idaho, Washington, Arizona and Colorado). Another way to examine this relationship is to measure the change in gross rent 1990 to 2000 by the change in headship (Figure 7). Again, the negative relationship emerges (this time slightly stronger), with states that have had significant average rent increases also having had the largest declines in headship rates of young adults (Utah, Colorado, Idaho, Washington and Arizona). However, some states with equally high increases in average real rents of above 10 percent such as North Carolina, South Carolina and Tennessee saw increases in young adult headship rates.

A further note of caution when interpreting these results is in order. Large differences in the census undercount between 1990 and 2000 could have possibly affected the estimates of young adult headship rates, and therefore the measurement of change in headship rates, which for most states was only in the range of $\pm$ 2 percentage points.

For owner households there appears to be a weak positive relationship between the change in share with high owner cost burdens and the change in the ownership rates (Figure 8). The majority of states experienced both an increase in cost burdens and an increase in ownership rates, supporting the hypothesis that short-circuiting even higher prices and pursuing equity growth are likely the dominant motives for assuming higher owner costs. Yet, there are enough states where cost burdens increased and ownership rates of young adults fell to indicate that perhaps rising costs are squeezing potential owners out of the market as well.

In general, there is a lot more variation in ownership rates for young adults across states than there is variation in headship rates. This is especially true for non-Hispanic minorities and for Hispanics (Figures 9-11). Within each race/Hispanic origin group, the economic and housing market conditions that affect the speed of cohort progress in household formation and homeownership is also highly variable (Figures 12-14). Whereas whites have achieved a national uniformity in their levels of household formation and ownership by the time they reach age 35-44, blacks still exhibit considerable variability across states in headship and homeownership rates in this age group. Hispanics, in particular, are subject to highly variable economic and housing market conditions that sustain state variability in headship and homeownership well into middle age. The high representation of recent immigrants among Hispanics could explain some of the Hispanic variation.

In addition to state variation in headship rates of young adults, doubling up can also be measured by the number of persons per room and by the frequency of multigenerational living arrangements. 2000 Census data on these variables provide some additional support that states with affordability problems also have slightly higher density living arrangements in terms of number of people per room and number of generations per household. However, our inability with current data to further disaggregate these variables by age of head, race/Hispanic origin, and immigrant status limits our ability to draw firm conclusions about the direct effects of housing affordability on these variables.

Income Trends and Differentials

After a downward slide in median income in the early 1990s, income increased dramatically in the mid-and-late 1990s. This trend took place for all race/Hispanic origin groups (Figure 15). Median incomes of households with heads age 25-34 rose especially strongly (Figure 16). There can be no doubt that the very large median income increases of young adults in the mid and late 1990s helped to fuel the housing boom of that period.

With many ups and downs in median incomes evident over the past three decades, it is also surely the case that the future will be made up of periods of both falling and rising average incomes. It is likely however that whatever period we find ourselves in, housing affordability issues will persist. This is because trends in median incomes conceal the essential stagnation in income for households in the bottom of the income distribution (Figures 18-20). Lower income households fared poorly when improvements in the middle of the income distribution helped drive housing prices up, and they will fare poorly when an economic recession hits low-income wage earners the hardest, even if housing prices might soften somewhat.

For every income quintile within race/Hispanic origin categories, minorities average significantly less income than whites. Given the increasing minority share of household growth (se below), downward pressure on average household incomes relative to current housing prices should deepen average housing affordability problems in the future.

The Increase in Low Income Ownership in the Late 1990s

The late 1990s were a period of rapid run-up in homeownership rates, and not only for households with increasing incomes, but among low-income households as well. The increase in low-income homeownership rates resulted partly from significant levels of net transitions from renter to owner tenure status that was aided by aggressive mortgage lending to low income households in the late 1990s. There has been some concern that a strategy of mortgage lending to low-income households based on relaxed down-payment requirements and generous income qualification criteria may have resulted in a large number of low-income owners vulnerable to default on mortgages should the economy

turn down. However, examination of cohort increases in the number of low-income owner households between 1995 and 2000 reveals little cause for alarm.

A significant portion of the increase in low-income owners overall resulted from the normal loss of income when households are between age 55 and 74 (Figure 17), but occurs during a period of life when the majority of owners have paid off their mortgages. The relatively high minority representation in overall recent low-income owner growth is largely due to the much higher losses of low income white owners age 75+ whose households are dissolving, and not due to exceptionally large minority owner gains in the younger ages (Figure 21). Overall, there was about 2.5 million more owners in 2000 compared to 1995 in the age group under age 55 with incomes below 80 percent of the national median. Some of this growth is due to the inclusion of more households in the low-income definition due to rapidly rising median incomes in the mid-and-late 1990s. Much of the increase in low-income owners below the age of 55is due to declining interest rates having made homeownership more affordable to low-income renter households. And finally, incomes will rise with age for many younger households in this category who became homeowners at the bottom of their cohort income trajectories, even if the economy remains in mild recession for a number of years.

Projected Household Growth by Tenure, Age and Minority Status

High levels of foreign immigration during the past 15 years, and high historical levels of natural increase, have propelled minority contributions to net new household formations above those of non-Hispanic whites during the 1980s and 1990s (Figure 22). Whereas minorities accounted for only 23 percent of all households in 1995, they accounted for 68 percent of the net household growth between 1995 and 2000. In 1995 minorities were only 15 percent of all owners, but between 1995 and 2000 they accounted for 44 percent of the owner household growth. Consequently, the share of owner and renter households that are minority has been increasing steadily, and is projected to continue in the decades ahead. Over the next two decades, minorities are projected to increase their share of renter households from about 40 percent in 2000 to over 50 percent in 2020 (Figure 23a). Likewise, minority share of owner households is projected to increase from 18 percent in 2000, to 25 percent in 20 years (Figure 23b).

Driving the total projected minority growth shares are the large cohort losses among non-Hispanic white elderly owner and renter households, negating much of the non-Hispanic white growth projected for the younger cohorts. On the owner side this loss is due to the large share of owner household heads age 55+ who are non-Hispanic white and who, when they are age 75+ in 2020, will have suffered depletion in numbers due to death and loss of headship status. Minorities simply have a lot fewer owner heads in the elderly age groups at this time, and therefore there are relatively few to be lost over the next two decades. The magnitude of these white owner losses and the location of the losses will play a large role in structuring minority owner gains in the coming decades (see below).

The minority role in projected renter household growth is greater, both in the aggregate and for individual cohorts (Figure 24b). The greatest contribution to renter increases comes from households whose heads are age 15-44. Over the next two decades minorities will contribute about half the increase for the youngest two 10-year age cohorts in this group, and virtually all of the increase contributed by cohorts who will be age 35-44 in 2020 (early echo boomers). But because of larger white renter losses from every cohort above age 45 (about three times as many white as minority losses), whites are projected to lose about 3.4 million renter total renter households on net over the next 20 years, while minorities are projected to gain about 5 million. This 8.5 million white/minority difference on the renter side is primarily why the minority share of past and future total household growth is so large.

The Changing Occupancy of the Housing Stock

How minority household growth impacts affordability trends depends not only on the levels of increase in minority households, and on future income trends for minorities, but on the age and location of housing that minority owner and renter households choose to occupy. To help better understand the rapid changes in housing occupancy that are now taking place throughout the country, we have examined cohort trends in the occupancy of the housing stock by tenure, age, race/Hispanic origin and family type (married couples and other households). The 1990s decade was one in which the older non-Hispanic white married couple population fundamentally loosened its hold on suburban housing to make way for younger minorities and unmarried heads of households.

By partitioning the housing stock into four vintage categories by year that the housing unit was built (pre-1950, 1950-1969, 1970-1984, and 1985+), and examining the changing occupancy of these vintage groupings between 1989 and 1999 by age, race/origin and family type, the rapid reconfiguration we are now experiencing in our housing demography becomes evident. The three older vintage categories saw a large net loss of occupancy of housing units formerly occupied by mostly older non-Hispanic white heads of households. The loss of white households from the older vintage stock has two components. First there is the demise of households due to aging of those over 75 that was discussed earlier. About nine million whites in this category removed themselves during the 1990s from the pre-1985 housing stock. Next there are white losses between the ages of 35 and 74 that come from a variety of causes (including death at the end of the age range), but mostly due to whites moving to newer housing. This represents another 8.9 million white household losses in the pre-1985 built stock. In total there were almost 18 million net white household losses in the middle and older age groups in the three oldest vintage units, which was only partly offset by a 9.2 million increase in young whites under the age of 35 moving into the oldest categories.

This cohort pattern of occupancy change was repeated in broad outline for minorities living in the older stock as well, except that losses due to the death of households were much smaller (fewer older heads to depart), as were the losses due to out-migration of

middle-aged households to newer units. Only about 2.5 million minority households were lost to occupancy of pre-1985 housing on net in the middle and oldest age groups. But about 6 million minorities under the age of 35 moved into pre-1985 housing on net during the decade – a number a number that is much greater than either their losses in the older age groups or their that share in the total population would have predicted.

White households who moved out of older vintage units found their way to the newer housing stock. There were 6.1 million more whites between the ages of 35 and 74 in 1999 (relative to the number of 25-64 year olds in 1989) living in housing built since 1985. While some of these were first-time buyers, the majority was not. There was a gain of about 4.1 million white heads under the age of 35 in 1999 also living in newer units, and many of these younger households were surely first-time buyers.

In light of our findings about the strong increase in incomes for three fifths of households during the 1990s, it is not surprising that whites acted to upgrade their housing in large numbers. It is also not surprising that minorities were in a position to take advantage of the newly vacated housing opportunities that were opening up in the older more affordable stock. The demographic and economic momentum that supported these turnover trends in the 1990s will likely continue into the coming decades, even if economic growth slows. The aging of the baby boom will contribute to the growth in empty-nest households. Empty nest baby boomers are at a stage in their life course when incomes are peaking, and many of these households will choose to relocate to newer housing over the next decade or two. Pressure form the growing number of minority renters who wish to move into owner occupied housing is also expected to gain momentum in the decades ahead.

Out of this high level of demographic turnover of the stock formerly occupied by older white household heads, more affordable housing units are being introduced to the market. It is also out of this high turnover that some affordable units are lost to the stock as housing is torn down to make way for larger units, or converted to non-residential use, or left vacant or boarded up because of its poor condition. Exactly how these two processes will balance out to result in a net gain or a net loss of affordable units will vary from place to place.

PART 1

I. Introduction

The goal for this paper is modest. It is to present some timely primary data to fill in a few of the gaps in the excellent review of housing affordability issues authored by Jack Goodman in his paper prepared for the Millennial Housing Commission (Goodman, 2001). In fact, this paper should probably best be viewed simply as an extended Appendix to the Goodman effort.

While most of what Goodman reports on is from the perspective of an economist, there are certain demographic themes that need to be brought to the fore, and this paper attempts to do just that. Foremost is the need to disaggregate national trends by such variables as age, race/Hispanic origin, household composition and geographic location. These are variables that economists usually include as just another set of control variables in their models. Demographers prefer to disaggregate the population according to such variables, and essentially model the different groups separately. Such disaggregation not only provides a better understanding of the social and economic circumstances that are creating the aggregate trends, but also provides a better focus for policy interventions intended to ameliorate long-term or emerging housing affordability problems.

It is a truism that all housing markets are local, and that analyses of national trends in housing affordability mask sometimes-large differences among sub-national areas. In housing research, national trends are often of most use as a set of benchmarks by which to place different housing markets into a national context. Having identified affordability issues that are significant enough to appear on a national scale helps analysts and policy makers to form their agendas at the state, metropolitan, county and sub-county levels. But we can not be satisfied with only developing an understanding of the national picture. We also need to measure and understand the broad differences that exist in the types and levels of housing affordability problems that exist around the country. The first half of this paper examines state differences in owner and renter housing affordability as measured by the percent of household income spent on housing, and in the change in affordability that took place across states over the decade of the 1990s.

In addition to direct measures of affordability, we also examine trends and differences in the rates at which young adults living in different states form independent households and move into homeownership. Differentials in these rates and their changes during the 1990s are presented as indirect indicators of the consequences of differences in housing affordability around the country.

An understanding of housing affordability trends and differentials requires both a greater focus on income trends and on housing costs, and on other household and housing characteristics associated with differentials in income and housing consumption. Introducing Part 2 of this paper is a description recent and long-term trends and differentials in household income in the United States by race and by age. This review

of income trends and differentials documents the large increases in real income experienced by most demographic groups during the late 1990s, but also finds that a disturbingly large share of households have not benefited from the income gains that have been reaped by others. The long-term trend data also underscores the likely prospects of a downward swing in average real household income in the future. Data on the trajectory in income over the life cycle are also presented and interpreted. All of these trends and differentials have an important bearing on both historical and future trends in housing affordability.

The second part of the paper also include discussions of three different but inter-related analyses from current research being conducted at Harvard's Joint Center for Housing Studies in which the author is involved. These studies include a detailed analysis of the late-1990s surge in low-income ownership in the U.S., a discussion of recently completed household projections by age, race/Hispanic origin, family type and tenure, and finally an analysis of the shifting match-up between households and the housing stock that is now taking place in the U.S. Excerpts are presented from these unpublished studies as they inform certain issues of housing affordability.

II. Direct Measures of Housing Affordability

The best data source to evaluate current geographic variation in housing affordability themes are 2000 census long-form sample data, where detailed information on income, housing characteristics, housing costs, and other social and demographic variables related to income and housing were collected. When taken together with similar data from the 1990 and earlier census, long-term housing trends and differentials over the 1990s, or from decade to decade, can be analyzed. Unfortunately, as of this writing none of the detailed long-form data from the 2000 census has yet been released to the public.

However, the first round of releases from a unique data source called the 2000 Census Supplementary Survey has provided a few tables that allow us to examine geographic variation in owner and renter affordability measures.[2] The 2000 Census Supplementary Survey was developed under the new American Community Survey (ACS) program at the Bureau of the Census using the ACS questionnaire at 1,200 sites around the country and included a sample size of about 750,000 households. The reason for fielding the Supplementary Survey in 2000 was to test how accurately the ACS might substitute for the long form questions on the decennial census. The ACS questionnaire replicates all of the questions on the census short and long forms, (plus a few additional questions), and its results can be compared with 2000 Census long form data. Beginning in 2003, the ACS is scheduled to be expanded to about 3 million households annually, and will be conducted in virtually every county in the United States. The ACS will provide timely information at the local level on an annual basis for many important variables that in the past we were only able to examine once every ten years.

[2] When this paper was written, only state level data were available. In late November, core table data for sub-state areas were released. In late 2001 or early 2002 the full complement of data tables at the sub-state level should be available.

For now, the 2000 Census Supplementary Survey data fill a gap by providing a means to examine important variations around national averages and trends over the 1990s decade. These state data from the 2000 Supplementary Survey are a useful first cut at a broader geographic focus on metropolitan/ non-metropolitan areas, cities/suburbs, and even counties, that will be possible when the long-form 2000 Census data and the first full complement of American Community Survey data are released in 2002 and 2003.

A. Renter Households

Housing analysts identify renter households that spend 30 percent or more of their income on rent and utilities (gross rent) as having a high housing cost burden.[3] While somewhat arbitrary, this level is a standard that is often used in the literature and for programmatic purposes. The reader is directed to Goodman (2001) where a an extended discussion of alternative measures of affordability can be found. Throughout the country, a large share of renters are high cost burdened, with the vast majority of states having more than 35 percent of their renter households spending 30 percent or more of their income on rent (Figure 1). The West is the most expensive place for renters according to this measure, while the Midwest is the least.

For lower income households, this share that is high cost burdened is even higher. While the core tables currently available from the Supplementary Survey do not give a breakdown by household income (future tables will), we expect the differentials to reflect what was recorded in the 1990 Census. Table 1 presents the cost burden percentages for renters with a household income of less than $20,000 in 1989 (this includes 48 percent of all renters nationwide in 1990, and is equivalent to a household income of $26,093 in 1999 dollars). On average, 72 percent of renters earning less than $20,000 spent 30 percent or more on housing in 1990, with California leading the pack at 86 percent. South Dakota is at the bottom of the list, but still had over 50 percent of lower income renters in the state spending 30 percent or more of their household income on housing. These very high cost burdens for low and moderate-income renter households will most certainly be documented when the 2000 census long-form sample data are released.

Figure 2 summarizes the relationship between share high-cost burdened renters in 1990 and share high-cost burdened in 2000 across states. States that fall above the diagonal line saw an increase in high burdened renters, while those falling below the line saw a decrease. The distance above or below the diagonal measures the degree of change over the decade. Sixty percent of the states experienced an increase in the share of households in the high cost burden category (60 percent of states fall above the diagonal line) and about forty percent experienced a decrease. This difference between the two

[3] In 1990, published STF-3 tables contain an uppermost category of 35 percent of income. 2000 Supplemental Survey tables contain an uppermost category of 50 percent of income. 2000 Survey data are a compilation of monthly household surveys conducted in each of 12 months, and ask about income during the previous 12 months. This data source therefore reflects income earned in 1999 and 2000. The 2000 Census long form data, when they are available, will refer to income earned the previous calendar year (1999), as does the 1990 Census (1989 income).

groups of states is because a shift downward occurred in those locations where incomes increased faster than rents, while the opposite was true for those states with a shift upward in the rental cost burdens. The top 10 states for high renter cost burden in 2000 were California, Florida, Hawaii, Nevada, Oregon, Washington, New York, Louisiana, Arizona and New Mexico. Other states made a strong movement upward in their share of renters paying more than 30 percent of their incomes on rent and utilities, including Utah, Idaho, South Carolina, North Carolina, Colorado, and Alabama. Many of these states experienced high population growth over the 1990s decade, putting pressure on the rental housing stock. These 16 states listed above had average population growth rates almost twice as high as the national rate. On the other hand, states that had a decline in high rent burdens were often in parts of the country where population growth was low. These states include North Dakota, Kansas, Wisconsin, New Hampshire, Minnesota, Rhode Island, Arkansas, Mississippi and Michigan. Fast growth states must necessarily rely more on new construction to meet rental demand, while the slow growth states can rely more on less-costly older rental stock to meet demand.

Figure 2 reinforces our understanding that rental cost burdens for households have been highly variable both in space and in time. There is a positive relationship between the 1990-2000 shift and the level in 2000, with most of the top dozen most cost-burdened states having experienced a significant increase in their shares in the high cost burden category between 1990 and 2000.

B. Homeowner Households

The geographic variation in the percent of owner households spending 30 percent or more of household income on housing can suggest parts of the country where homeownership affordability problems are greatest and where they are least. While a "30 percent or more" level for owners might be judged to be less "burdensome" than for renters because of tax benefits and equity appreciation that are not figured into the equation, the state comparisons still allow us to identify places where owner cost burdens are higher and have been increasing.

In the case of homeowners, it is desirable to focus specifically on households with a mortgage because owner households without a mortgage have relatively low housing cost burdens. Approximately two thirds of owner households in 2000 have a mortgage. Owner housing costs include all mortgage payments (including second mortgages, junior mortgages, and home equity loans, etc.), deeds of trust, real estate taxes, fire/hazard/flood insurance costs, utilities bills (electricity, gas and water) and heating fuel costs pro-rated on an average monthly basis. Owner costs also include where appropriate, a monthly condominium fee or special fees for mobile homes. Only owner occupied single family housing units on less than 10 acres are included in the tabulations.

Figure 3 shows that the share of owner households with a mortgage outstanding that spent 30 percent or more of income on housing ranges from a low of under 18 percent in South Dakota, to a high of over 40 percent in Hawaii. Other states with a high homeowner cost burdens in 2000 include California, Nevada, Florida, Washington,

Oregon, New York, and New Jersey (and also the District of Columbia). Low burden states are mostly in the Midwest, and include the Dakotas, Iowa, Kansas, Indiana, Minnesota, Nebraska and Michigan. States outside of the Midwest that have relatively few households in the high burden category are Delaware, Kentucky and Idaho. In general, the Midwest has the lowest share with high owner cost burdens, while the West is the region with the highest average costs. There are typically one or two states in each region that stand out above the rest – New York and New Jersey in the Northeast, Ohio and Illinois in the Midwest, Florida in the South and Nevada and California in the West. These seven states accounted for 36 percent of all households and 37 percent of all population nationwide in 2000.

Overall, a significantly lower share of owners in every state spends 30 percent or more of their monthly income on average monthly housing expenses compared to renters. Owners tend to be older than renters and are in higher income groups (fewer minorities, better educated, more dual-income households, etc.) which can help explain why fewer owner households spend 30 percent or more of their income on housing.

Except for a handful of states, those with a higher cost burdens increased their share between 1990 and 2000 in most parts of the country (Figure 4). Once again, some of the greatest increases were in states that experienced the greatest population growth from in-migration. These include Florida, Nevada, Utah, Washington and Oregon, but they also include states with other influences (second homes in Hawaii, and the effect of rapidly increasing owner costs in New York City). Owner cost-burden increases were enough to move Washington, Oregon and Utah from below average in 1990 to well above average in 2000. Nevada was above average in 1990 but moved up from 11th most burdened to 3rd in 2000. In 1990, California was by far the most burdened with the highest share of owners paying 30 percent or more of income on housing, but was surpassed by Hawaii by 2000. Virtually all of the states with a below average share spending 30 percent or more on owner housing in 1990 increased their share in 2000, although most of these states still remained below the national average at the end of the decade. States experiencing a significant 5+ point increase in the 30+ percent owner cost burden category include Ohio, Illinois, Indiana, Missouri, and Michigan. While these Midwestern states are still below the national average in 2000, we might well add them to those high on the owner cost burden list in both 1990 and 2000 (Hawaii, California, Nevada, Florida, New York and New Jersey) when focusing on places where homeowner perceptions of a growing affordability problem have likely emerged.

Only six states had a noteworthy reduction in homeowner cost burdens in the 1990s, and four of these (New Hampshire, Connecticut, Rhode Island and Massachusetts) were in a part of the country that experienced a strong correction during the early 1990s to the rampant housing inflation that took place there during the mid-and-late 1980s. The other two states having lowered owner burdens are Mississippi and Virginia. Texas appears to have experienced a very slight decline in high cost-burdened homeowner households, but this is well within the margin of error we might expect by comparing two different data sources. It is noteworthy that California exhibited only modest upward pressure on homeowner affordability on net over the 1990s, but this too was the result of strongly

declining housing prices during the early 1990s being offset by rapidly rising prices toward the end of the decade.

There is a strong direct relationship between the share with high owner and the share with high renter cost burdens across states (Figure 5). The highest burdens are found in Hawaii, California, Nevada, Arizona, New Mexico, Florida, Washington, Oregon, and New York. Both owner and renter household growth in these nine states took place at a pace that was, on average, almost twice as large as owner and renter household growth in the country as a whole (U.S. Census Bureau, 2001). In each of these states a high demand for housing during the 1990s had boosted housing production, but not without housing costs going up faster than incomes.

We might speculate that the high demand for owner housing in these fast growth states was partly responsible for the increased renter cost burdens. Faced with limitations on available land for new housing construction in booming housing markets, builders and developers will build what will return the highest profit margin. In the 1990s, with strong income growth, baby boom aging, and low mortgage interest rates, this was housing for owner occupancy. Rental units that could not return competitive profit margins were either not built, or built in limited quantity for the higher rent market niche.

III. Indirect Measures of Affordability Differentials

A. Headship and Ownership Rates for Young Adults

Because direct measures of housing affordability from the 2000 census or Supplemental Survey are not available for demographic sub-groups, we can not fully understand the reasons that lie behind the aggregate differentials in state housing cost burdens at the turn of the century. However, household headship and homeownership rates can be calculated from census STF-1 tables for 1990 and 2000 census data by age. With such information, we can examine a potential consequence of geographic variation in housing cost burdens on the rates of household formation and movement into homeownership for young adults. In addition, these data are available by race/Hispanic origin, and while only available for 2000 census data, they provide a very useful additional perspective.[4]

[4] It is possible to develop the needed 1990 cross-tabs by race/Hispanic origin from 1990 census Public Use Microdata (PUMS) files, but time limitations and concerns about differential undercount between the 1990 and 2000 censuses precluded following such a strategy for this paper. The differential undercount problem is further compounded because 1990 and 2000 levels of headship and ownership are expected to be very close in many states, with each date marking the end points of a period of strong swings in regional economies. The substantial decrease in the undercount between 1990 and 2000, unless it took place equally in population and households (the numerator and denominator of the headship rates), or proportionally in owner and renter households, could distort any attempt to measure real change over the decade in headship and ownership. This concern is especially well founded when the focus is on measuring change in headship and ownership for minorities. Not enough data has been yet released from

On the rental side one might hypothesize opposing relationships between increasing renter cost burdens and the headship rate of 25-34 year olds. Rising young adult headship rates could put pressure on the existing stock of rental units and drive up rents. New units added to accommodate increasing rental demand would tend to be more expensive than units in the older stock, and would thus help drive up average rents. An influx of young adult migrants might create such a situation because migrants are less likely to have the kinship and friendship networks necessary to double up, and therefore they would be more likely to form independent households. On the other hand, we would expect that rents could rise for a variety of reasons independent of increases in headship rates, including losses to the rental housing stock, the desire of landlords to take advantage of the rising incomes of many tenants by demanding rent increases, and the higher rents required by the cost of bringing new rental units to market that are simply replacing those from the older stock that are being lost to rental occupancy. Under these circumstances, rising rents would be expected to depress household formation rates, especially for those whose incomes are low.

What we find is an inverse relationship between the change in high cost burden renter households during the 1990s and the change in the headship rate for 25-34 year olds (Figure 6). States with the biggest increases in high rent burdens tend to be those with the largest declines in headship rates. States experiencing a decline in headship rates of young adults also were among the states with the largest growth from net migration, either foreign or domestic, and include California, Texas, Arizona, Colorado, Utah, Nevada and Idaho. It appears that the hypothesis that independent increases in headship will cause changes in affordability is less powerful than the hypothesis that changes in renter affordability will depress headship rates.

The findings in Figure 6 are duplicated when we examine changes headship rates in relation to changes in average gross rents between 1990 and 2000 (Figure 7). Colorado and Utah experienced the largest increase in average gross rents, and also experienced among the strongest decline in headship of young adults. Other states with a strong decline in headship that had an increase in average rents include Washington, Idaho, Texas, Arizona, and Nevada.

On the owner side we examined the relationship between change from 1990 to 2000 in high owner cost burden shares and change in ownership rates 1990-2000 for 25-34 year olds for all race/Hispanic origin groups combined (Figure 8). There is a fairly weak positive relationship (r= +.35). A positive relationship would be expected if the 1990s were a period of housing inflation, and young adults were motivated to accept higher owner cost burdens and move into homeownership in anticipation of either reaping the rewards of growing home or avoiding entering the market later at even higher prices. On the other hand, we might have expected a negative relationship because rising housing prices will deter some renter households from moving into homeownership because of

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the 2000 census to allow us to clarify potential problems and make a judgement about the impact of undercount reduction on the specification headship and ownership rates.

higher down-payment burdens or because of greater difficulty in qualifying for a mortgage. The net result of these two opposite effects is the weak relationship recorded in Figure 8.

We should caution, however, that we must view the results in Figures 6–8 as provisional. The estimated changes in headship and ownership rates for 25-34 year olds were small over the entire span of the 1990s and could very well have been influenced by the significant decrease between 1990 and 2000 in census undercount differentials for population and households and for owners and renters. A change in the denominator of headship rates (population) due to undercount reduction without a proportional change in the numerator (households), would depress headship rates. A change in the numerator of the ownership rate (owner households) that is proportionally greater than the change in the denominator (total households, including renters) would tend to raise ownership rates. If these changes in undercount were different among the states (say they are related to differences in the size of the Hispanic population), then part of the relationships we observe in Figures 6–8 would be spurious. In addition, any real change in the headship rate for young adults would automatically move the ownership rate in the opposite direction, since headship is most sensitive to the formation of renter households.

B. Headship and Ownership Rates by Age and Race/Hispanic Origin

There are significant differences among the three broad race/Hispanic origin groups in levels of headship and ownership of 25-34 year olds living in different states in 2000 (Figures 9-11). Non-Hispanic whites have both the highest headship and highest ownership rates, with headship variability across states fairly low when compared with variability in ownership rates. Non-Hispanic minority headship and ownership rates are generally lower than those of whites, but this picture is clouded by data limitations forcing the non-Hispanic minority category to contain both blacks and Asians with very different headship and ownership profiles. The non-Hispanic minority category can not be further broken down as it is derived as a residual (non-Hispanic black or Asian data not yet available).

The biggest differences are found between whites and Hispanics. Lower levels of Hispanic ownership can be explained by lower incomes, by high proportions of recent immigrants, by age differences even within the 25-34 age group, by differences in household and family structures, and by differences in homeownership opportunities because of housing stock constraints and housing market discrimination in locations where Hispanics are concentrated. The substantial differences in white vs. Hispanic headship rates are also due to some of the same factors that likely explain ownership rate differences. Unfortunately, the currently available 2000 Census data do not allow us to control for many of these variables.

Another perspective on the variation in headship and ownership rates by age and race/Hispanic origin can be gained by examining state variation within each group based on the calculation of state ratios of headship and ownership rates to the national average

rate for the age and race/Hispanic origin group as a whole. Thus a ratio of 1.1, for example, would mean that the state's level of the age-specific headship (or ownership) rate for that particular race/Hispanic origin group is 10 percent higher than the national average for that group. Figures 12a-d through 14a-d graph these state ratios for non-Hispanic white households, for non-Hispanic minority households (Black/Asian/Other), and for Hispanic households. On the X-axis are plotted state ratios for headship rates and on the Y-axis state ratios for ownership rates. Each panel plots one of four separate 10-year age groups from 15-24 to 45-54.

Before pausing to examine the 15-24 and 25-34 panels in greater detail, it should be noted that non-Hispanic whites have moved relatively quickly in the recent past toward a national uniformity in both headship and homeownership rates. The white cohort that was age 35-44 in 2000 had already achieved remarkable uniformity across states in headship and ownership, with variation mostly confined to well within 10 percent of the national average rates for the age group. Hawaii and the District of Columbia are the only, and not surprising, exceptions. Non-Hispanic minorities and Hispanics, on the other hand, have much slower geographic convergence to the national average for their age group, indicating that there are strong local and regional demographic and economic forces that operate to sustain geographic variation in headship and ownership for these minority groups well into middle-age.

1.) 15 to 24 Year Olds

Among 15-24 year olds there is quite considerable variation in both headship and ownership rates for all three broad race/Hispanic origin groups. There is a loose overlap across the race/Hispanic origin groups in the states falling into each of the four quadrants (above average headship/above average ownership, above average headship/below average ownership, below average headship/above average ownership, and below average headship/below average ownership).

States falling below the average for both headship and homeownership in the 15-24 non-Hispanic white age group include all nine states in the Northeast (Maine, New Hampshire Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey and Pennsylvania), with the addition of several states contiguous to this region (Virginia, Maryland, and Ohio). Also included in this group is California. These are the states that provide the least hospitable environment for rapidly moving into independent household formation and home ownership for persons below the age of 25. It is likely that these states include a large student population among 15-24 year olds, as well as more powerful cultural norms relating to delayed transitions into adulthood including marriage and family formation, in addition to higher housing prices.

For non-Hispanic minorities in the "below-below" quadrant, eight states overlap with the non-Hispanic white category (California, New Jersey, New York, Massachusetts, Connecticut, Maine, New Hampshire and Maryland). The other "below-below" states for whites (Pennsylvania, Vermont and Virginia) are located just outside this quadrant for non-Hispanic minorities, while Rhode Island and Ohio are significantly into the above

average headship rate category while retaining below average ownership rates. Illinois joins the "below-below" group for non-Hispanic minorities.

Because of the high concentration of the nation's Hispanics in a relatively few states with headship rates well below average for 15-24 year olds, most (43) states have above average Hispanic headship for 15-24 year olds. In spite of low ownership rates for young Hispanic households in the Northeast, above average Hispanic ownership in Florida, Texas, Arizona and New Mexico and other western states help create a more even split between states on the ownership axis. Because of the shift to the right on the headship axis, only 6 states fall into the "below-below" category for Hispanics. Perhaps not surprisingly, these states include the high housing cost stalwarts of California, New Jersey, New York and Maryland (Vermont and Hawaii are the other two).

States with both above average levels of headship and ownership for the youngest age group tend to be located in the South for whites and in both the South and West for minorities. For non-Hispanic Whites, states with both above average headship and ownership include Alabama, South Carolina, Kentucky, Arkansas, Tennessee and North Carolina as the most prominent. For non-Hispanic minorities and Hispanics, Alabama, Idaho, Arizona, Oklahoma, New Mexico and Colorado stand out.

2.) 25 to 34 Year Olds

While the 15-24 age group shows the most variation across states in both headship and ownership, for a whole host of reasons (including the recognition that a relatively small number of households, especially owner households, fall into this age group) it is the variation that still remains in the 25-34 age group that is perhaps of more interest from a public policy perspective. It is in this age group where problems of housing availability and affordability most strongly affect the life course of individuals who are striving to become independent and are seeking to house growing families. For non-Hispanic whites, a handful of states continue to exhibit below average levels of headship and homeownership, including California, New York, and Massachusetts. For non-Hispanic minorities, low headship and homeownership relative to the national average for their group continues in California, New York, New Jersey, Massachusetts, and Connecticut among states with significant black and Asian populations. Illinois is also included in this group. For Hispanics, below average headship and ownership rates continue to be found in California, New Jersey and Virginia, and also in North Carolina, Georgia, and South Carolina. In addition, a host of states with slightly above average Hispanic headship continue to have very significant ownership deficits, including Connecticut, Massachusetts, Rhode Island, New Hampshire, Kentucky, and Tennessee. New York also has very low Hispanic ownership among 25-34 year olds, undoubtedly because of the high concentration of Hispanics in New York City.

C. Number of Persons per Room

Another potential indirect indicator of pressure on housing affordability might be seen in any increase in number of persons per room in owner and renter housing if occupants double up to a greater extent when housing cost burdens are high. Comparing the 1990 census and 2000 Supplementary Survey data on the change in the distribution of low (0.5 or less persons per room), medium (0.51-1.0 persons per room) and high (more than 1 person per room) density occupancy reveals no clear trend toward overall higher-density occupancy over the 1990s (Table 2). Perhaps this is not surprising given the generally large average size of housing in the U.S. compared to other countries where crowding issues are still more common, and compared to the size of housing units earlier in our history. For all states combined, high-density occupancy actually decreased slightly over the 1990s for owners, and decreased even more for renters.

While most states showed a decline in the number of high-density owner households, with just 18 showing an increase, those that did increase were typically among the states with affordability pressures that we identified earlier. These include Arizona, California, Colorado, Connecticut, Illinois, Massachusetts, Nevada, New York, New Jersey, Oregon and Washington. Clearly the forces that are tending to reduce average household size throughout the United States (declining minority fertility, divorce, delay in marriage and the start of family formation, the aging of the population) are being met by countervailing forces in some parts of the country where housing costs are high, otherwise all states would have had a decline in persons per room in owner occupied housing.

For the most part, a shift to high-density renter occupancy has also not occurred over the past decade, with just 20 states increasing the number of renter households in the high-density category. High or increasing rent burden states like Arizona, Colorado, Washington, Oregon, and Nevada are among this list of 20, but others like Florida, New York and California showed a loss in the number of high density renters. Several of these states, like Florida and California, do stand out in the growth of medium density renter occupancy, and this might reflect cost pressures to a certain degree, but might also reflect the growing influence of foreign immigration on the demography of these states. Since the available 2000 Census Supplementary Survey data on density of occupancy are not available by age of head, race/Hispanic origin, household income, immigrant status, family type or other demographic variables of interest, they are of limited use in further refining the hypothesis that increasing rent burdens have led to more doubling up.

D. Multigenerational Households

Another potential indirect indicator of growing pressure on housing affordability might be seen in the number of households with three or more generations under one roof. According to the 2000 census, almost 4 million households fell into this category (Table 3). Almost two thirds of multigenerational living arrangements (65.2%) consisted of households containing both a child and grandchild of the head. Almost all of the remainder had a child and a parent of the householder present.

Low headship/low ownership states identified earlier are also some of the ones most likely to have multigenerational households. But these are also states (New York, New Jersey, California) that have received large numbers of immigrants during the 1990s. Cultural differences in multi-generation household living arrangements between non-Hispanic whites and Asian or Hispanic immigrants can not be discounted as the proximate cause of generational doubling (or tripling) up.

The increase in out-of wedlock childbearing that has taken place throughout the country is another factor to be considered when accounting for the growth in multi-generational households. Because grandchildren are involved in the majority of multigenerational households in every state, considerations like a safe environment for their children and built-in babysitting could trump even readily available and affordable rental housing for young single parents, or even for young married couple parents, who are still in school.

Recognizing that other forces are operating to produce multi-generational living arrangements does not mean that housing affordability issues also might not be important. Another 3-to-4 million two-generational households contain children over the age of 25 who have delayed leaving the parental home for a variety of reasons. If only one third of these two and three-generational adult households were to be unbundled into affordable housing, that would represent an increase of as much as 10-15 percent of total households headed by persons below the age of 35, and a larger share of renter households.

PART 2

IV. Income Differentials and Trends

A. Trends in Median Income

1.) Median Income by Race

Housing cost burdens are jointly determined by income levels and housing prices. Income levels vary across time and space, and at different levels according to social and demographic characteristics such as age, race, sex, household composition, immigrant status and others. In looking ahead at housing affordability issues as they are likely to develop in the future, there are certain fundamental long-term income trends and differentials that must be considered. This section will examine trends and differentials in median income for the nation as a whole in order to gain a better understanding of income dynamics.

Median incomes for different groups in the United States have been trending upward on average for the past three decades, with some of the strongest increases on record occurring in the period since about 1994 (Figure 15 a). All racial groups have experienced similar increases in absolute levels of median income in the late 1990s (about $5,500) adjusted for inflation). Non-Hispanic whites have achieved this increase over a period of 6 years, blacks over a period of 7 years and Hispanics over a period of just 4 years. The increase for blacks and Hispanics, because of their lower base levels at the start of this upswing, make their proportional gains much larger than that of whites (Figures 15b-d).

If the income trends are measured from the beginning of the 1990s decade to the end, as we would if we were using Census data to measure income change, the patterns would look quite different. Hispanics showed only a modest net gain in median income of $1,283 from 1989 to 1999, as this longer period masked a substantial decline followed by an even greater increase. Non-Hispanic white households saw their median income increase by $2,635 on net over the decade, but again this trend masks a much larger swing. Blacks saw their median incomes increase by over $3,600 from 1989 to 1999, and this larger net increase is due to the fact that the average real income decline from 1989 to 1992 was more modest for blacks.

As significant as the recent upsurge in median incomes have been, we should not lose sight of the fact the past increases have been followed by periods of significant declines in median incomes as well. It is therefore very likely that we will experience a downturn in the near future, if we are not already experiencing it today. Our discussion of the relationships between housing cost burdens and headship and ownership have been based upon data from a period when incomes went up. Different results might be obtained during a period of declining incomes.

One last item of interest from these median income comparisons is to note that the underlying level of Hispanic median income has not increased much, on average, since as far back as 1972. This undoubtedly is due to the continuing influence of recent foreign immigrants in the Hispanic population. One fully expects that as the large immigration cohorts that arrived in the 1980s and 1990s increase their residency in the U.S., and contribute future generations to the native born to the population, Hispanic income trends will more closely resemble those of the total population.

2.) Median Income Trends for Young Adults by Race[5]

The recent increase in median income has been especially beneficial to young adults. Figures 16a-d show the trend between 1987 and 1999 for the youngest three age groups of household heads for the three racial groups. Focusing on the 25-34 age group, it can be seen that each racial group increased its median income by over $6,000 from their low point in the early 1990s. Blacks increased their levels by almost $8,000 for this age group, representing a whopping 38 percent growth in just 6 years. The increase for 15-24 year old black households was over 50 percent, yet still their 1999 median income level stood fully $10,000 below that of 15-24 year old white household heads and almost $8,000 below that of Hispanics.

3.) Changes in Median Income as Cohorts Age

As cohorts age they follow a typical trajectory of income, first rising as they age into the mid-50s or early 60s, and then declining (Figure 17a-d). The rise in household income is due to both rising incomes of individuals in the young and middle adult years, and to the fact that union formation is occurring causing more households to have multiple incomes. The opposite is taking place after age 55 when average individual incomes begin to decline as individuals retire or lose their jobs, and households begin to lose members through death and divorce without remarriage. This relationship between household income and age, or stage in the life cycle, is fundamental to patterns of housing consumption in the U.S. Young adults form renter households when their roots are shallow and incomes are low, and although they may endure high housing cost burdens at that time, they know that they will likely soon move into homeownership as their incomes increase. Even though initial homeowner cost burdens might also be high, stabilization of housing costs and continued increases in incomes will result in a decline in owner costs as a percent of income throughout middle age. The income tax deductibility of mortgage interest payments and growth in home equity further motivate middle age households to maintain high levels of home ownership. When incomes begin to fall, if the mortgage is paid off not only will housing cost burdens be relatively low, but also equity can be taken out of the house to raise cash whenever it is needed.

[5] Historical annual data on median income by age and other household characteristics are only available for all whites and not for non-Hispanic whites as with the data in Figure 15. Therefore, the white data in Figures 16-18 include Hispanics who identified themselves as white.

For the most part, cohort income trajectories are broadly similar in form across the racial groups. Only the levels at which they peak differ between whites and minorities. There does not appear to be significantly different paths followed by individual cohorts for either whites or Hispanics (the heads of the arrows follow closely on the tails of the cohorts that preceded them in the age structure). Successive black cohorts, however, do appear to have followed different income trajectories. Above age 55, black cohorts are tracking on higher and higher income levels, largely the result of first the migration of blacks out of the South into industrial cities in the North after World War II, and then to the subsequent transformation of the southern economy (where the majority of blacks still live) since the 1970s. We fully expect, for example, the black cohort that will be age 55-64 in 2009 to be tracking on a higher income path than the older black cohort that was that same age in 1999. In fact, it would not at all be surprising for white and Hispanic cohorts reaching age 55-64 in 2009 to also break with the pattern of the cohorts that preceded them and see their average incomes turn down less sharply during the next 10 years. Longer working life and increased income from multiple wage earners and investments for these middle-aged cohorts support such a position. A delay or moderation in the downturn would be especially important for blacks and Hispanics, many of whom have made a late entry into home-ownership, and will still be carrying a mortgage late into mid-life.

B. Income Inequality within Racial Groups

While median incomes have increased in recent years, the distribution of income within racial groups has become more unequal. Figures 18a-20a show the long-term trends in average income of each income quintile for whites, blacks and Hispanics. Figures 18b-20b show the trends in the share of aggregate income generated within each group that is captured by each quintile for the three race/Hispanic origin groups. The growing income inequality in the U.S. over the past two decades has been both persistent and dramatic.

The previous charts on trends in median incomes essentially depicted what was occurring to average incomes within the middle quintile. The magnitude of recent increases in the medians pale by comparison to the very large increases in average income in the top quintiles for all three race/Hispanic origin groups. The bottom quintile has seen practically no change in average income over the entire period covered in the charts. Invariably we must conclude that somewhere between 20 and 40 percent of all households, on average, have shown very little income progress during any period, no matter how robust the economy. These are the households that will experience the greatest problems with housing affordability as those in the higher income quintiles set market prices.

As large and persistent as the potential cadre of low income households is, some of what we have reviewed earlier might lead us to temper any initial conclusions about the nature of the housing affordability problem faced by households in the lower income quintiles. The cohort income trajectories in Figure 17 remind us that lowest-income

households are made up of both young and old householders. The young householders are in a dynamic income situation, and older householders are the most likely to be owners with paid-up mortgages and relatively fixed housing costs. As young householders move up the income heirarchy, others still younger move in to take their place. Some fall down from the higher income quintiles, but maybe only for a short time. The numbers of households that persist in being poor at a time in their lives when they are not expected to be poor is likely a small subset of the total low-income group. Of course this target category will vary by race/Hispanic origin, family structure, education, English language ability, employability, and a host of other variables that may result in this population being geographically concentrated in particular housing markets that poorly serve their needs.

C. The Increase in Low Income Ownership in the Late 1990s

The late 1990s were a period of rapid run-up in homeownership rates, and not only for households with increasing incomes, but among low-income households as well. The increase in low-income homeownership rates resulted from significant levels of net new low-income transitions from renter to owner tenure status, partly as a consequence of aggressive mortgage lending to low income households.[6] There has been some concern that a strategy of mortgage lending to low-income households based on relaxed down-payment requirements and generous income qualification criteria, in an effort to increase minority homeownership, may have resulted in a large number of low-income owners vulnerable to default on mortgages should the economy turn down. But exactly how large was the net increase in low-income homeowners and who are they?

We can examine the size of the net numerical increase in low-income owners directly by comparing ownership data from 1995 and 2000 Current Population Surveys. We measured the net change in the number of low-income owners contributed by separate 5-year age cohorts for three race/Hispanic origin groups. The results of this analysis are summarized in Figures 21a-b. The topmost panel shows the change in number of low-income owners for households falling below 50 percent of the U.S. median income ($32,140 in 1995 and $40,551 in 2000), while the bottom panel shows the same information for households falling between 50 and 79.9 percent of median income. Changes in numbers of owners can occur because low-income non-owners (either non-heads or renters) became low- income owners (or moved in the other direction), or because existing owners from a higher income group fell into the low-income categories (or moved in the other direction). The total change in low-income owners has been partitioned in each figure into three broad age groups. The period from age 15-54 is typically one where household incomes are rising and ownership is increasing. We call this the age range containing "tenure shifters". The middle age range, between 50 and 74, is one where typically there are no new net owner households being formed by cohorts, so any increase in the number of poor owners is due to "income shifting", i.e. existing owner households falling into the low-income categories. This partition is

[6] Increasing low-income homeownership rates were also due to a weakness in net new renter household formation that fell below levels expected during a robust economy.

supported by the data we examined earlier on cohort income trajectories. Finally, the end of the age range age 75+ is typically one where income is fixed and owner households are "dissolving" due to death, movement into non-household living quarters, or movement into households headed by children or other relatives.

Several conclusions can be drawn from this analysis. First, the largest component of the growth of low-income owners during the late 1990s, for both whites and blacks, came not from net gains in tenure shifters in the first age grouping, but from income shifters in the 55-74 age grouping. About 1.8 million more of the low-income owner households that were counted at the end of the five-year period resulted from income shifting. These older homeowners may or may not be in a housing affordability squeeze, depending on their mortgage situation, other expenses, etc.

The largest net gain in low-income owner households from tenure shifting was for non-Hispanic whites (about 750,000 owners in each of the two low-income categories between 1995 and 2000). This net gain is surely the result of a lot more low-income households moving into ownership over that period, but when combined with simultaneous depletion of the number from owner households moving out of the low-income categories as incomes increased, the observed moderate net gains took place. Finally, the total gains for non-Hispanic whites in low-income owners among cohorts below age 75 in 2000 were significantly offset by losses from dissolving households in the 75+ ages. Most of these losses occurred to householders age 80+ in 1995 and 85+ in 2000 (data not shown).

There has also been a significant rise in the number of low-income owners for both blacks and Hispanics below age 55, summing to about an 800,000 net minority gain combining both income categories and both minority race/origin groups. This represents about a third of the total gain in low-income owners under age 55 in the country during the late 1990s. Again, these net changes are the result of what are certainly higher levels of mortgage lending to low-income households, but also significant movement of many of these households out of the low-income categories over the 5-year period being studied. For blacks and Hispanics the losses in the older age groups were not nearly as offsetting of the gains in the younger age groups.

While these net gains in low income owners recorded in Figures 21a and 21b are not so large as to raise major concerns, they do represent a significant departure from the cohort dynamics that took place before 1995 and that established the baseline numbers of poor homeowners at mid-decade. In other words, there are about 2.5 million more owner households in the three race/Hispanic origin categories and the two low-income categories in 2000 than there were in 1995. About one third of these are minority. Some of this increase is due to the inclusion of more households in the low-income definition due to the rapidly rising median income. Much of this increase was due to declining interest rates making homeownership more affordable to low-income households. And finally, incomes will rise with seniority for many younger households in this category who became homeowners at the bottom of their cohort income trajectories, even if the economy remains in mild recession for a number of years.

V. Projected Household Growth by Tenure, Age and Minority Status

High levels of foreign immigration during the past 15 years, and high historical levels of natural increase, have propelled minority contributions to net new household formations above those of non-Hispanic whites during the 1980s and 1990s (Figure 22). Whereas minorities accounted for only 23 percent of all households in 1995, they accounted for 68 percent of the net household growth between 1995 and 2000. In 1995 minorities were only 15 percent of all owners, but between 1995 and 2000 they accounted for 44 percent of the owner household growth. Consequently, the share of owner and renter households that are minority has been increasing steadily, and is projected to continue this trend in the decades ahead. Over the next two decades, minorities are projected to increase their share of renter households from about 40 percent in 2000 to over 50 percent in 2020 (Figure 23a). Likewise, minorities' share of owner households is projected to increase from 18 percent in 2000, to 25 percent in 20 years (Figure 23b). Because we are focusing on the young adult age groups due to their particular relevance for issues of housing affordability, it is worth noting that the share that is minority for both renters and owners is higher for the 25-44 age group than it is for households of all ages.

Does a high level of projected minority household growth over the next few decades raise additional concerns about housing affordability given the lower average incomes of minorities? The answer to this question is "yes", but definitely a "qualified yes". Delving a little more deeply into the age patterns of household growth helps us to better understand the high minority impact. Figure 24a confirms that the high minority share of owner household growth is projected to continue for the next two decades at just under 50 percent for all age groups of owner households. However, for all individual age cohorts but the elderly, the minority contribution is significantly below 50 percent. For the cohorts that will be between the ages of 25 and 44 in 2020 (the echo-boom children of the baby boom generation) who will be contributing most of the new owner household formation, the share of growth is below 30 percent minority. While this level of growth is still above the 20 percent minority representation among 20-44 year old owners, it is substantially less than the total minority contribution for all cohorts cited above.

Driving the total owner minority growth shares so high are the large cohort losses among non-Hispanic white elderly owner households, negating much of the non-Hispanic white growth projected for the younger age groups. This loss is due to the significant number of owner household heads age 55+ who are non-Hispanic white and who, when they are age 75+ in 2020, will have suffered depletion in numbers due to death and loss of headship status. (Added to these losses are small fractions that shift from owner to renter late in life). Minorities simply have a lot fewer owner heads in the elderly age groups at this time, and therefore there are relatively few to be lost over the next two decades. The magnitude of these white owner losses and the location of the losses will play a large role in structuring minority owner gains in the coming decades (see below).

The minority role in projected renter household growth is greater, both in the aggregate and for individual cohorts (Figure 24b). The greatest contribution to renter growth comes from households whose heads are age 15-44. Over the next two decades minorities will contribute about half the increase for the youngest two 10-year age cohorts in this group, and virtually all of the increase contributed by cohorts who will be age 35-44 in 2020 (early echo boomers). But because of larger white losses from every cohort above age 45 (about three times as many white as minority losses), in the aggregate whites are projected to lose about 3.4 million renter total households on net over the next 20 years, while minorities are projected to gain about 5 million. This 8.4 million difference on the renter side is why the minority share of past and future total household growth is so large.

In conclusion, the changes that are projected in the shift in share of households headed by 25-44 year old minorities will tend to exert upward pressure on housing affordability. The greatest influence of racial turnover will be for renters, where 25-44 year old minority shares are already approaching 40 percent, and about half of the projected increase will be minority. On the owner side, only about 20 percent of 25-44 year old heads are minority, and about 30 percent of the projected annual increase in this age group are minority. How this minority household growth impacts affordability trends depends not only on the levels of increase in minority households, and on future income trends for minorities, but on the age and location of housing that minority owner and renter households choose to occupy. The next section demonstrates that the housing stock has been in a very dynamic state of occupancy adjustment during this past decade, and will likely continue to be in the decades ahead.

VI. The Changing Occupancy of the Housing Stock by Age of Stock, Tenure, Age and Minority Status of Household Head

The 1990s decade was one in which the older non-Hispanic white married couple population fundamentally loosened its hold on suburban housing to make way for younger minorities and unmarried heads of households. A recent Brookings Institution report (Frey, 2001) calculates that minorities were responsible for the bulk of suburban population gains between 1990 and 2000 in 65 of the nation's 102 metropolitan areas with populations above 500,000. Minority dominance of growth in these suburbs is due to the growing city-suburb migration of minorities as well as increased foreign immigration directly to the suburbs and to high natural increase of suburban minorities (young age structures with many more births than deaths). Aiding this trend in about two dozen metros was a numerical decline of the non-Hispanic white suburban population, in some cases at levels that even exceeded the white losses in their central cities.

If we partition the housing stock by year that the housing unit was built, and examine the changing occupancy by age, race/origin and family type, the rapid reconfiguration we are experiencing in our housing demography becomes evident. Table 4 summarizes the changes in housing occupancy of owners and renters that stem from changing cohort

occupancy in four vintages of housing stock.[7] Units built before 1950 represent housing stock in largely pre-war central city and old-line suburbs in older metropolitan areas and small cities and towns. Units built between 1950 and 1969 are mostly post-WWII inner-ring suburban housing tracts, and units built between 1970 and 1984 dominate the suburban housing built in the next ring out. New housing is designated as units built since 1985, and again most of this stock is found in suburban communities even further removed from the pre-1950 built housing. While the cut-off dates for each vintage category are somewhat arbitrary, they were selected to include about the same number of owner occupied units in each category in 2000.

The three older vintage categories saw a net loss from 1989 to 1999 of about 8.5 million housing units formerly occupied by mostly older non-Hispanic white heads of households. At the same time, there was a net gain of mostly younger minority headed households in these older units of about 3.5 million, leaving about 5 million units lost to occupancy or lost altogether. About 55 percent of these losses were to the renter occupied stock. There was a net change over the decade of about 6.2 million fewer married couple households and about 1.5 million more unmarried headed households occupying the three oldest vintage categories.

The loss of white households from the older vintage stock has two components. First there is the demise of households due to aging of those over age 75 that we discussed earlier. About nine million whites in this category removed themselves during the 1990s from the pre-1985 housing stock. Next there are white losses between the ages of 35 and 74 that come from a variety of causes (including death at the end of the age range), but mostly due to moving to newer housing. This represents another 8.9 million white household losses. Whites living in housing built between 1970 and 1984 constituted the largest losses in this middle age group. Many of these households would have first moved into this housing when it was new and when they were just starting or expanding their families 20-30 years ago, and would now be in the empty nest stage and approaching retirement.

In total there were almost 18 million net white household losses in the middle and older age groups in the three oldest vintage units, which was only partly offset by a 9.2 million increase in young whites under the age of 35 moving into the oldest categories. Such a cohort pattern of change was repeated in broad outline for minorities living in the older stock, except that losses due to the death of households were much smaller (fewer older heads to depart), as were losses due to out-migration of middle-aged households to newer units. Only about 2.5 million minority households were lost to occupancy on net in the middle and oldest age groups. About 6 million minorities under the age of 35 moved into pre-1985 housing on net during the decade, a number much greater than either their losses in the older age groups or their share in the total population would have predicted.

[7] No charts are presented to summarize this data, but the format of the data would allow charts similar to Figure 24 to be produced separately for the four vintage categories of owners and renters, and for the four vintage categories of married couple heads and unmarried heads (=16 charts). Reading the data in the table as if translating it into such charts is a useful way to understand the positive and negative contributions of the various cohorts.

White households who moved out of older vintage units relocated to the newer housing stock. There were 6.1 million more whites between the ages of 35 and 74 living in housing built since 1985 than there were living in these units 10 years earlier when they were age 25-64. While some of these were first-time buyers, the majority was not. There was a gain of about 4.1 million white heads under the age of 35 in 1999 also living in newer units, and many of these younger households were first-time buyers.

In light of our findings about the strong increase in incomes for three fifths of households during the 1990s, it is not surprising that whites acted to upgrade their housing in large numbers. It is also not surprising that minorities were in a position to take advantage of the newly vacated housing opportunities that were opening up in the older established suburbs. The demographic and economic momentum that supported these turnover trends in the 1990s will likely continue into the coming decades, even if income growth slows. The aging of the baby boom will contribute to the growth in empty-nest households. Baby boomer empty nesters are at a stage in their life course when incomes are peaking, and many of these households will choose to relocate to newer housing over the next decade or two. Pressure form the growing number of minority renters who wish to move into owner occupied housing is also expected to gain momentum in the decades ahead.

Out of this high level of demographic turnover of the stock, formerly occupied by older white household heads, affordable housing units will likely filter into to the market. It is also out of this high turnover that affordable units are lost to the stock as some of the housing is torn down to make way for larger units or converted to non-residential use, or left vacant or boarded up because of its poor condition. Exactly how these two processes will balance out to result in a net gain or a net loss of affordable units will vary from place to place.[8]

When long-form data from the 2000 census are released as Public Use Microdata files in 2002, we will be able to extend this type of cohort analysis of housing turnover by focusing on particular geographic locations and on different household and housing characteristics, including housing value, household income and structure type. How the existing housing stock accommodates different demographic groups of low and moderate income households, and how this has changed between the last two censuses, needs to be determined before future trends in housing affordability can be forecast. By mid-decade we also will be able to examine such housing trends over shorter periods of time using data from the American Community Survey.

[8] A recent study finds that rental units are more likely to filter out of affordable status in neighborhoods where other rental housing is less affordable to low-income households (Sommerville and Holmes, 2001). Units filtering into the affordable stock was more difficult to identify, except that the chances increased if the neighborhood contained a high concentration of other affordable units. The importance of neighborhood characteristics over unit characteristics in determining which units become or remain affordable underscores the significance of neighborhood demographic change for affordability trends.

VII. Concluding Observations

One key to understanding housing trends of the past decade was the large increases in incomes that took place in the mid-and late-1990s. Income increases helped boost investment in owner housing, which for a majority of states also meant increases in the share of income spent on homeownership.

Income increases kept ahead of rent increases in about 40 percent of the states, and the opposite was true in the remaining 60 percent. States where rent increases prevailed and rental housing became less affordable tended to be places where population growth rates were the greatest.

Differences between whites and minorities in both headship and homeownership rates for young adults are significant, and part of these differences are due to long-term differences in average household incomes among the different race/Hispanic origin groups. The differences in headship and ownership we document by state suggest that overall state differences in minority composition will surely be confirmed as important in explaining overall state differentials in housing affordability measures once the appropriate 2000 census data are released.

Income growth and differentials are important and neglected dimensions of research on changing housing affordability. A big unanswered question is "What will happen to housing affordability if and when incomes move down instead of up?" Simply studying trends during the 1990s offers few downward trending observations from which to extrapolate. We need to go deeper into our history, rely more on biennial American Housing Survey data, and choose locations and dates that deliberately contrast different phases of the economic cycle in order to answer this question.

Low-income households that are young are in a dynamic phase of their life cycle on income and household composition, and this further complicates any attempt to pin down affordability problems that are long-term. We need to measure and project the fraction of low income households at any given point in time that are likely to be stuck in this status for an extended period of time to truly estimate demand for affordable housing.

The aging and diversification of households in terms of race/Hispanic origin and marital status of head is a presently a very dynamic dimension of our housing demography, but one we can forecast at the national level with some confidence. Translating national trends in household aging and diversification down to the local level is another matter altogether. Some dimensions of this challenge can be more easily addressed, as with our understanding of household changes taking place in different vintages of the housing stock. But making the leap from broad national trends to trends for local housing markets requires a greater understanding of the diversity in housing demography that exists around the country. Yet to be released 2000 census data and the new American Community Survey data will greatly facilitate progress in this direction.

References

Goodman, Jack. 2001. “Housing Affordability in the United States: Trends, Interpretations, and Outlook.” A report prepared for the Millennial Housing Commission.

Sommerville,Tsuriel, and Cynthia Holmes. 2001. “Dynamics of the Affordable Housing Stock: Microdata Analysis of Filtering.” *Journal of Housing Research*, v.12: 115-140.

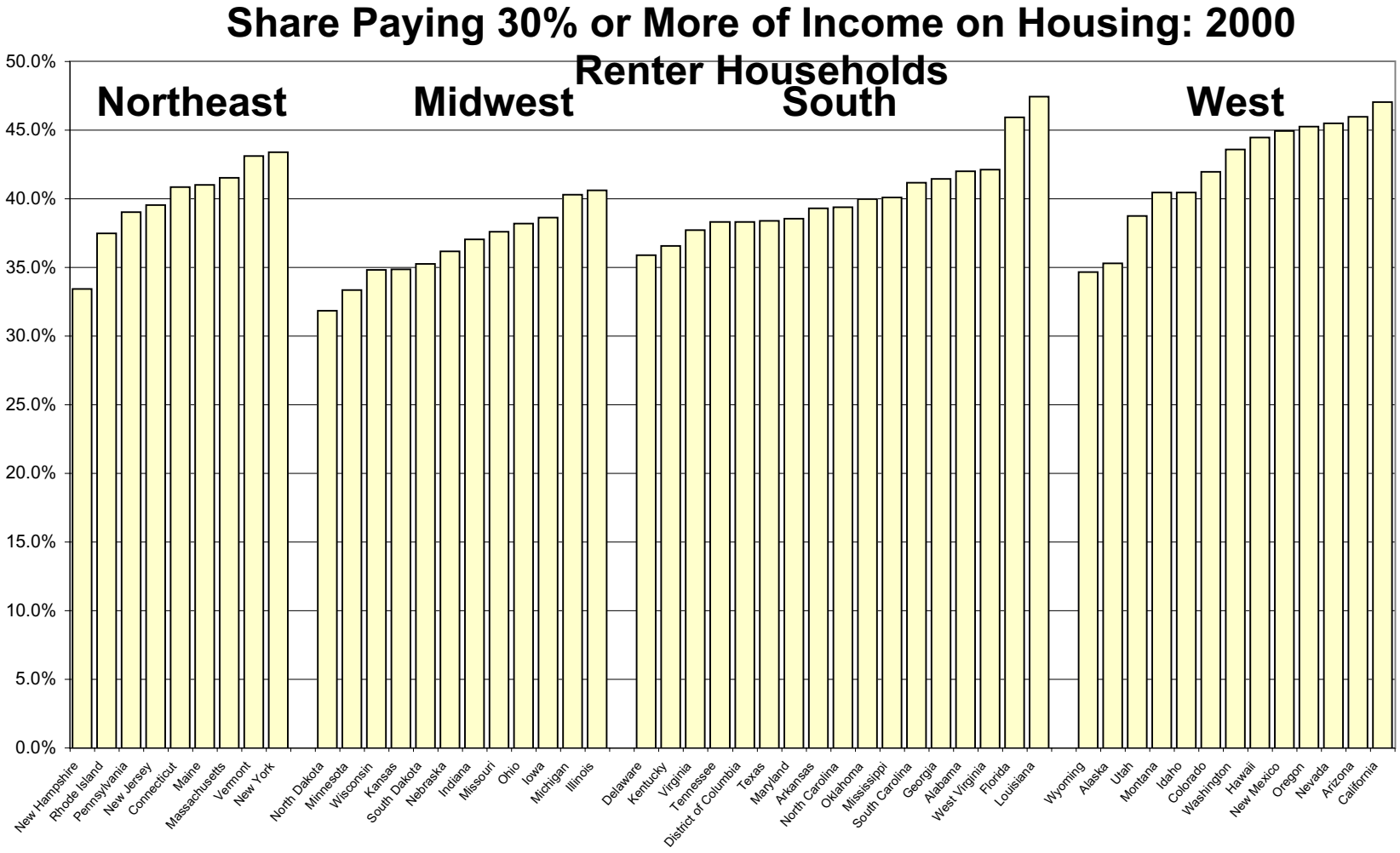
U.S. Census Bureau. 2001. “Housing Characteristics: 2000.” A Census 2000 Brief. C2KBR/01-13.

Frey, William. 2001. “Melting Pot Suburbs: A Census 2000 Study of Suburban Diversity.” Brookings Institution Center on Urban and Metropolitan Policy.

Masnick , George S. 1998. "Understanding the Minority Contribution to U.S. Owner Household Growth." Joint Center for Housing Studies, Harvard University, Working Paper W98-9.

Masnick , George S., and Zhu Xiao Di. 2000. "Updating and Extending the Joint Center Household Projections Using New Census Bureau Population Projections." Joint Center for Housing Studies, Harvard University, Re

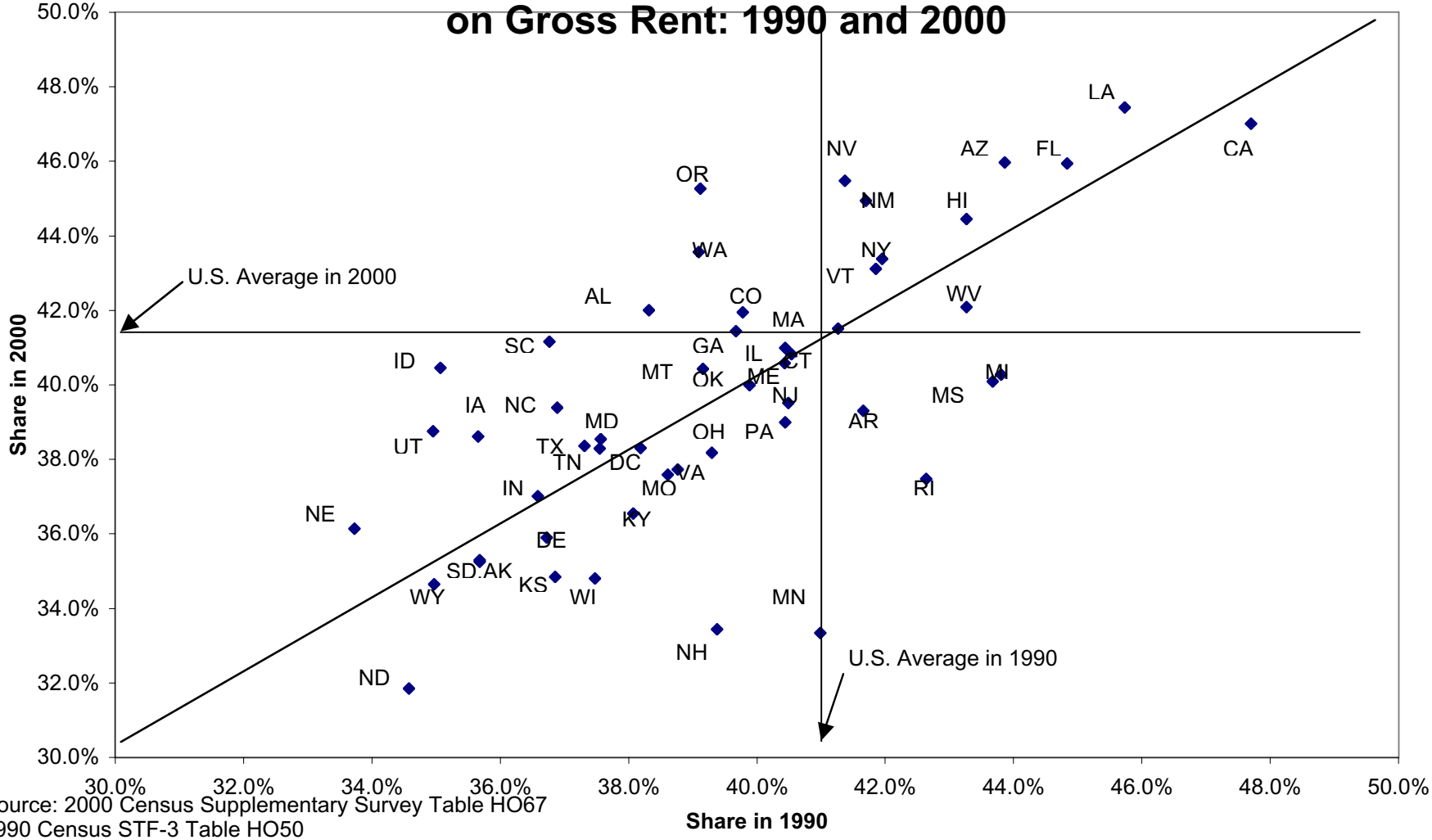
Figure 1



Source: 2000 Census Supplementary Survey Table HO67

Figure 2

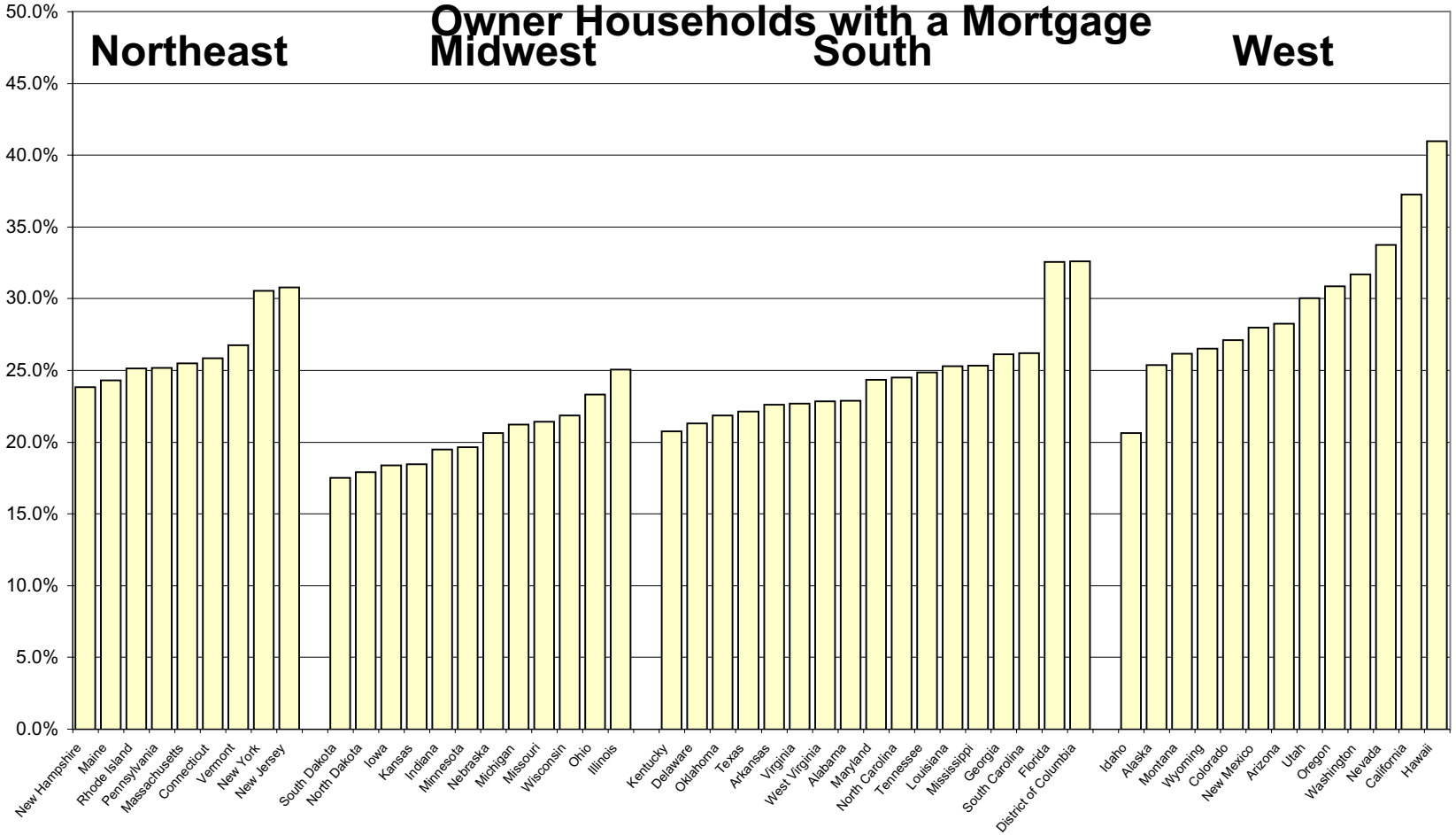
Share of Renter Households Spending 30% or More of Income on Gross Rent: 1990 and 2000



Source: 2000 Census Supplementary Survey Table HO67
1990 Census STF-3 Table HO50

Figure 3

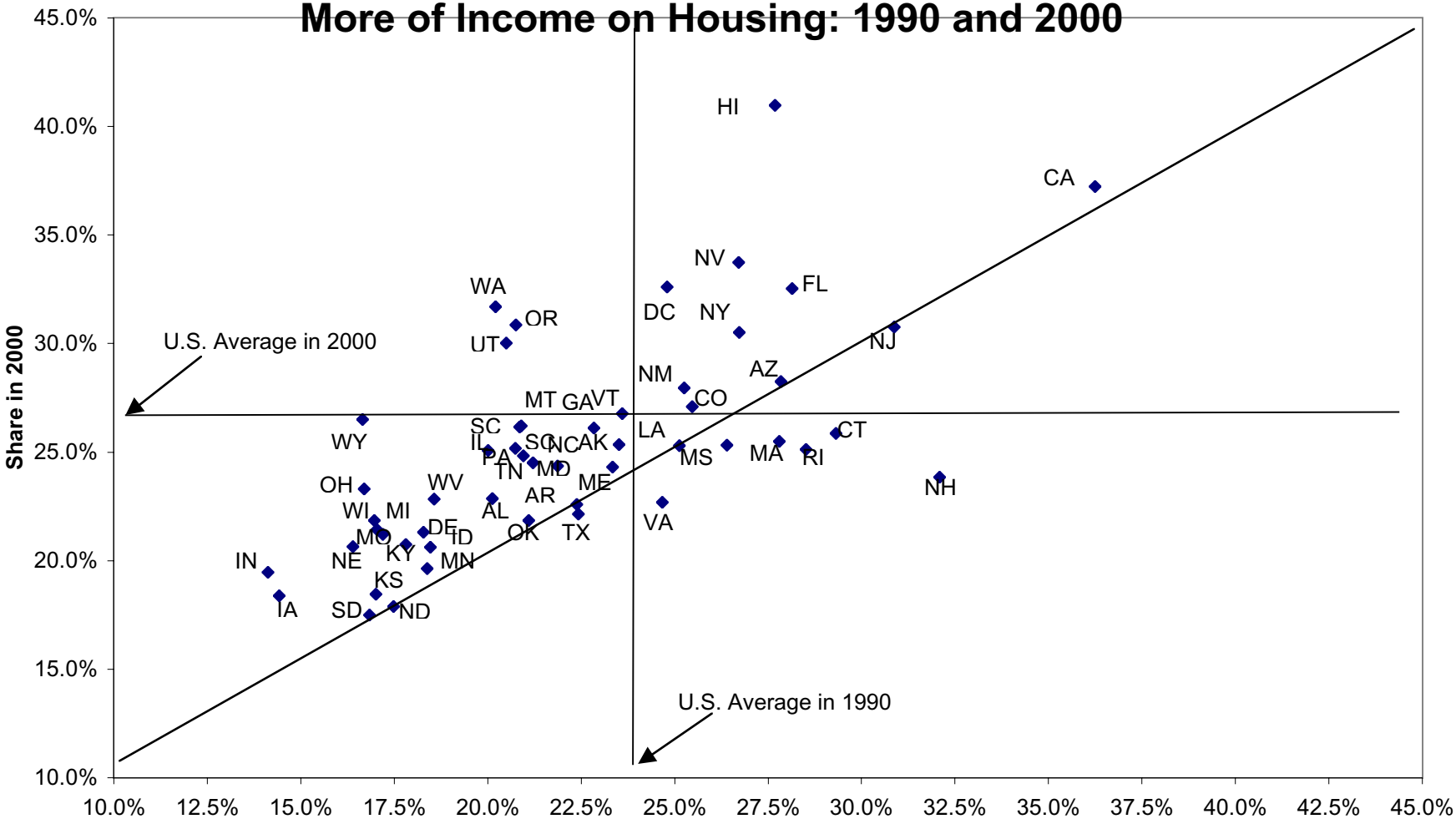
Share Paying 30% or More of Income on Housing: 2000



Source: 2000 Census Supplementary Survey Table HO88

Figure 4

Share of Owner Households with a Mortgage Spending 30% or More of Income on Housing: 1990 and 2000



Source: 2000 Census Supplementary Survey Table HO88
1990 Census STF-3 Table HO58

Figure 5

Relationship between Share of Households with High Owner and High Renter Cost Burdens

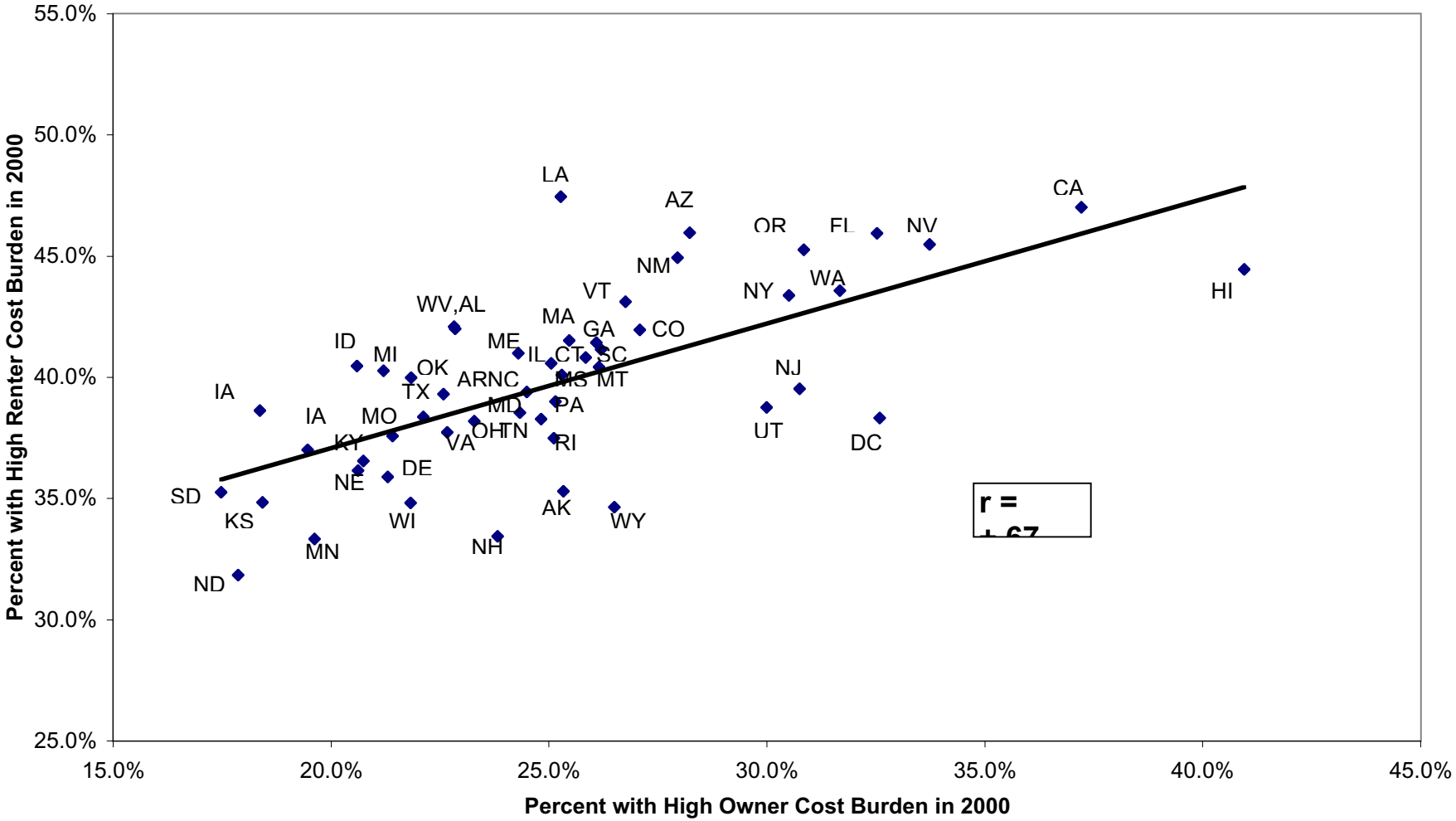
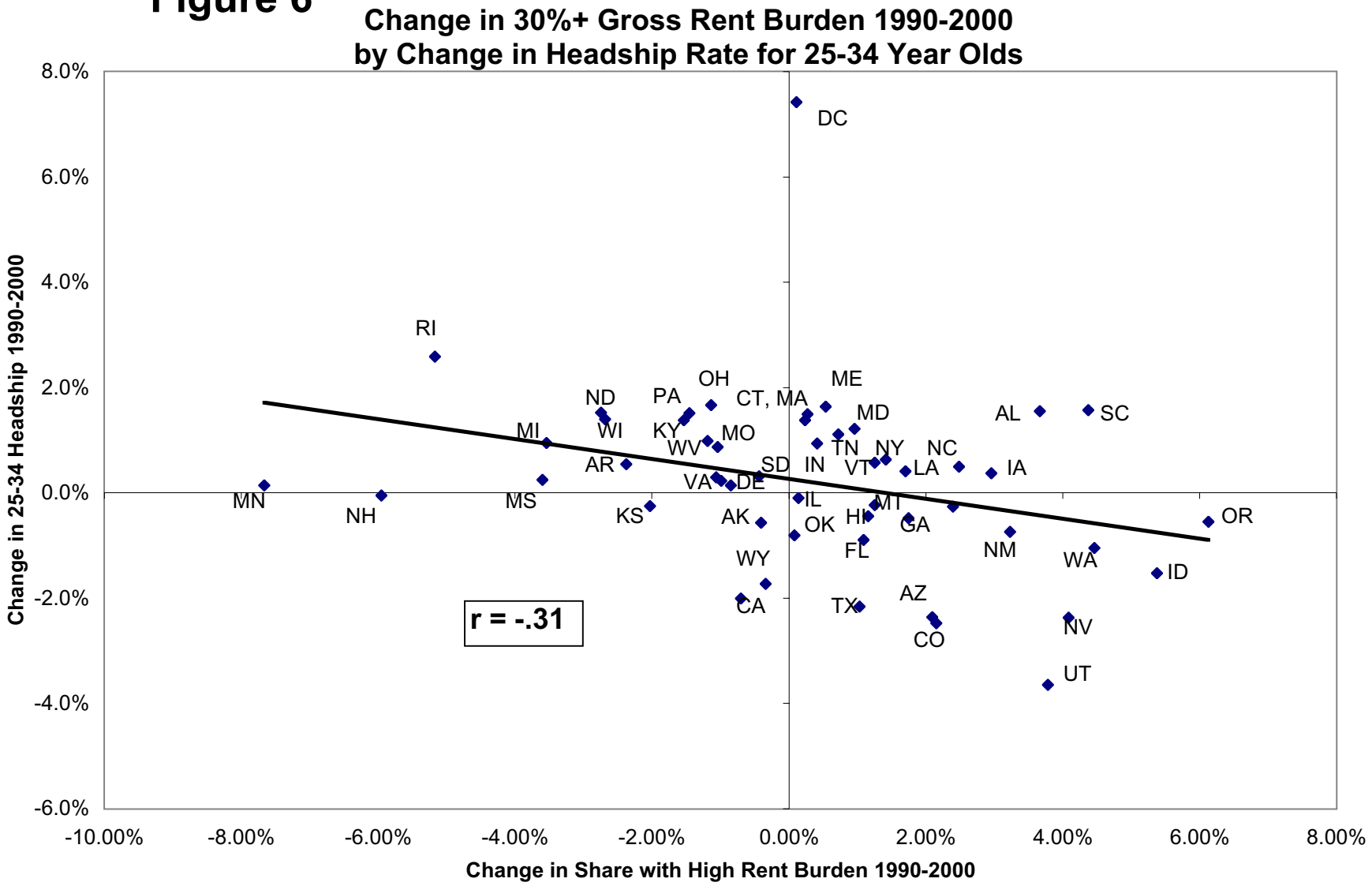


Figure 6


Change in 30%+ Gross Rent Burden 1990-2000
by Change in Headship Rate for 25-34 Year Olds
Change in 25-34 Headship 1990-2000
Change in Share with High Rent Burden 1990-2000
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
-6.0%
-10.00%
-8.00%
-6.00%
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HI
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OR
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FL
NM
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UT

Figure 7

Change in Gross Rent 1990-2000 (Constant $1999) by Change in Headship Rate 1990-2000 Heads Age 25-34

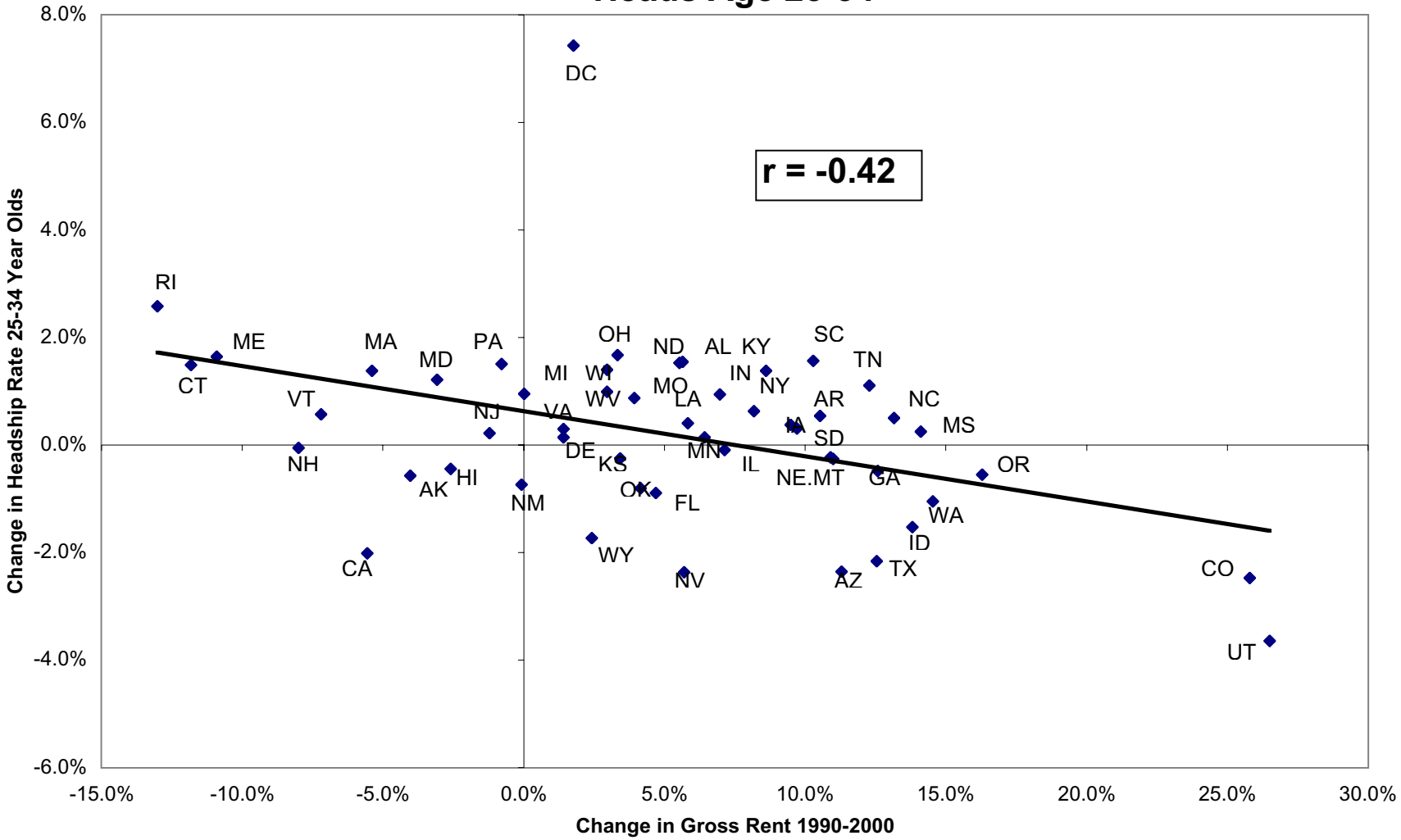

Figure 8

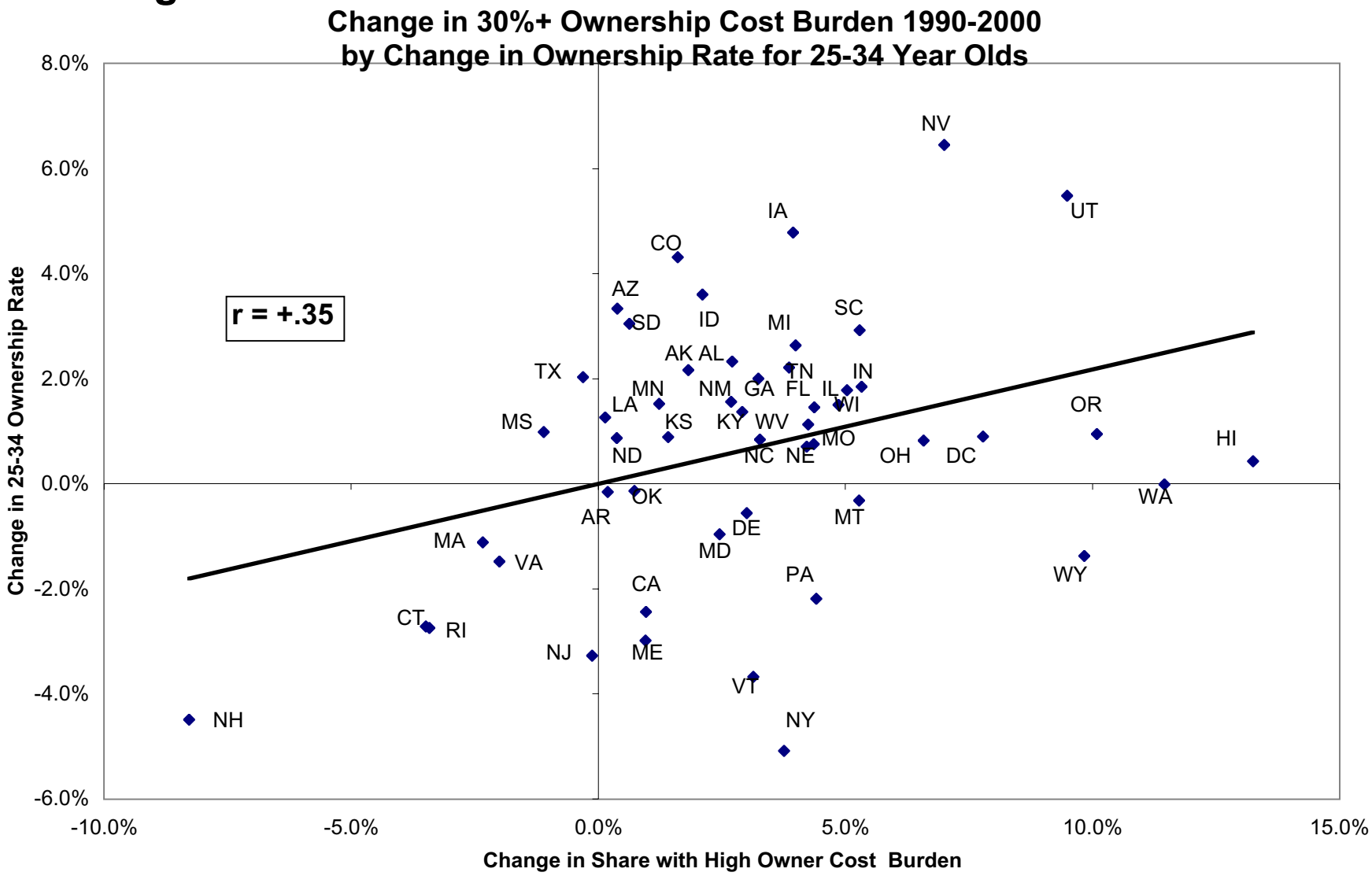
Change in 30%+ Ownership Cost Burden 1990-2000
by Change in Ownership Rate for 25-34 Year Olds
r = +.35
Change in 25-34 Ownership Rate
Change in Share with High Owner Cost Burden
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
-6.0%
-10.0%
-5.0%
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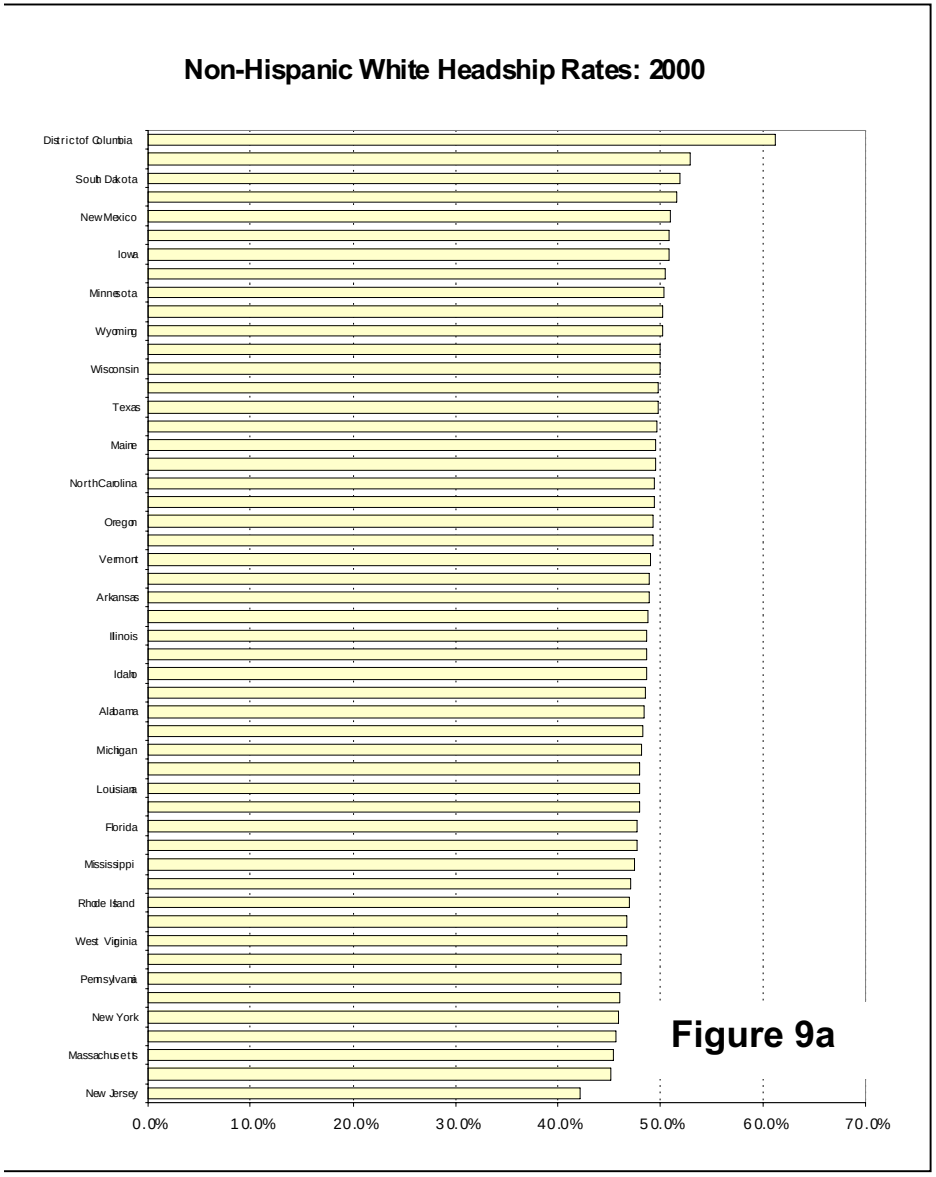
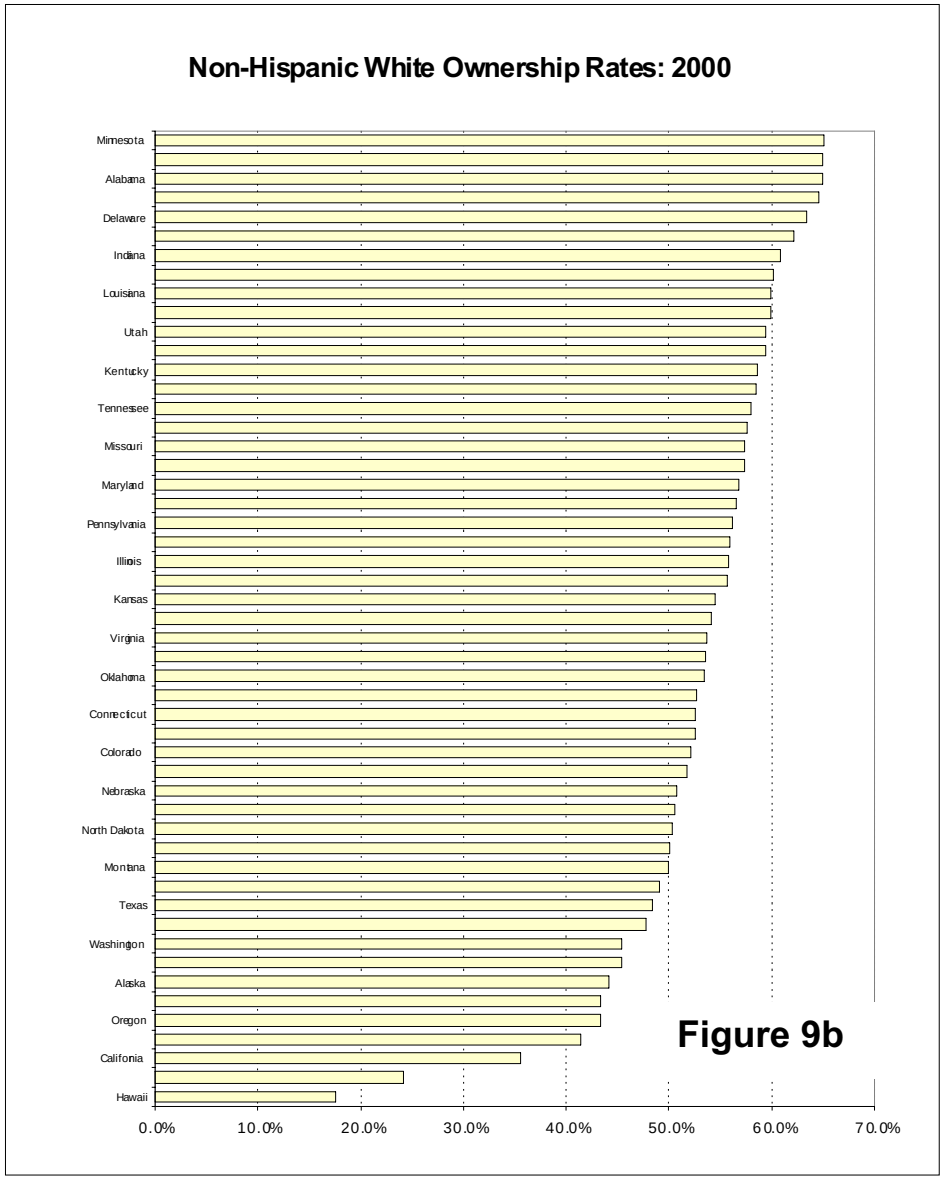
Figure 9

More State Variation in Ownership than in Headship for Non-Hispanic Whites Age 25-34

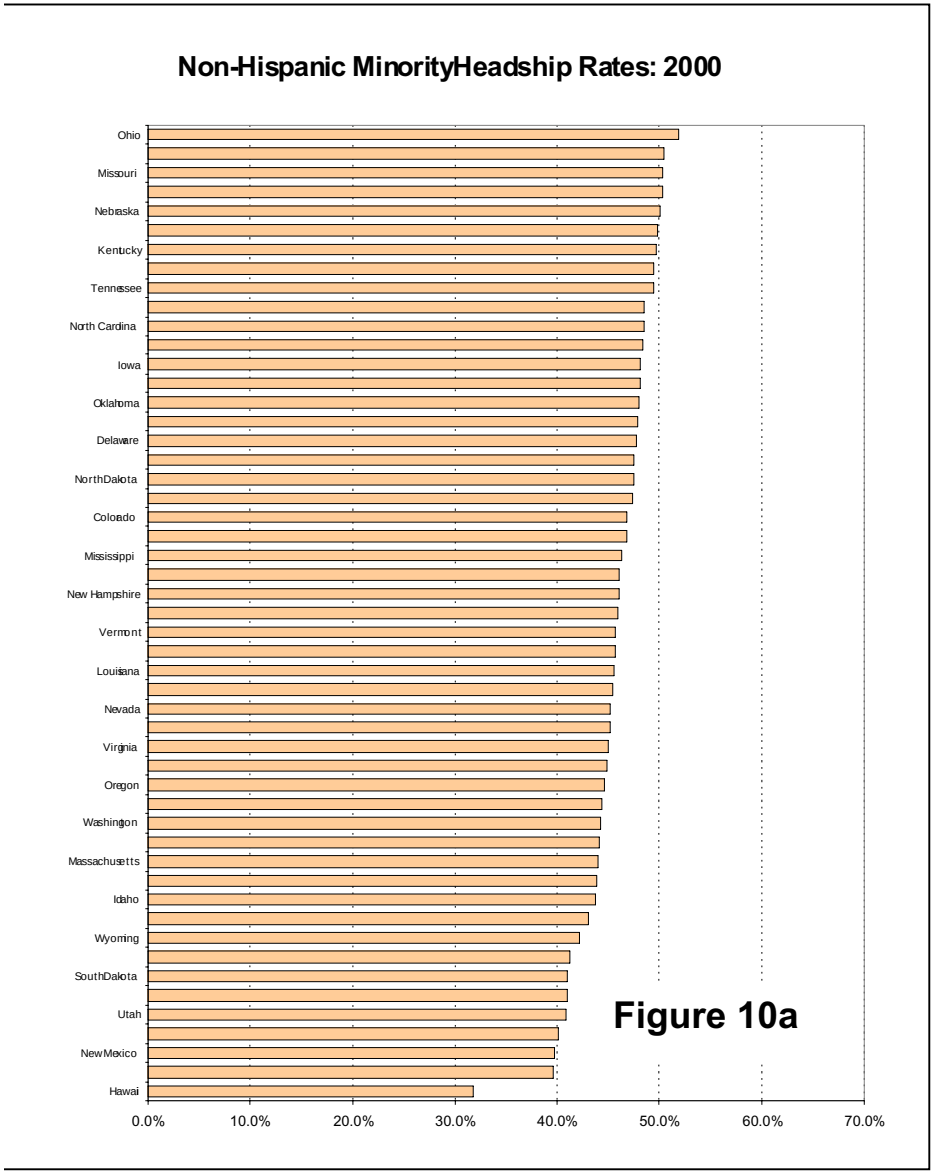


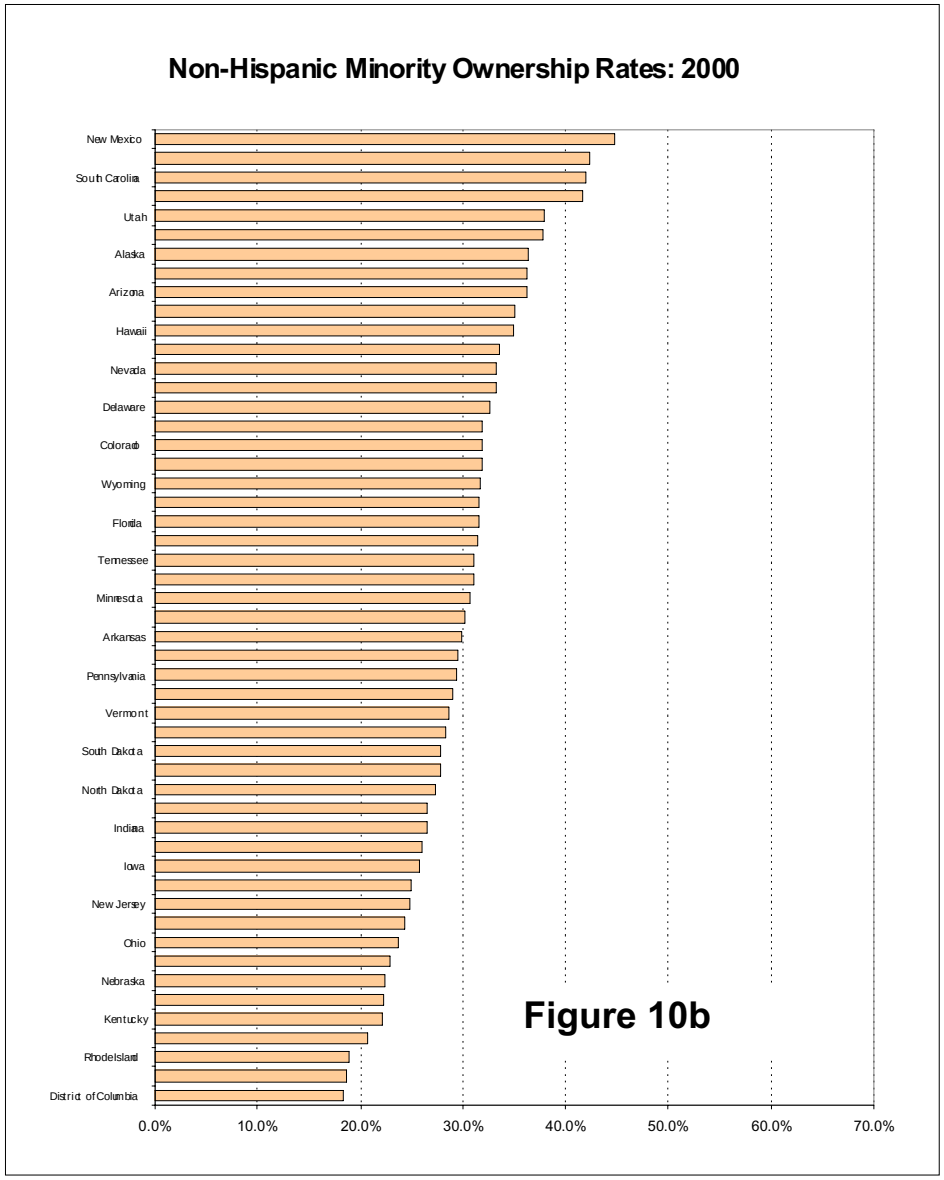


Source: 2000 Census STF-1 100% Count Files

Figure 10

Non-Hispanic Minority Headship and Ownership for 25-34 Year Olds Lower than White Rates

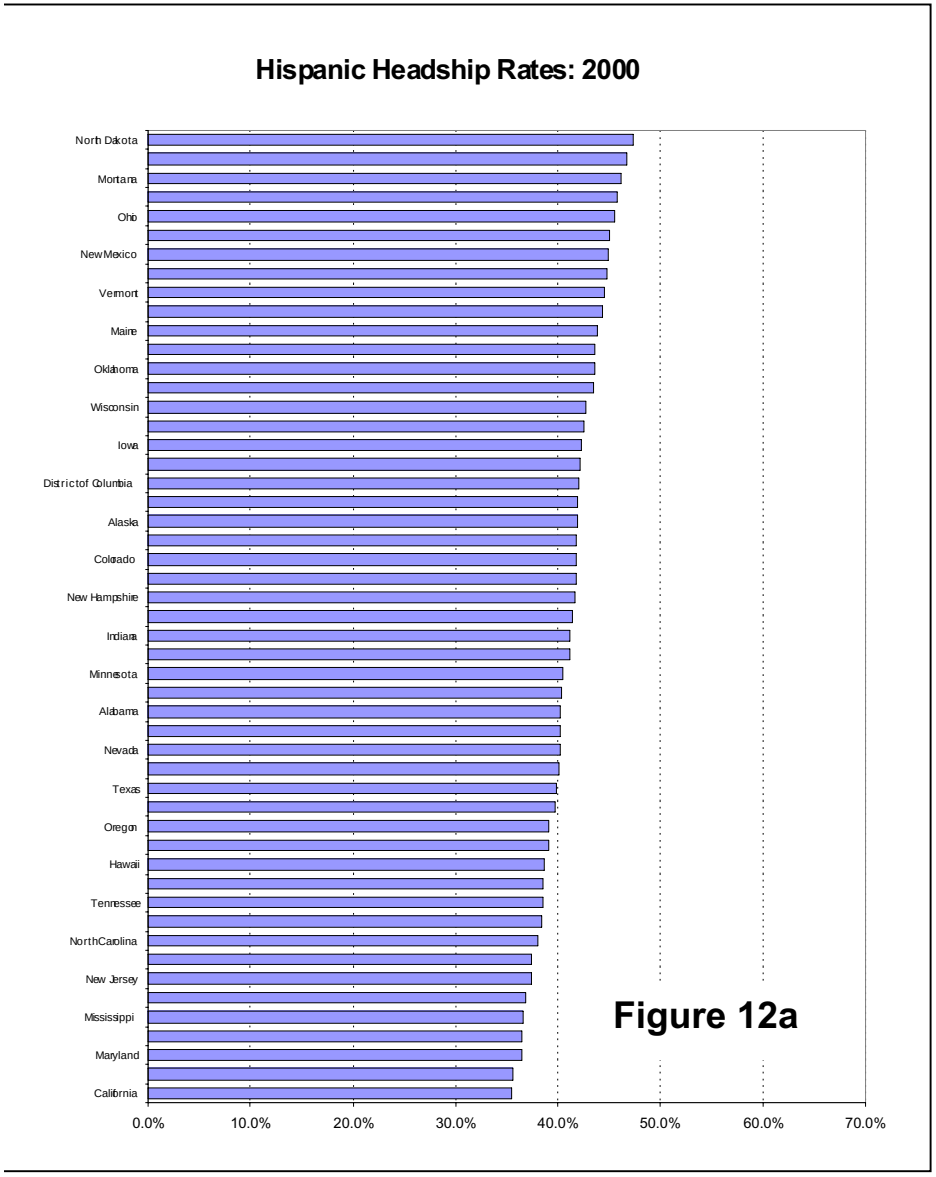


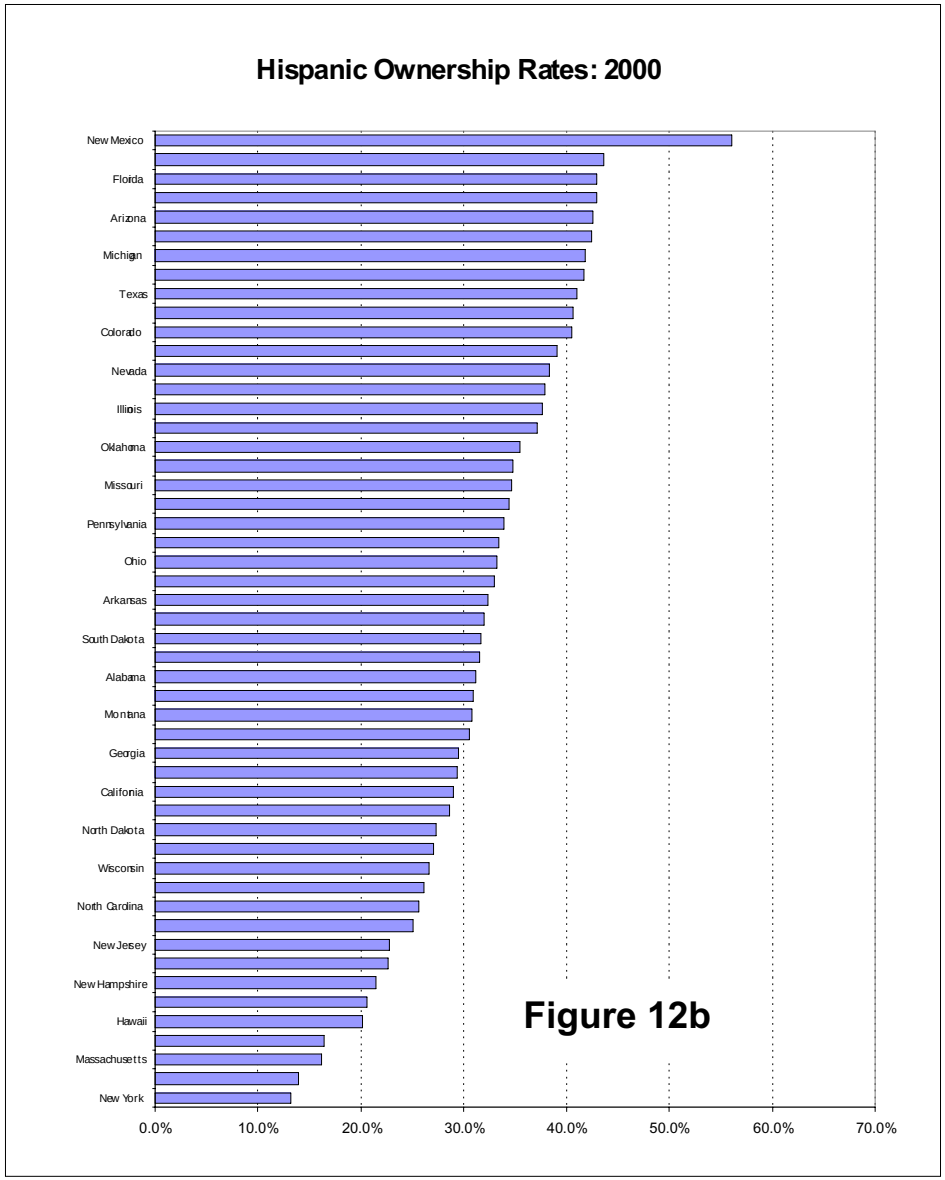


Source: 2000 Census STF-1 100% Count Files

Figure 11

Hispanics Have the Low Headship and Variable Ownership Rates for 25-34 Year Olds

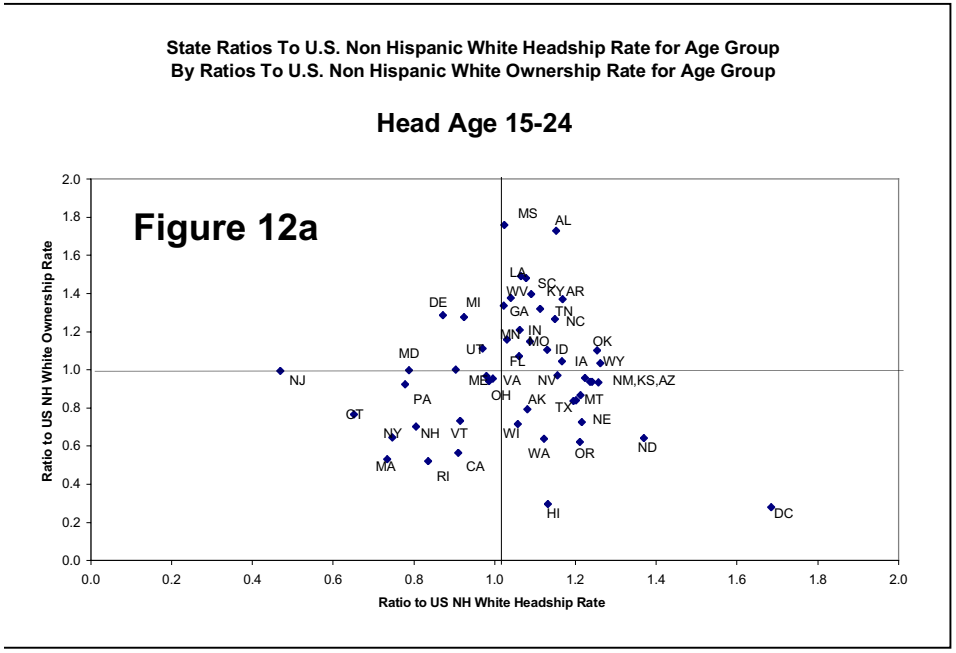


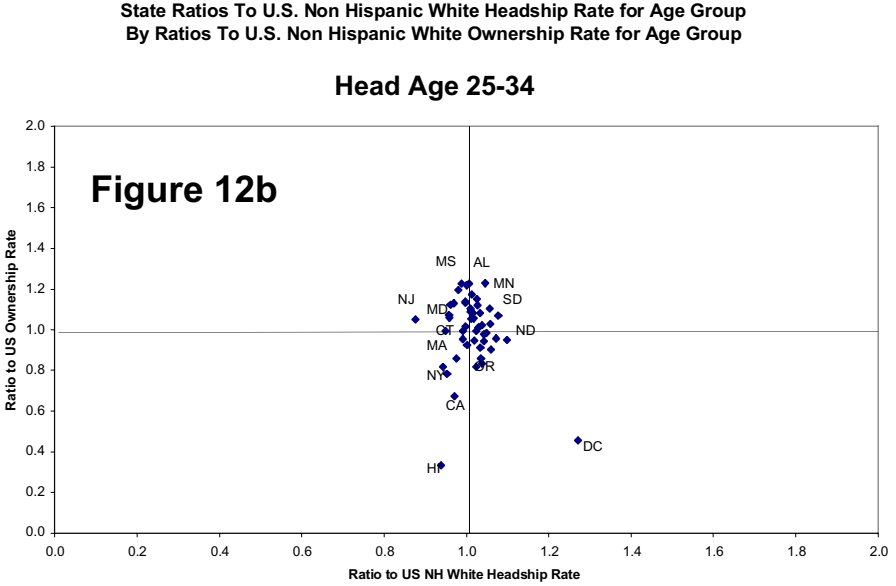


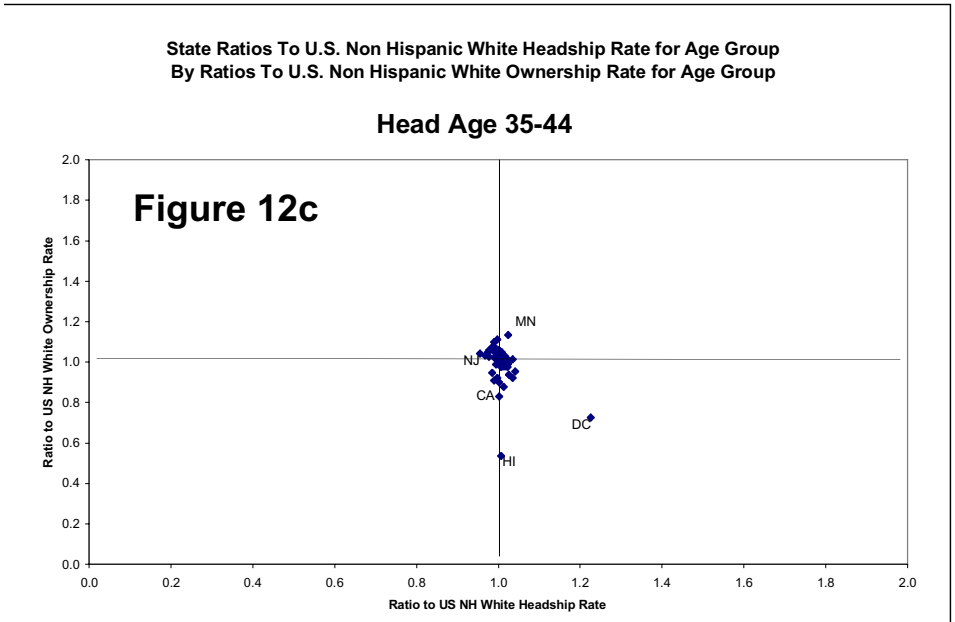
Source: 2000 Census STF-1 100% Count Files

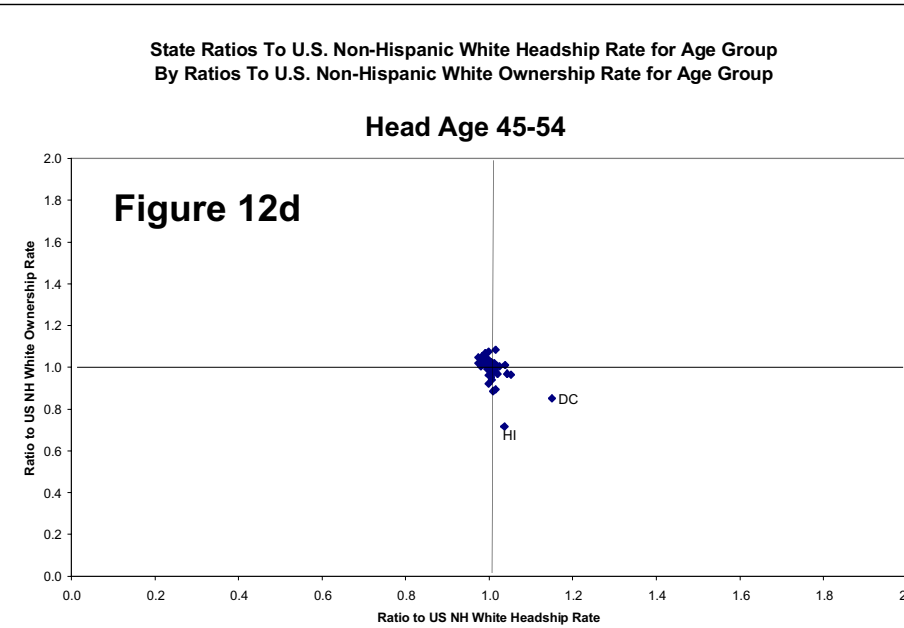
Figure 12

Non-Hispanic Whites Quickly Achieve Uniformity across States in Household Formation and Homeownership

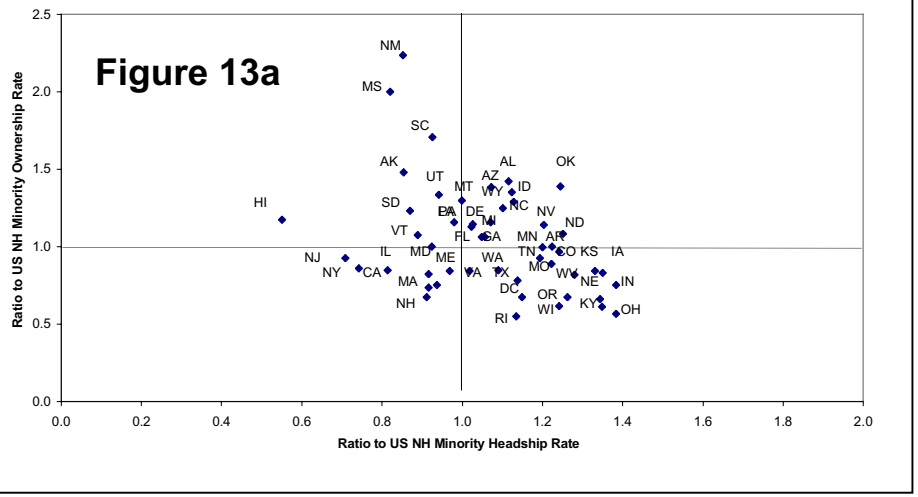


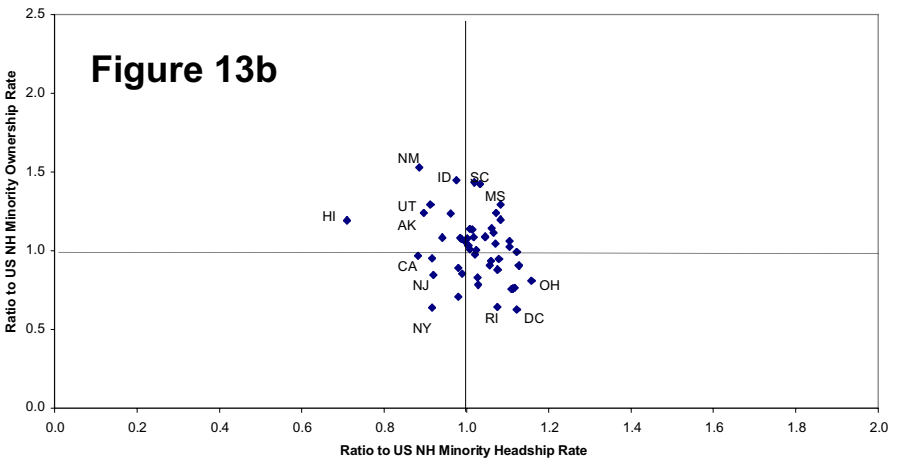


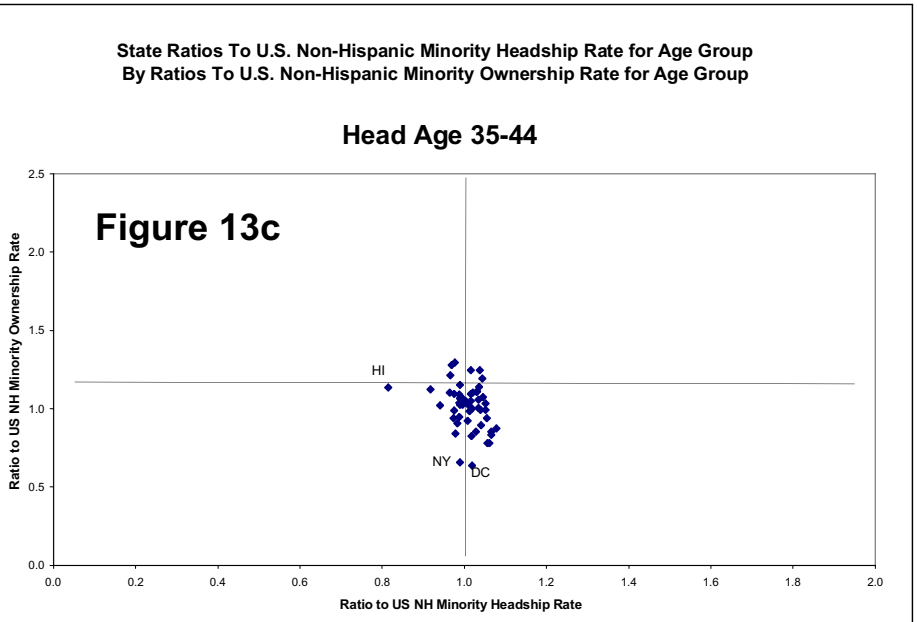




Non-Hispanic Minorities Achieve National Uniformity in Household Formation and Homeownership More Slowly







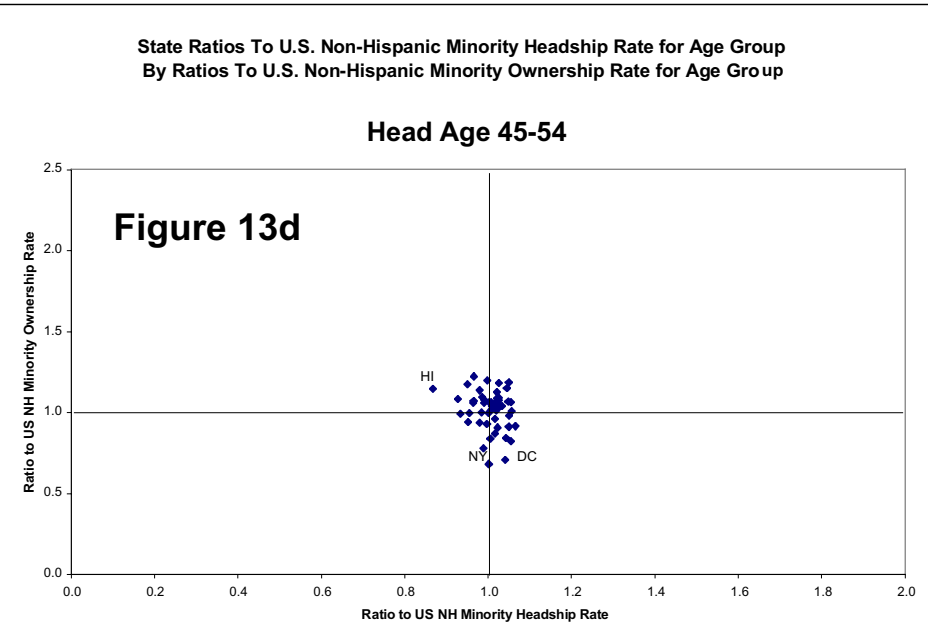
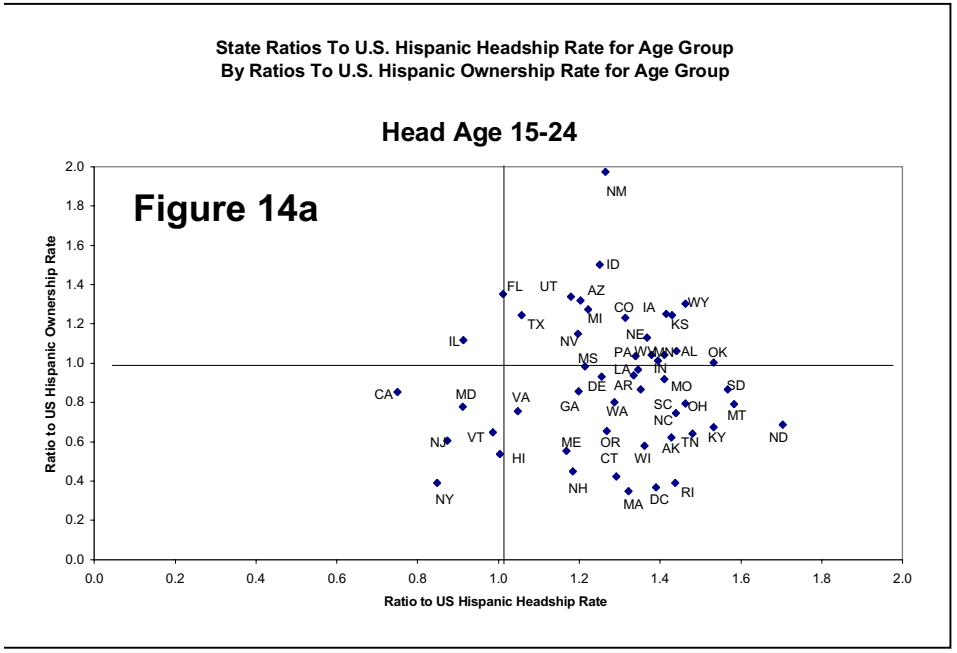
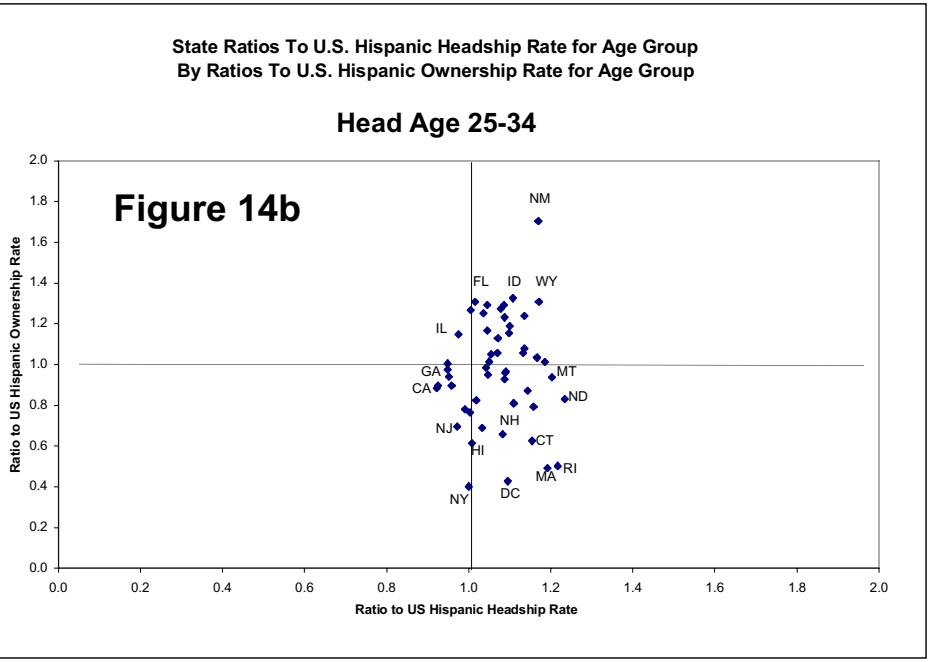
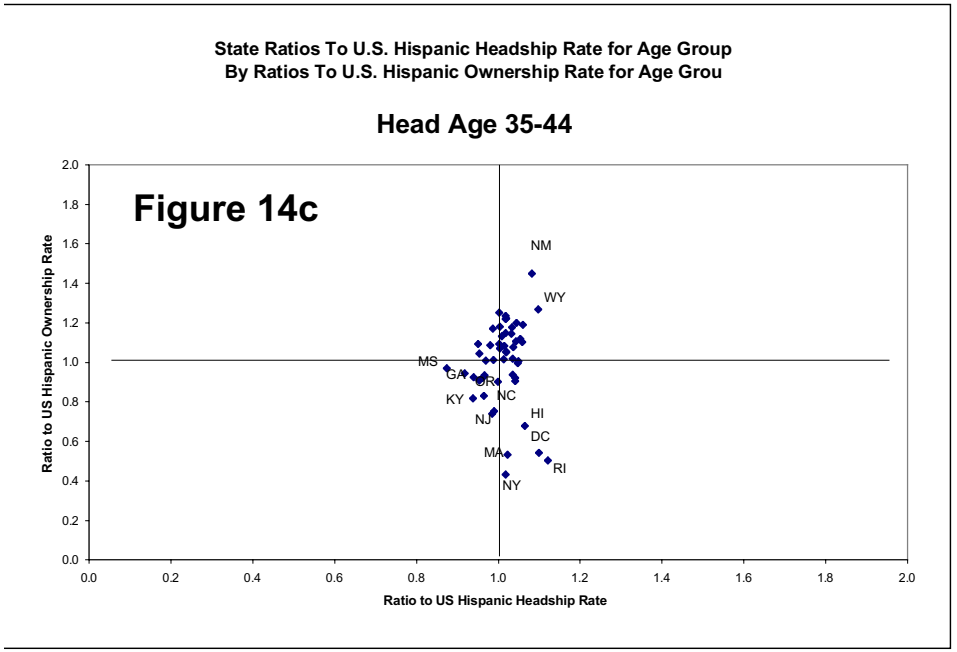


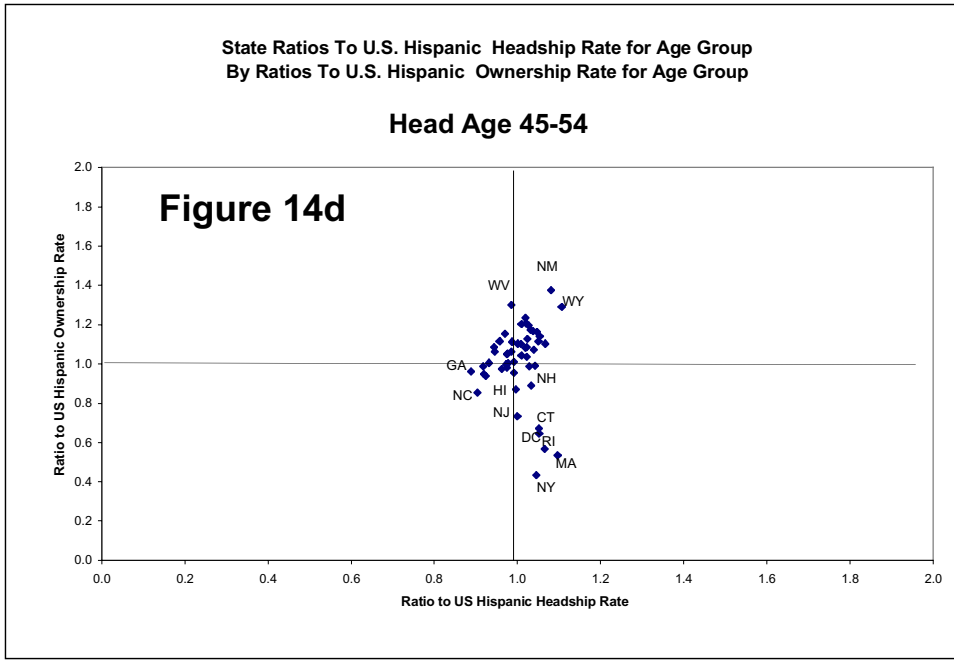
Figure 14

Hispanics Household Formation and Homeownership Remains Variable Across States through Middle Age



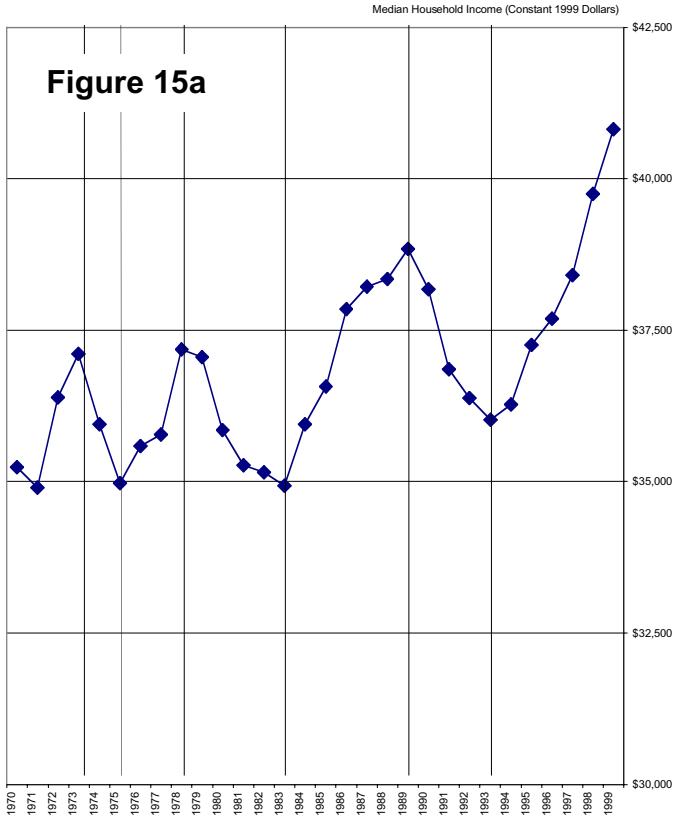




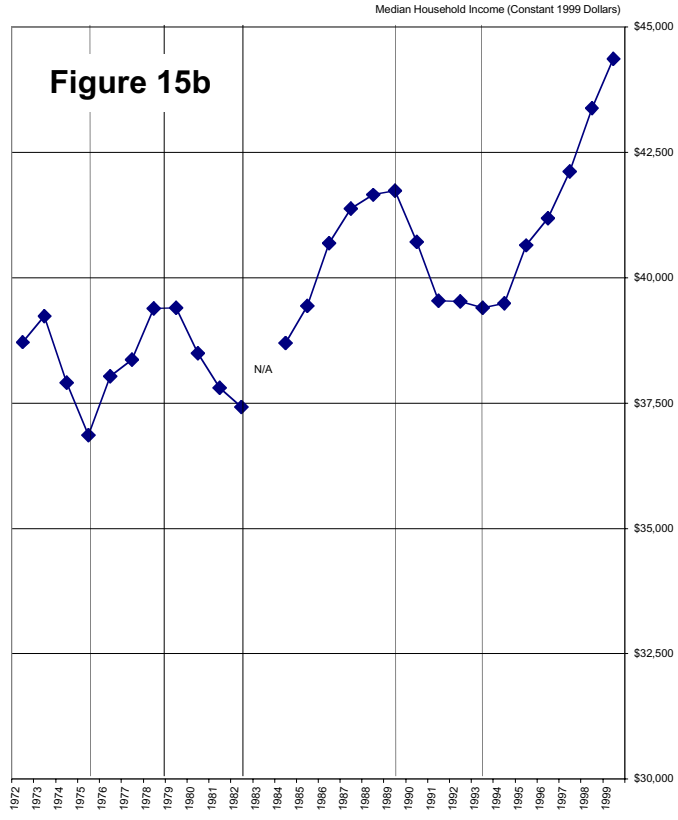


Median Household Income by Race: 1970-1999

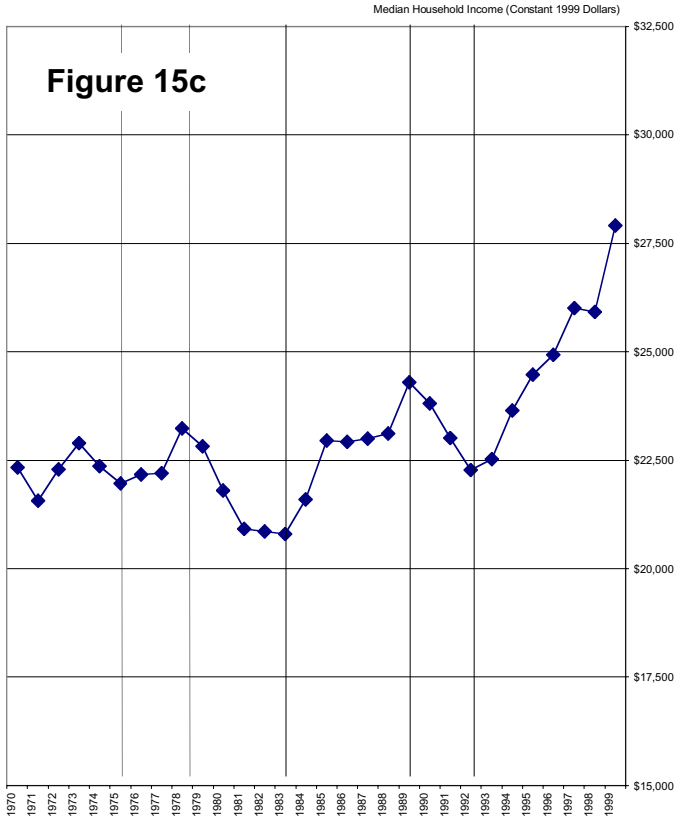
Total Households



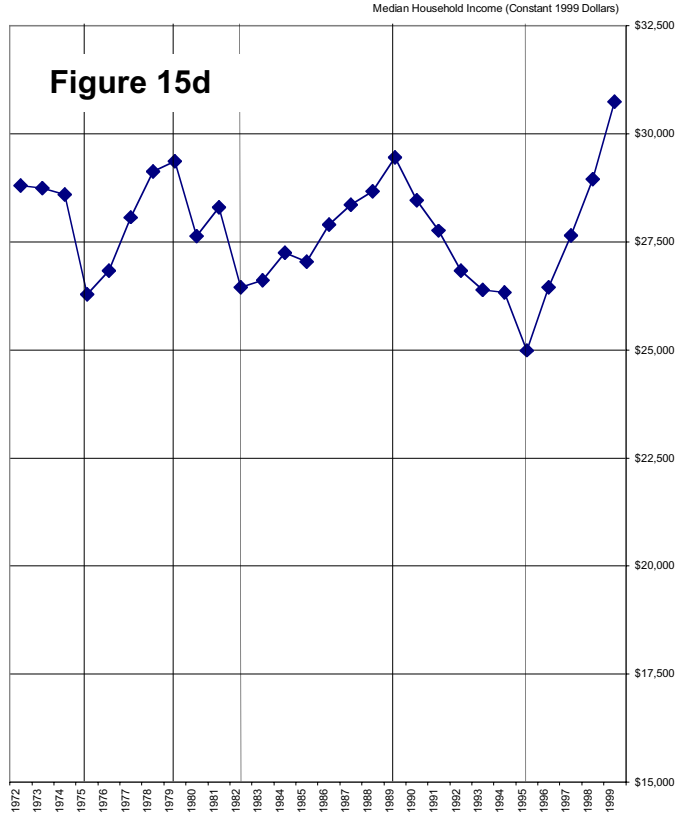
Non-Hispanic White Households



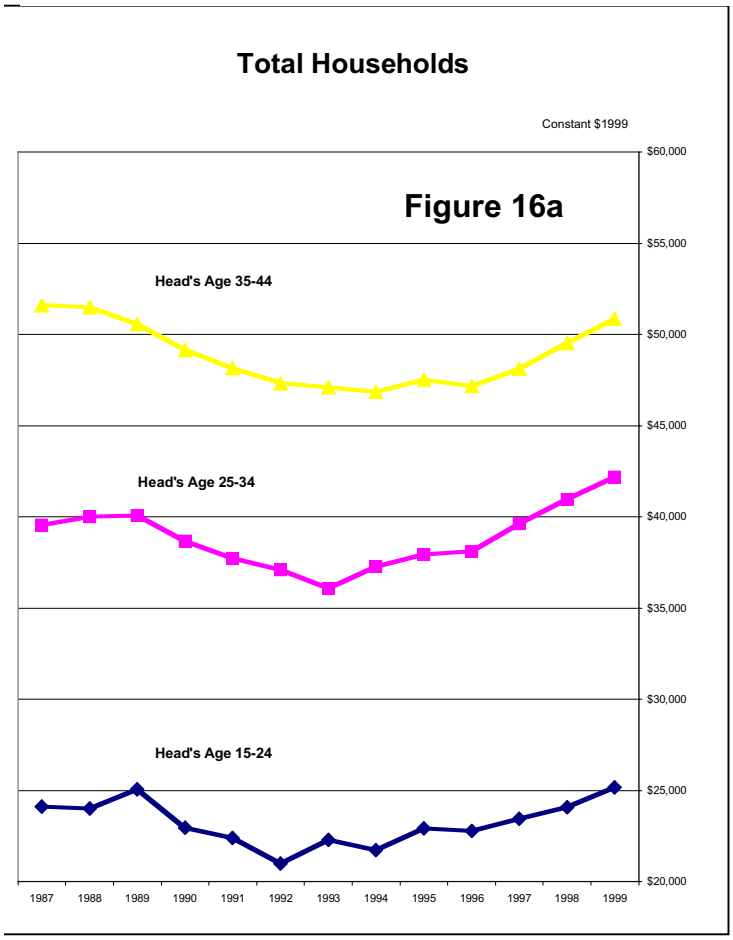
Black Households

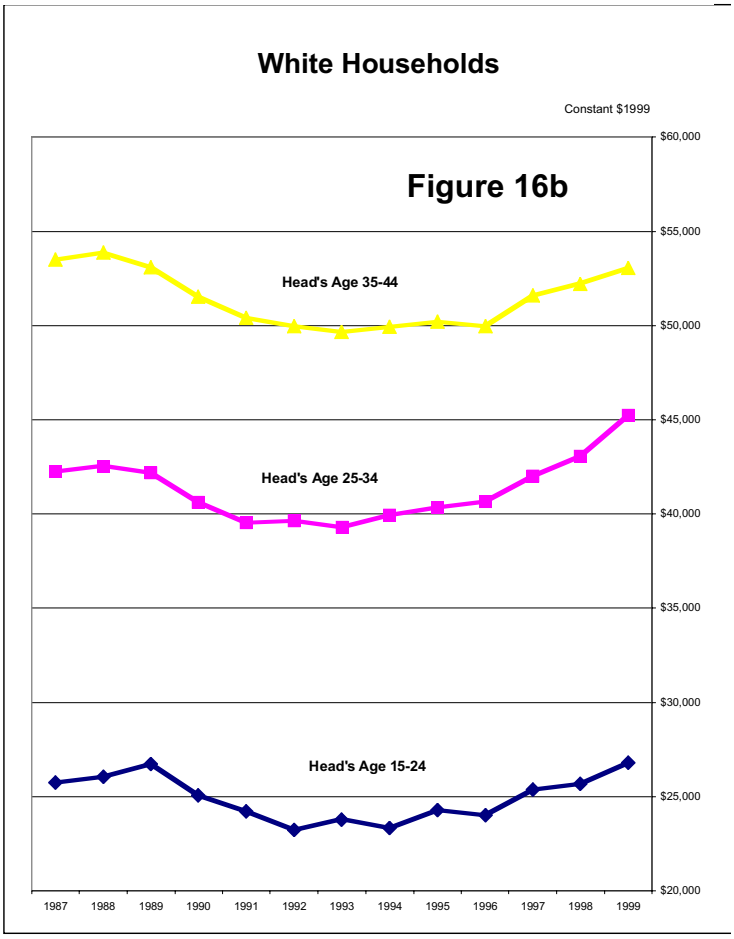


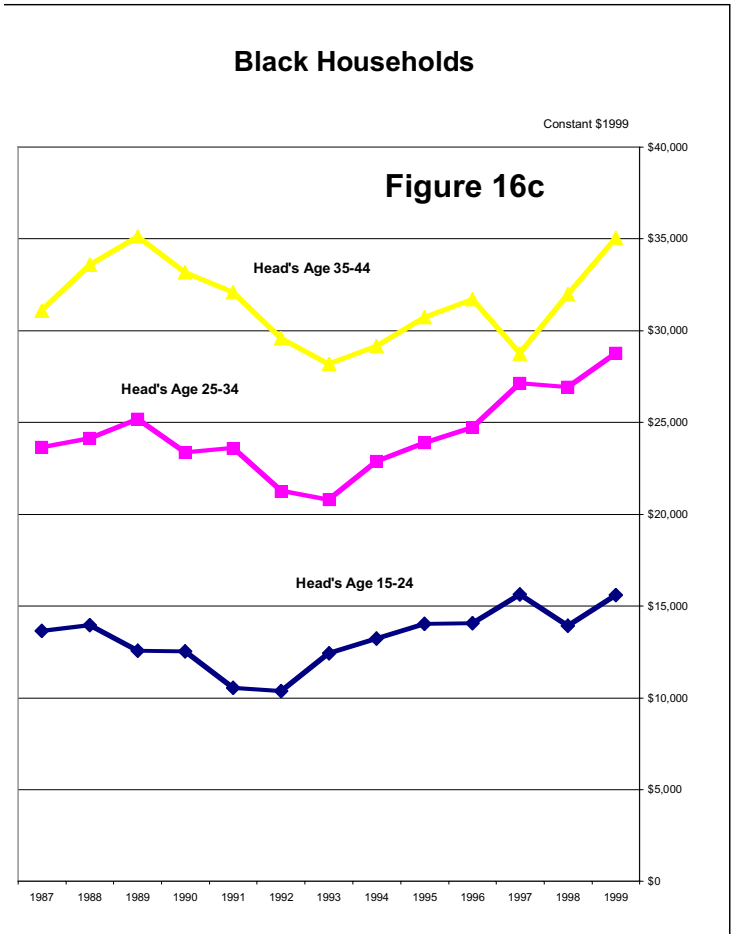
Hispanic Households



Median Household Income by Race and Age of Head for Young Adult Households: 1987-







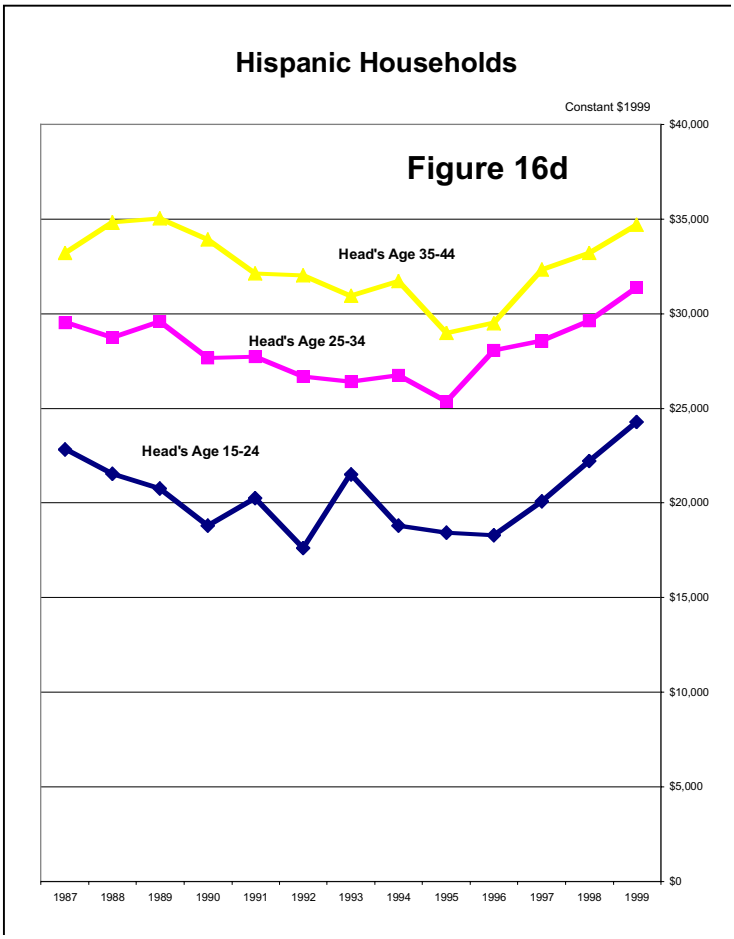


Figure 17

Change in Median Income for Cohorts by Race: 1988-1998

Figure 17a — Total Households

(3-Year Averages)

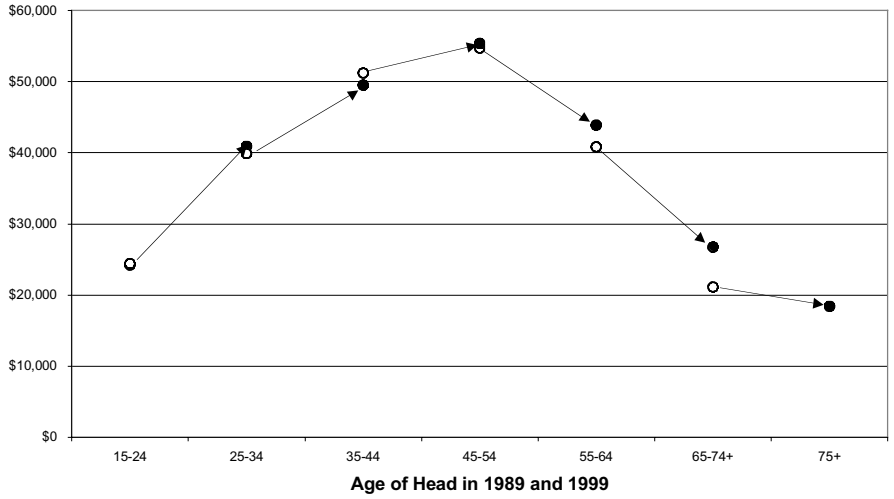


Figure 17b — White Households

(3-Year Averages)

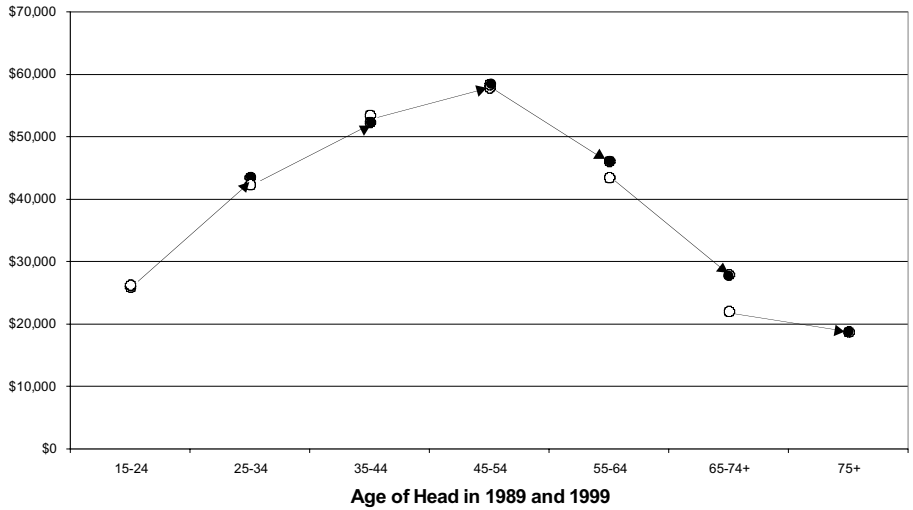


Figure 17c — Black Households

(3-Year Averages)

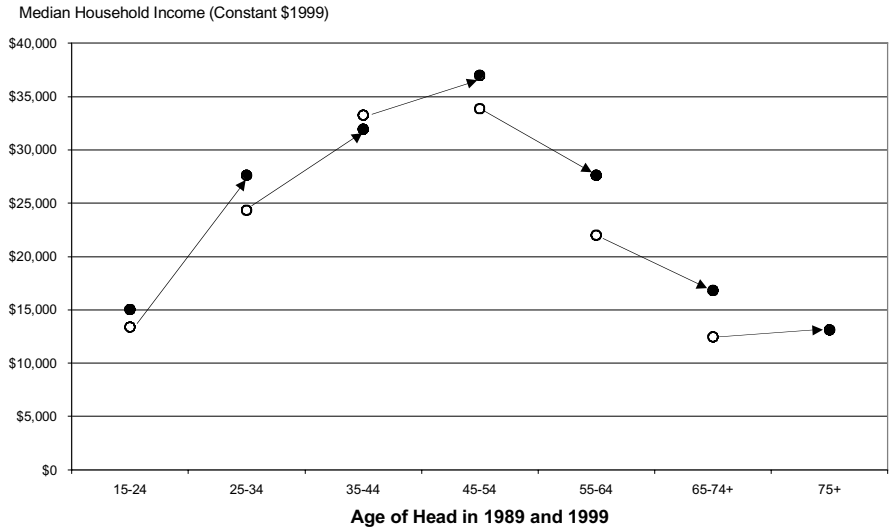


Figure 17c — Hispanic Households

(3-Year Averages)

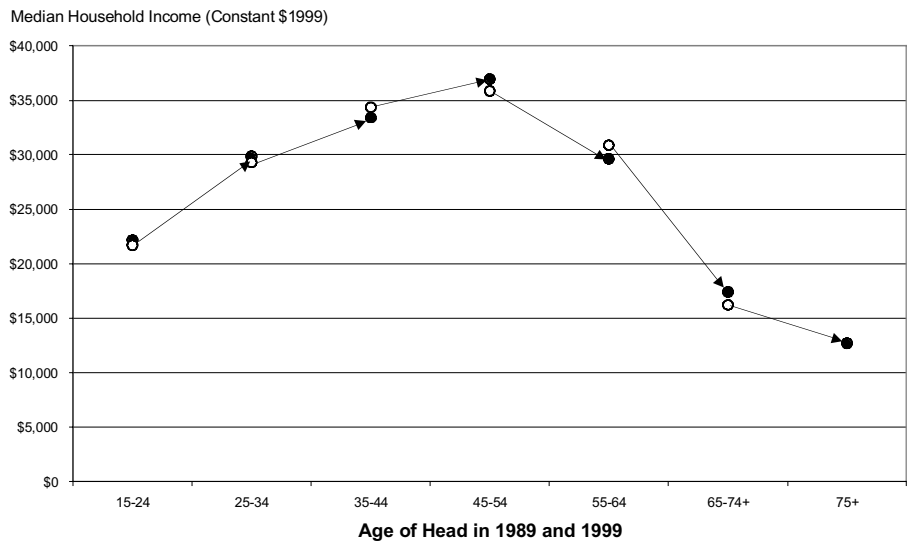


Figure 18

Mean Incomes for Bottom 40 Percent of Households Have Stagnated and the Income Distribution Has Become More Unequal

Figure 18a

White Households

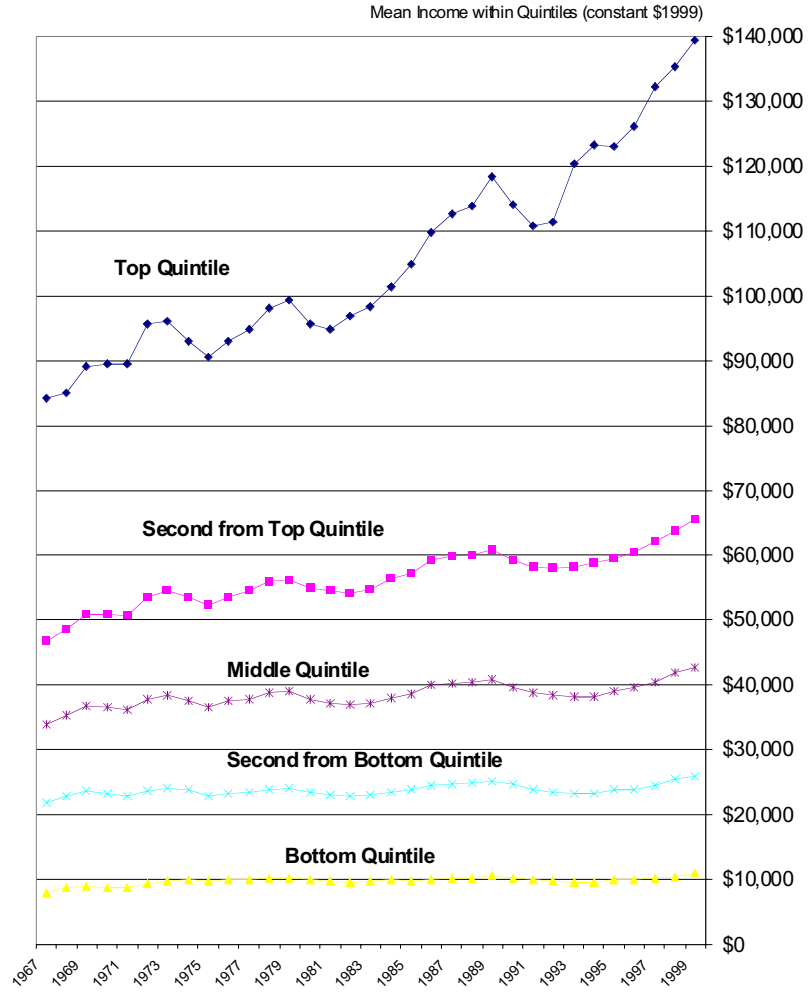
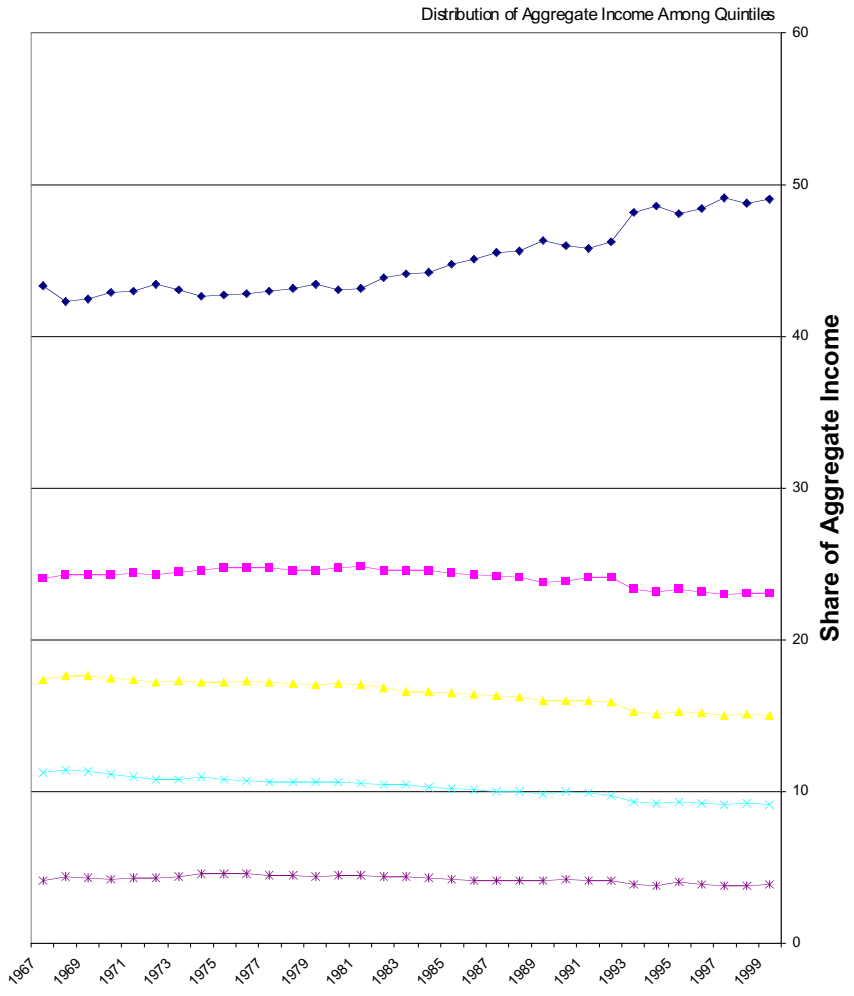


Figure 18b

White Households



Source: March Current Population Survey, Historical Tables H-2a

Figure 19

Mean Incomes for Bottom 40 Percent of Households Have Stagnated and the Income Distribution Has Become More Unequal

Figure 19a

Black Households

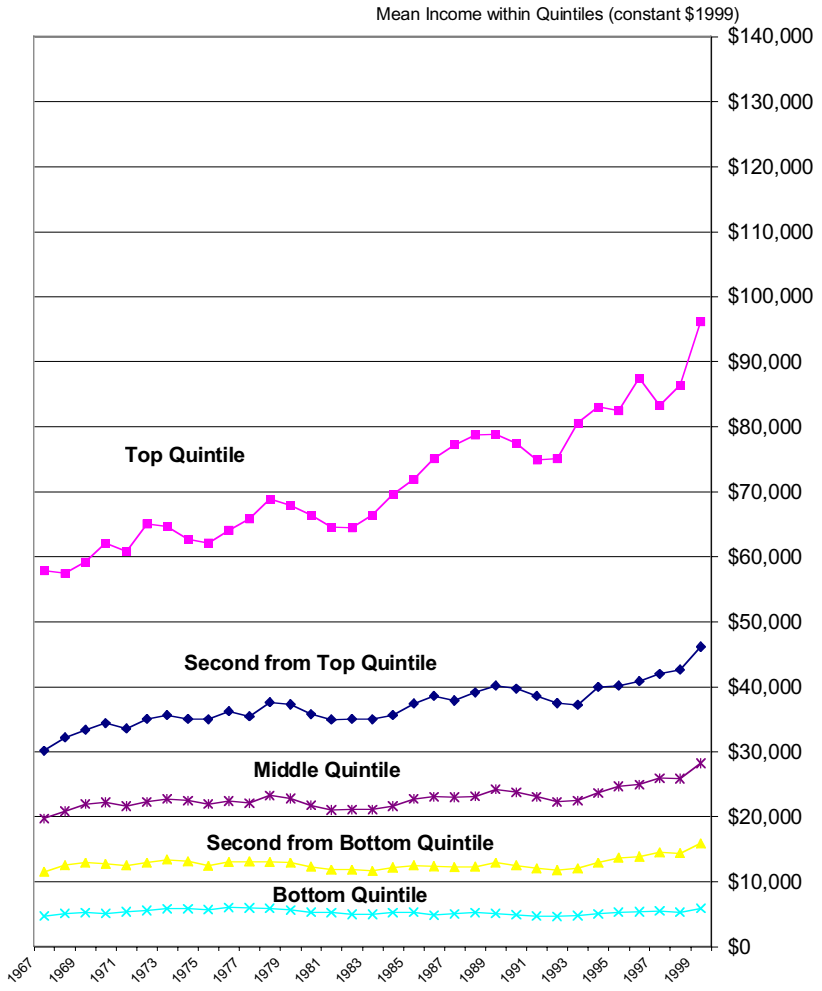
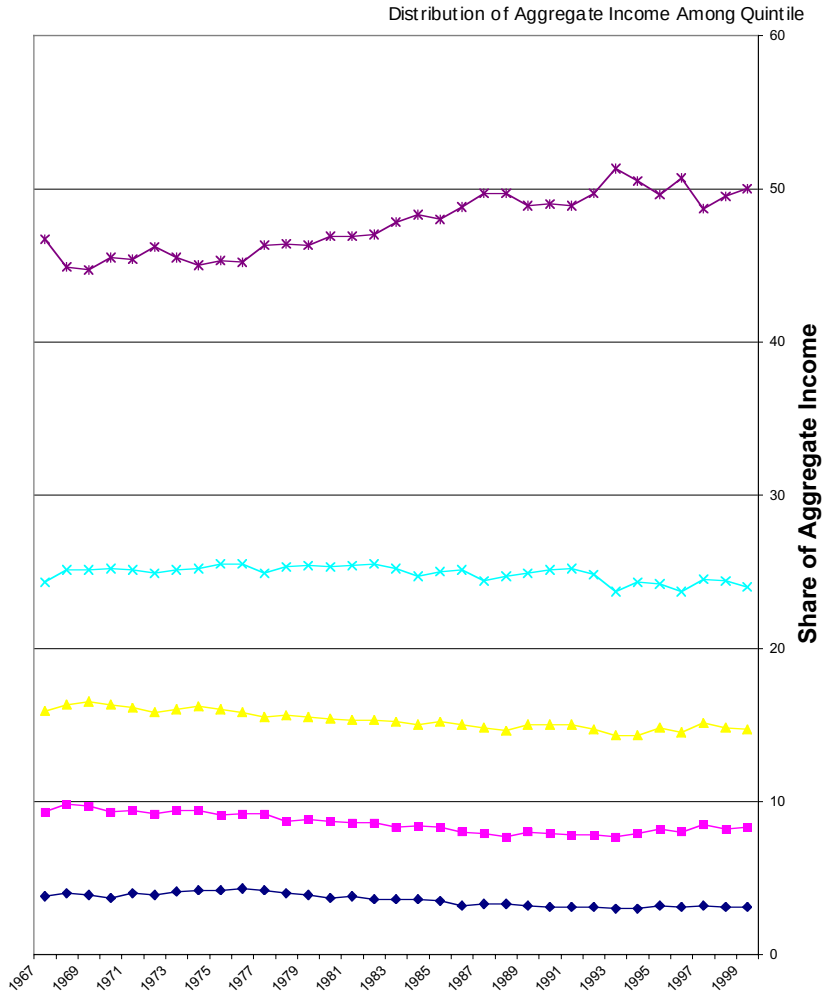


Figure 19b

Black Households



Source: March Current Population Survey, Historical Tables H-2a

Figure 20

Mean Incomes for Bottom 40 Percent of Households Have Stagnated and the Income Distribution Has Become More Unequal

Figure 20a

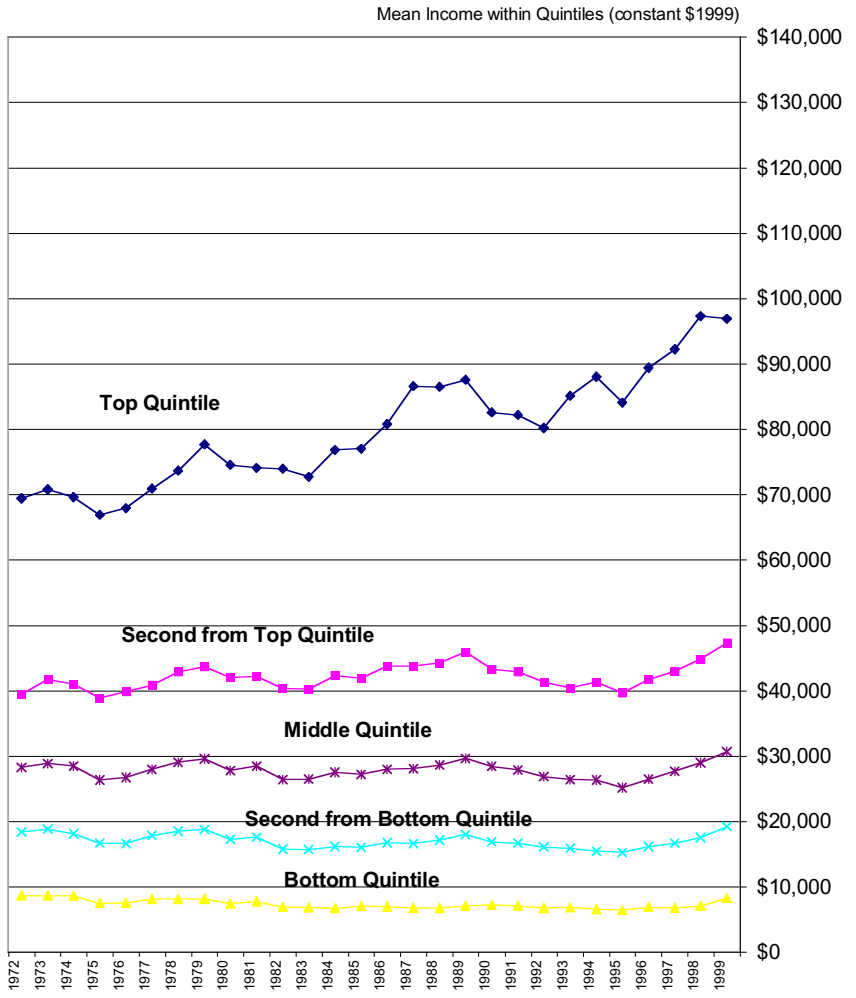
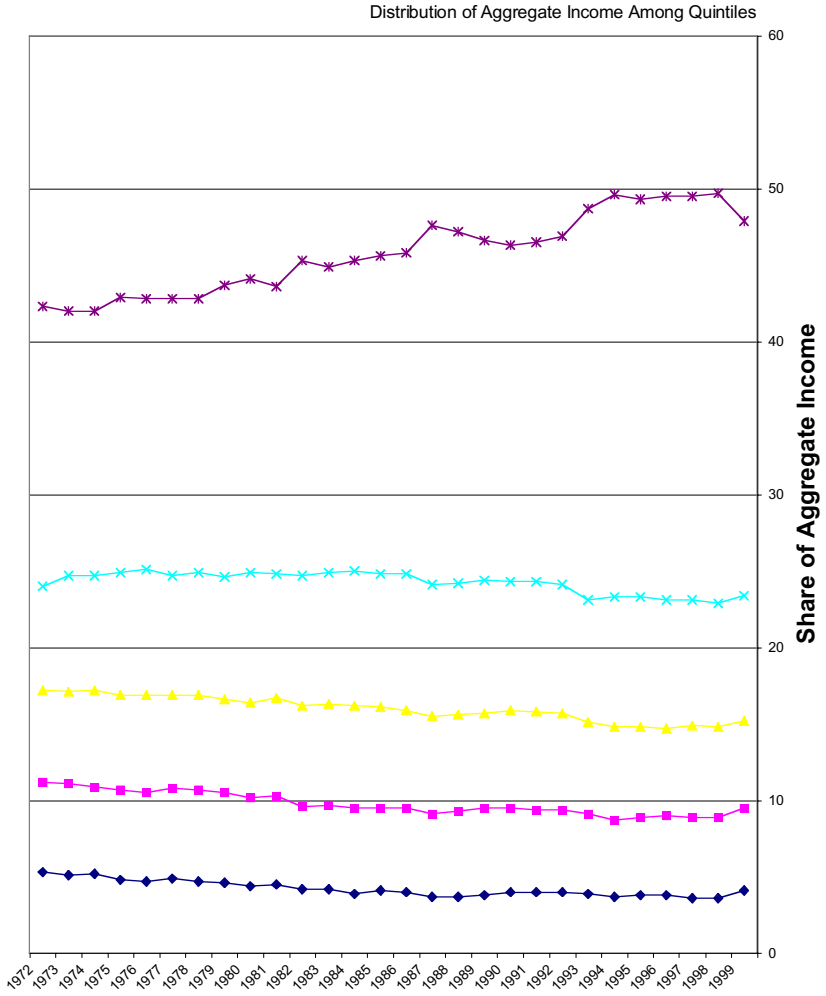


Figure 20b



Source: March Current Population Survey, Historical Tables H-2a

Change in the Number of Low Income Owners by Cohort: 1995-2000
Three Race/Hispanic Origin Groups and Bottom Two Income Groups

Figure 21a

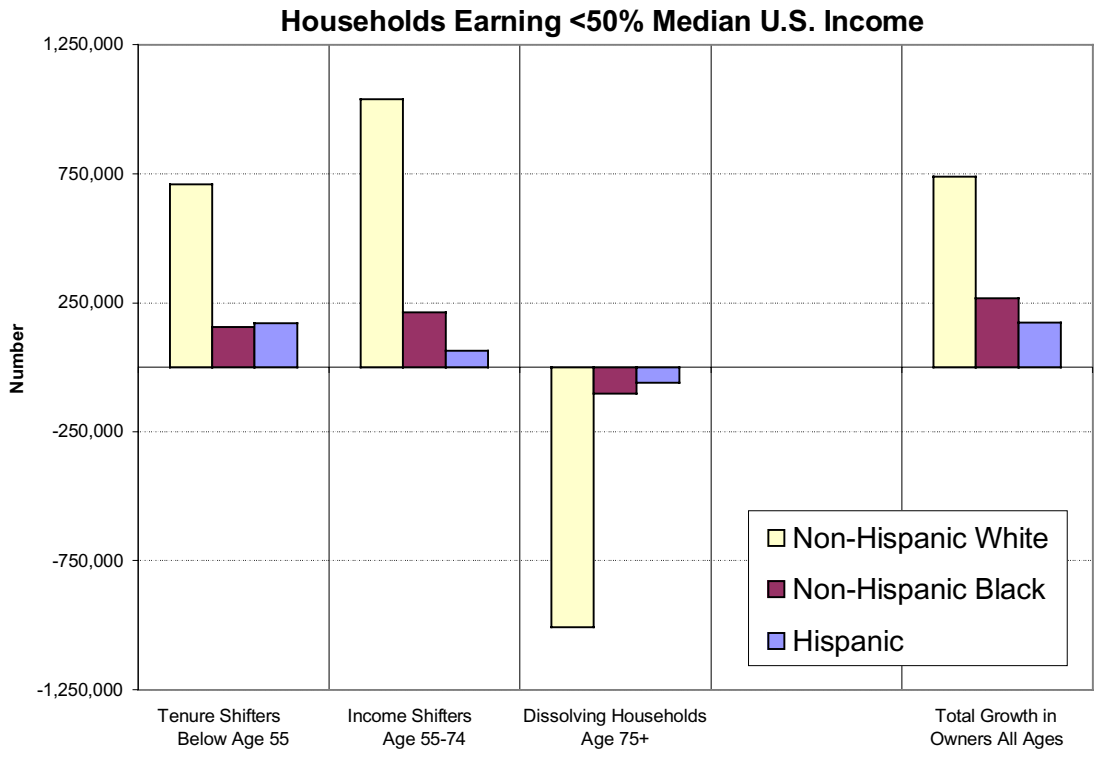


Figure 21b

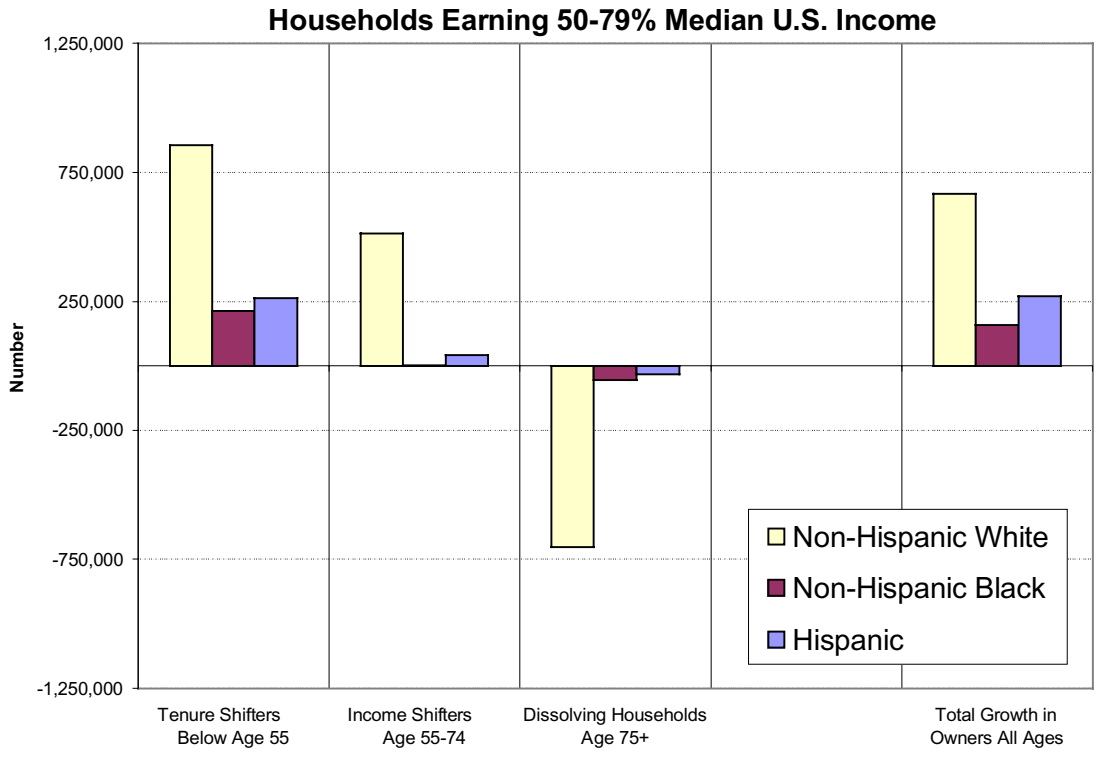
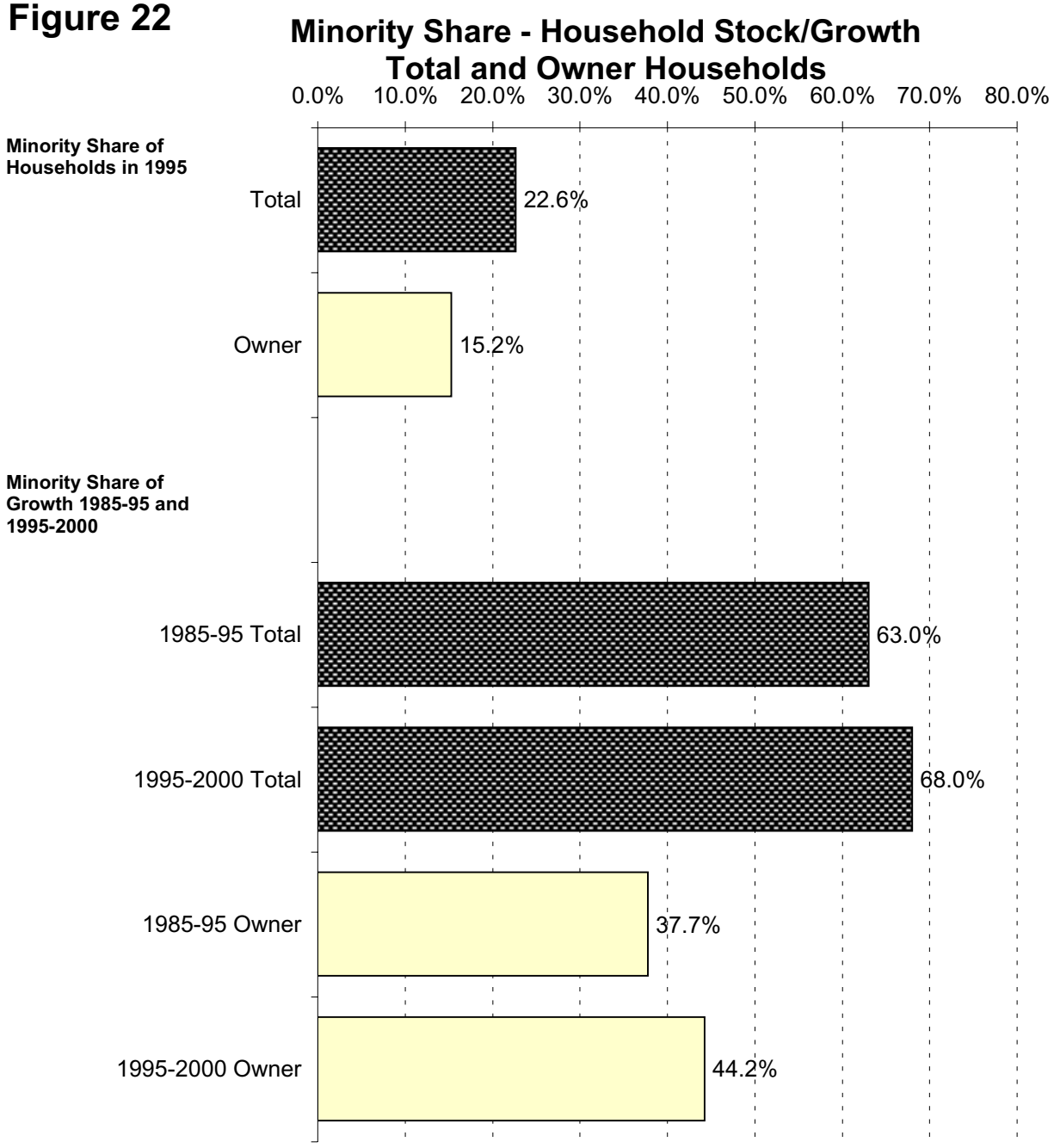


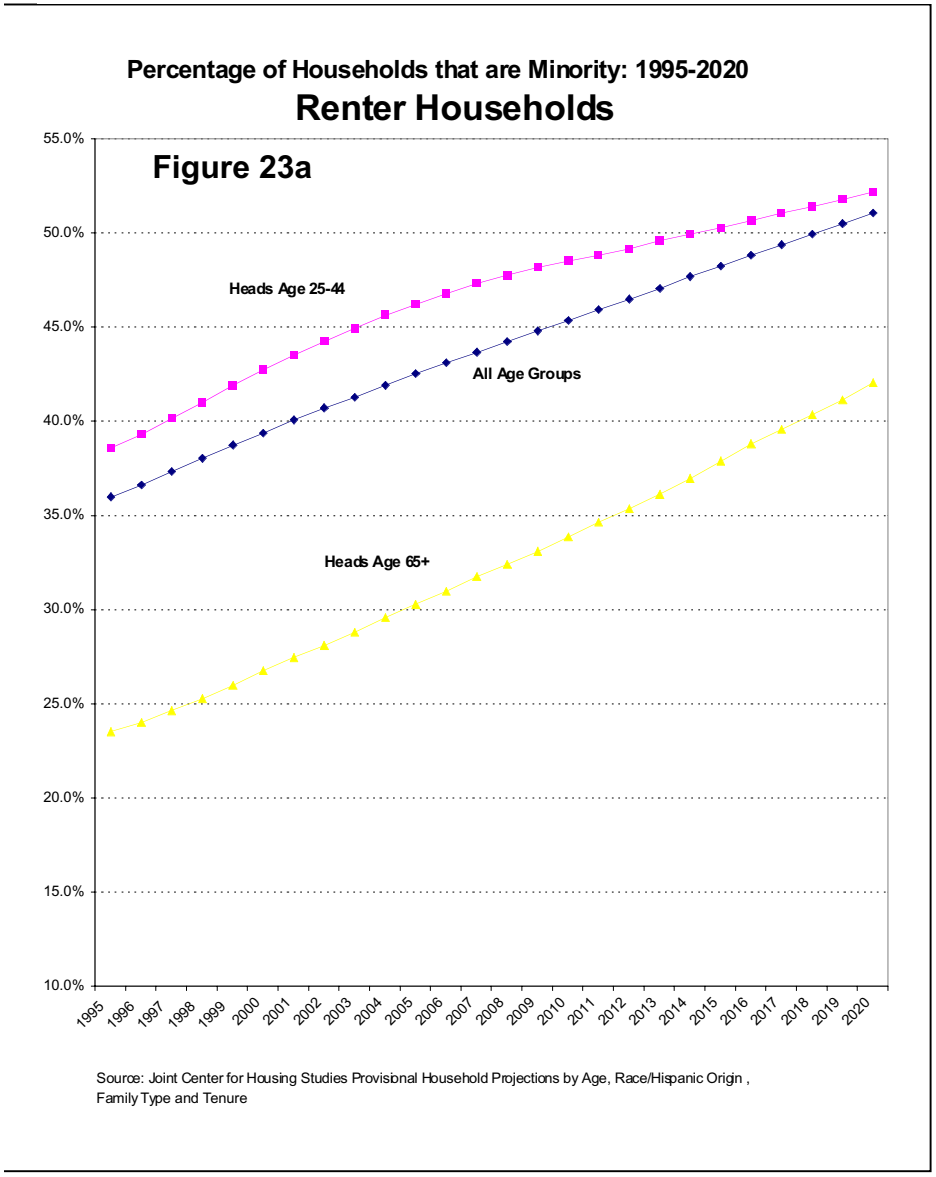
Figure 22



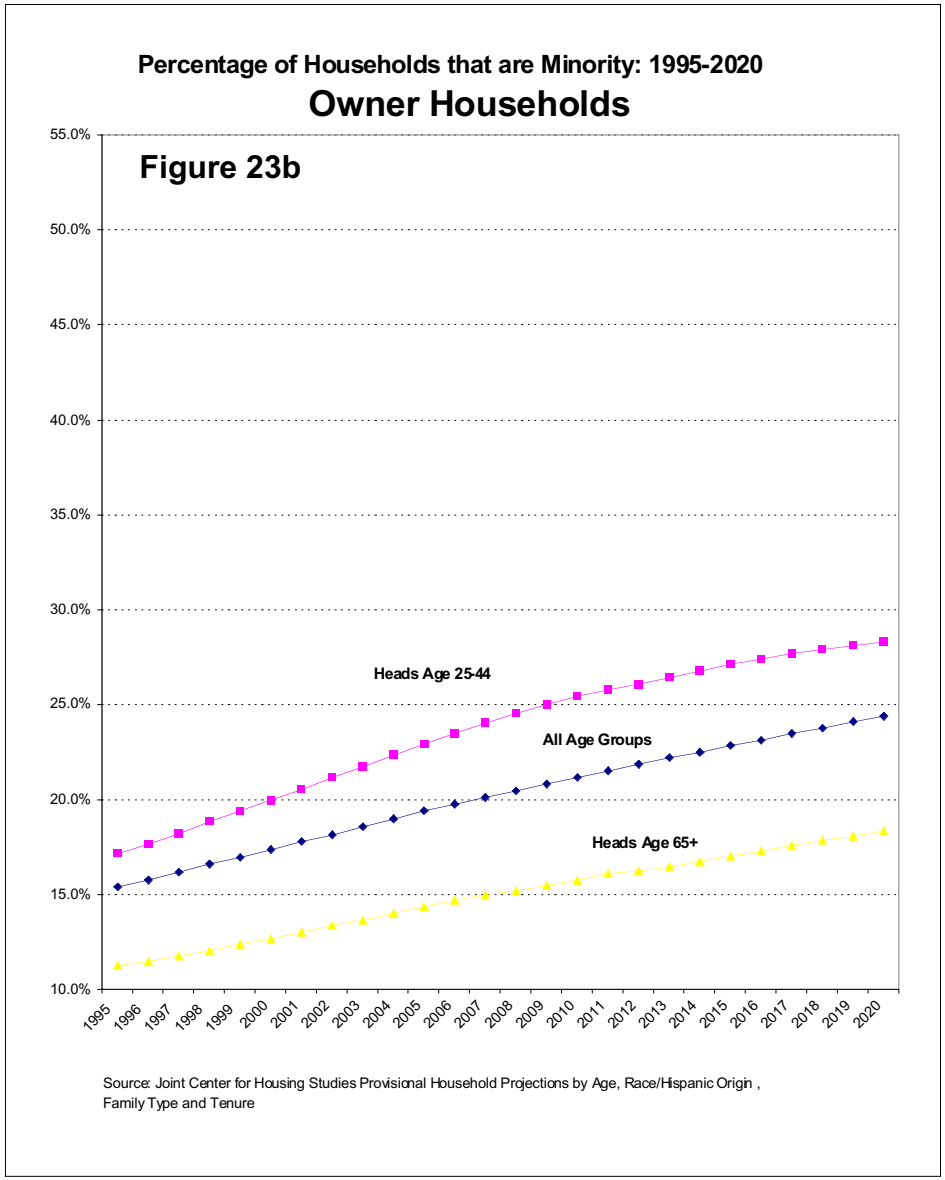
Source: Joint Center tabulations of 1985 and 1995 American Housing Survey and 1995 and 2000 Annual Housing Vacancy Survey

Figure 23

Projections of Minority Share of Renter and Owner Households: 1995-2020



Source: Joint Center for Housing Studies Provisional Household Projections by Age, Race/Hispanic Origin , Family Type and Tenure

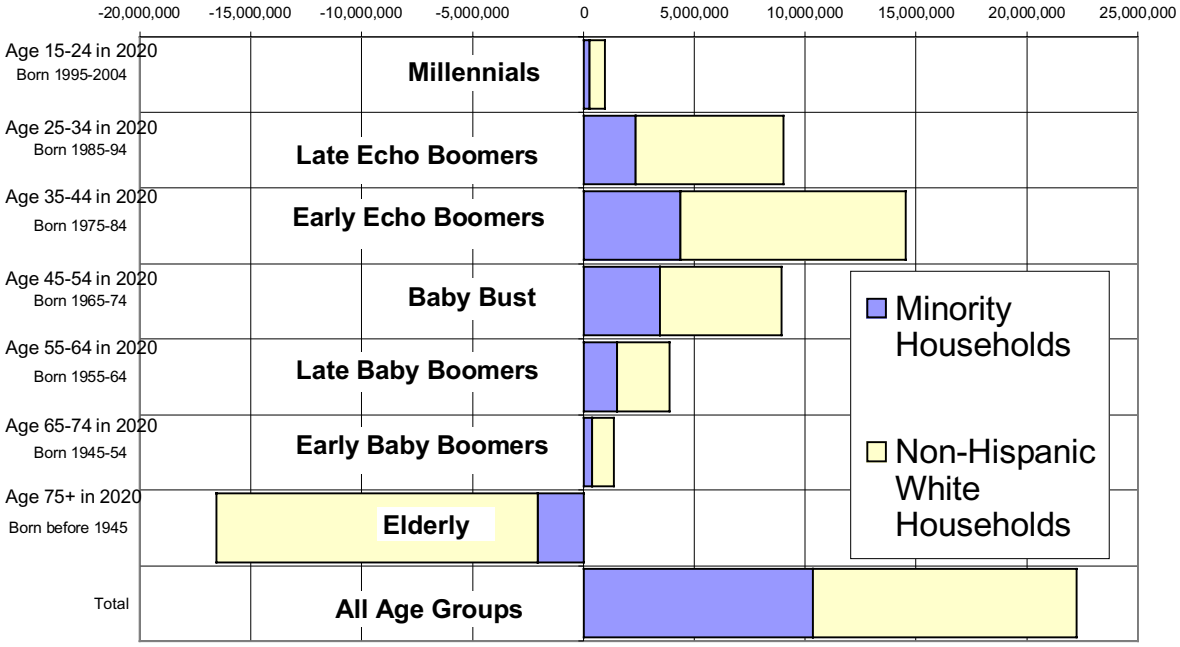


Source: Joint Center for Housing Studies Provisional Household Projections by Age, Race/Hispanic Origin , Family Type and Tenure

Cohort Contributions to Projected Household Growth 2000-2020

Figure 24a

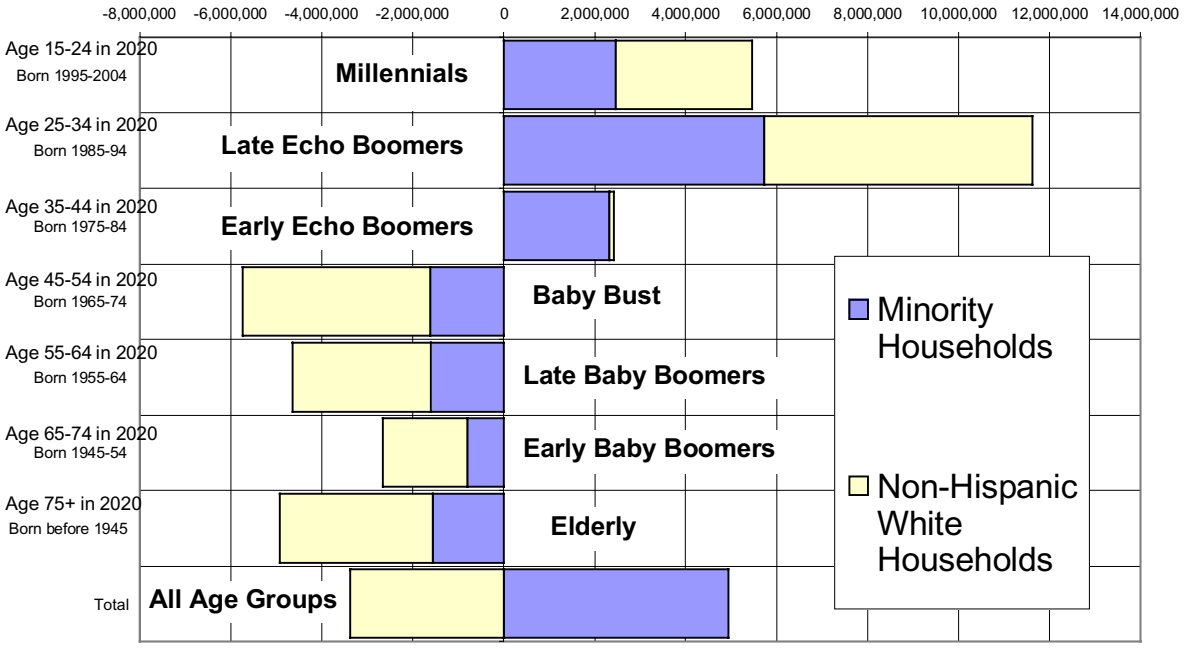
Owner Households



Source: Joint Center for Housing Studies of Harvard University, Provisional Household Projections by Age, Race/Hispanic Origin Family Type and Tenure, 2001.

Figure 24b

Renter Households



Source: Joint Center for Housing Studies of Harvard University, Provisional Household Projections by Age, Race/Hispanic Origin Family Type and Tenure, 2001.

Table 1 Amount Spent on Housing: 1990 Census

Lower Income Renters

Household Income in 1989 less than $20,000

	Percent of Household Income Spent on Housing					
	<20%	20-24%	25-29%	30-34%	30%+	35%+
United States	7.2%	8.9%	12.2%	10.9%	71.7%	60.8%
California	2.7%	3.8%	7.5%	8.4%	86.1%	77.7%
Alaska	3.8%	5.5%	9.6%	9.9%	81.2%	71.2%
Nevada	3.9%	5.2%	10.3%	11.8%	80.5%	68.7%
New Jersey	4.8%	5.3%	10.1%	8.9%	79.9%	71.0%
Florida	5.1%	6.7%	10.4%	11.4%	77.9%	66.5%
New York	5.2%	6.4%	10.6%	9.8%	77.9%	68.1%
Hawaii	6.6%	6.0%	9.9%	8.2%	77.5%	69.4%
New Hampshire	4.0%	6.4%	12.5%	12.1%	77.0%	64.9%
Connecticut	5.6%	6.3%	11.7%	9.4%	76.4%	67.0%
Arizona	4.8%	7.6%	11.8%	12.0%	75.9%	63.9%
Maryland	6.2%	7.0%	11.1%	10.3%	75.8%	65.5%
Michigan	5.5%	7.8%	11.7%	10.3%	75.0%	64.7%
Delaware	6.5%	7.3%	11.7%	12.5%	74.5%	62.0%
Illinois	6.9%	8.3%	11.4%	11.2%	73.4%	62.2%
Rhode Island	5.2%	6.8%	15.1%	12.7%	72.9%	60.2%
District of Columbia	7.6%	7.8%	12.5%	10.7%	72.1%	61.4%
Vermont	5.3%	8.3%	14.5%	12.7%	71.9%	59.2%
Washington	6.4%	8.8%	13.1%	11.9%	71.7%	59.8%
Virginia	8.6%	8.5%	11.4%	11.2%	71.5%	60.4%
Massachusetts	7.0%	9.9%	12.1%	8.7%	71.0%	62.3%
Oregon	6.7%	9.6%	13.8%	12.1%	69.9%	57.8%
Georgia	9.1%	8.9%	12.2%	11.8%	69.8%	58.0%
Louisiana	8.6%	9.9%	11.7%	10.5%	69.8%	59.3%
Colorado	7.0%	10.2%	14.2%	12.3%	68.6%	56.3%
Pennsylvania	7.8%	9.9%	13.9%	11.3%	68.4%	57.1%
Texas	7.6%	10.9%	13.6%	12.1%	67.9%	55.8%
Minnesota	7.4%	9.8%	15.3%	12.7%	67.5%	54.9%
Ohio	8.6%	10.4%	13.9%	11.5%	67.1%	55.6%
Maine	6.8%	9.7%	16.8%	12.5%	66.8%	54.2%
New Mexico	8.5%	10.9%	13.9%	11.6%	66.7%	55.1%
Wisconsin	6.8%	10.8%	15.7%	12.0%	66.7%	54.7%
North Carolina	10.1%	11.2%	13.7%	12.1%	65.1%	52.9%
South Carolina	10.3%	11.2%	14.1%	12.3%	64.4%	52.2%
Indiana	9.5%	12.0%	14.6%	12.1%	63.9%	51.8%
Missouri	9.9%	12.1%	14.2%	11.8%	63.8%	52.1%
Kansas	10.3%	12.6%	13.7%	12.2%	63.5%	51.3%
Oklahoma	10.3%	12.8%	13.4%	11.3%	63.5%	52.1%
Utah	9.1%	12.7%	15.0%	12.1%	63.1%	51.0%
Mississippi	12.7%	11.6%	12.7%	11.2%	63.0%	51.8%
Arkansas	10.6%	12.6%	14.5%	11.5%	62.4%	50.9%
West Virginia	12.2%	12.5%	13.3%	10.4%	62.0%	51.5%
Tennessee	10.9%	12.2%	15.6%	12.1%	61.3%	49.2%
Alabama	12.9%	12.4%	14.3%	11.0%	60.4%	49.4%
Kentucky	12.4%	13.5%	15.1%	11.7%	59.0%	47.3%
Montana	13.9%	13.4%	13.8%	11.3%	59.0%	47.6%
Iowa	12.0%	13.4%	15.9%	11.5%	58.7%	47.2%
Wyoming	12.4%	14.3%	14.8%	11.6%	58.6%	46.9%
Idaho	14.4%	14.0%	14.6%	11.1%	56.9%	45.8%
Nebraska	13.1%	14.0%	16.0%	12.0%	56.9%	44.8%
North Dakota	15.6%	15.6%	15.8%	11.2%	53.0%	41.8%
South Dakota	15.5%	15.0%	16.8%	11.4%	52.6%	41.2%

Table 2 Change in Number of Households 1990-2000 by Tenure Number of Persons per Room

	Owners 0.5 or Less	Owners 0.51 to 1.0	Owners More than 1 Per Room	Total Owners	Renters 0.5 or Less	Renters 0.51 to 1.0	Renters More than 1 Per Room
Alabama	201,424	8,841	-4,562	205,703	30,317	-16,827	-1,867
Alaska	27,663	11,288	-1,247	37,704	814	-2,161	-866
Arizona	287,667	103,541	11,259	402,467	59,065	57,753	24,465
Arkansas	86,371	13,945	-3,632	96,684	44,190	10,045	-496
California	313,741	294,715	2,628	611,084	155,559	267,825	-30,518
Colorado	266,569	79,356	6,476	352,401	27,834	28,201	10,933
Connecticut	38,376	8,545	2,287	49,208	20,659	-5,764	-3,836
Delaware	28,373	7,906	-49	36,230	7,466	3,962	103
District of Columbia	2,556	-1,900	-1,543	-887	3,177	-2,115	-5,862
Florida	750,683	191,617	-15,786	926,514	154,186	99,233	-31,174
Georgia	347,252	83,685	-3,277	427,660	108,395	29,978	10,449
Hawaii	25,308	8,528	-3,768	30,068	10,272	-2,768	-7,215
Idaho	65,303	25,212	1,850	92,365	8,882	5,968	341
Illinois	298,105	48,740	12,489	359,334	-2,533	-17,756	-3,764
Indiana	186,933	7,815	5,097	199,845	39,271	-2,829	-1,619
Iowa	68,552	4,378	2,215	75,145	2,024	-2,019	1,019
Kansas	71,574	13,712	-1,188	84,098	16,227	-7,877	-3,623
Kentucky	146,365	15,319	-5,571	156,113	38,835	2,966	-1,422
Louisiana	112,249	8,470	-19,248	101,471	54,189	13,988	-15,403
Maine	64,645	-7,912	-1,994	54,739	17,457	-12,569	-2,074
Maryland	129,069	59,516	-886	187,699	43,085	-101	-3,859
Massachusetts	173,103	-9,344	2,667	166,426	26,868	-20,463	-10,985
Michigan	362,613	5,105	1,761	369,479	39,798	-17,369	-5,717
Minnesota	240,899	45,657	5,621	292,177	62	-8,505	3,832
Mississippi	86,611	6,159	-14,222	78,548	33,955	9,786	-5,321
Missouri	197,628	28,416	-1,707	224,337	32,787	14,385	-1,820
Montana	42,008	6,352	-678	47,682	5,792	1,126	-697
Nebraska	37,427	7,333	-563	44,197	14,031	1,022	1,331
Nevada	140,939	49,880	7,081	197,900	47,152	29,734	3,369
New Hampshire	43,701	5,718	-136	49,283	13,553	-1,220	-996
New Jersey	125,605	71,077	4,058	200,740	31,658	-1,338	3,577
New Mexico	71,994	22,731	-4,998	89,727	13,135	16,452	-493
New York	257,654	85,681	6,498	349,833	83,529	-23,764	-43,957
North Carolina	388,570	58,838	2,791	450,199	55,894	52,327	3,672
North Dakota	13,602	-1,715	-546	11,341	-1,906	-86	-1,116
Ohio	305,954	-5,953	-8,231	291,770	54,742	-43,785	-2,746
Oklahoma	110,042	-6,325	-5,186	98,531	3,522	2,537	5,247
Oregon	129,379	41,584	5,511	176,474	59,627	28,865	5,782
Pennsylvania	196,687	-25,409	-1,485	169,793	86,768	-29,133	-11,758
Rhode Island	21,670	1,971	-298	23,343	6,890	-1,712	170
South Carolina	187,738	11,681	-13,638	185,781	55,304	8,966	-5,170
South Dakota	26,176	201	-796	25,581	3,835	-1,013	-1,893
Tennessee	244,215	28,740	54	273,009	78,081	9,203	2,765
Texas	652,422	265,901	6,412	924,735	145,470	190,953	-11,731
Utah	88,305	55,964	-4,500	139,769	12,935	15,308	3,696
Vermont	24,612	-429	-714	23,469	8,383	-2,158	-358
Virginia	277,390	50,345	-4,319	323,416	52,343	4,154	1,247
Washington	204,855	72,172	5,485	282,512	57,251	58,019	5,057

West Virginia	50,744	-9,232	-2,823	38,689	4,339	-12,068	-985
Wisconsin	200,039	1,807	3,972	205,818	51,467	428	1,950
Wyoming	19,910	4,207	-191	23,926	1,738	-3,044	138
Total US	8,441,270	1,854,430	-31,570	10,264,130	1,918,374	724,740	-130,198

Source: 1990 Census STF3 and 2000 Census Supplementary Survey

Table 3		Multigenerational households by type [1]			
	All households	Total [2]	Householder with child and grandchild	Householder with parent and child	Householder with parent, child, and grandchild
United States	105,480,101	3,929,122	2,561,637	1,289,159	78,326
Alabama	1,737,080	64,841	50,679	12,925	1,237
Alaska	221,600	6,784	4,681	2,029	74
Arizona	1,901,327	75,296	50,817	22,957	1,522
Arkansas	1,042,696	33,158	25,614	6,911	633
California	11,502,870	642,474	353,682	273,017	15,775
Colorado	1,658,238	44,214	29,240	14,166	808
Connecticut	1,301,670	41,621	23,701	17,188	732
Delaware	298,736	10,992	7,741	3,063	188
District of Columbia	248,338	11,399	9,138	2,024	237
Florida	6,337,929	238,213	142,326	90,353	5,534
Georgia	3,006,369	129,162	90,413	36,053	2,696
Hawaii	403,240	33,106	20,462	11,391	1,253
Idaho	469,645	10,907	7,571	3,168	168
Illinois	4,591,779	184,505	120,437	60,202	3,866
Indiana	2,336,306	62,864	46,862	15,032	970
Iowa	1,149,276	17,906	13,512	4,174	220
Kansas	1,037,891	22,378	16,065	6,014	299
Kentucky	1,590,647	43,223	32,719	9,875	629
Louisiana	1,656,053	79,898	64,075	14,407	1,416
Maine	518,200	8,713	5,657	2,942	114
Maryland	1,980,859	88,923	56,832	30,211	1,880
Massachusetts	2,443,580	75,081	43,175	30,673	1,233
Michigan	3,785,661	116,662	84,832	29,987	1,843
Minnesota	1,895,127	31,076	21,087	9,648	341
Mississippi	1,046,434	54,262	44,319	8,826	1,117

Missouri	2,194,594	58,438	43,713	13,779	946	
Montana	358,667	6,638	5,006	1,565	67	
Nebraska	666,184	10,973	8,018	2,840	115	
Nevada	751,165	30,005	16,978	12,371	656	
New Hampshire	474,606	10,674	6,352	4,157	165	
New Jersey	3,064,645	144,142	76,572	64,599	2,971	
New Mexico	677,971	29,276	22,346	6,401	529	
New York	7,056,860	312,270	178,039	127,841	6,390	
North Carolina	3,132,013	101,544	74,032	25,699	1,813	
North Dakota	257,152	2,799	2,190	594	15	
Ohio	4,445,773	123,767	90,449	31,378	1,940	
Oklahoma	1,342,293	38,306	29,286	8,492	528	
Oregon	1,333,723	33,284	21,067	11,671	546	
Pennsylvania	4,777,003	147,077	99,251	45,270	2,556	
Rhode Island	408,424	12,972	7,264	5,485	223	
South Carolina	1,533,854	63,722	49,252	13,212	1,258	
South Dakota	290,245	5,169	4,143	973	53	
Tennessee	2,232,905	75,753	56,307	18,106	1,340	
Texas	7,393,354	353,682	244,216	101,898	7,568	
Utah	701,281	25,673	18,198	7,038	437	
Vermont	240,634	3,839	2,443	1,347	49	
Virginia	2,699,173	92,471	60,693	30,097	1,681	
Washington	2,271,398	57,193	35,324	20,983	886	
West Virginia	736,481	19,011	14,661	4,099	251	
Wisconsin	2,084,544	39,255	27,514	11,229	512	
Wyoming	193,608	3,531	2,686	799	46	

Note: Parent may be either parent or parent-in-law of the householder. Child may be the natural born, adopted or stepchild the householder. Relationship refers to how each person is related to the householder.

[1] Individual types may include a small number of households with members from additional generations, for example, grandparents or great-grandparents of the householders for which tabulated data are not available.

[2] Total represents only those three types of households specified in the table.

Table 3 (cont'd)

Multigenerational Households by Type [1]

	All households	% of Total: Total [2]	Share Each Type: Householder with child and grandchild	Householder with parent and child	Householder with parent, and grandchild
United States	100.0%	3.7%	65.2%	32.8%	2.0%
Hawaii	100.0%	8.2%	61.8%	34.4%	3.8%
California	100.0%	5.6%	55.1%	42.5%	2.5%
Mississippi	100.0%	5.2%	81.7%	16.3%	2.1%
Louisiana	100.0%	4.8%	80.2%	18.0%	1.8%
Texas	100.0%	4.8%	69.0%	28.8%	2.1%
New Jersey	100.0%	4.7%	53.1%	44.8%	2.1%
District of Columbia	100.0%	4.6%	80.2%	17.8%	2.1%
Maryland	100.0%	4.5%	63.9%	34.0%	2.1%
New York	100.0%	4.4%	57.0%	40.9%	2.0%
New Mexico	100.0%	4.3%	76.3%	21.9%	1.8%
Georgia	100.0%	4.3%	70.0%	27.9%	2.1%
South Carolina	100.0%	4.2%	77.3%	20.7%	2.0%
Illinois	100.0%	4.0%	65.3%	32.6%	2.1%
Nevada	100.0%	4.0%	56.6%	41.2%	2.2%
Arizona	100.0%	4.0%	67.5%	30.5%	2.0%
Florida	100.0%	3.8%	59.7%	37.9%	2.3%
Alabama	100.0%	3.7%	78.2%	19.9%	1.9%
Delaware	100.0%	3.7%	70.4%	27.9%	1.7%
Utah	100.0%	3.7%	70.9%	27.4%	1.7%
Virginia	100.0%	3.4%	65.6%	32.5%	1.8%
Tennessee	100.0%	3.4%	74.3%	23.9%	1.8%
North Carolina	100.0%	3.2%	72.9%	25.3%	1.8%
Connecticut	100.0%	3.2%	56.9%	41.3%	1.8%
Arkansas	100.0%	3.2%	77.2%	20.8%	1.9%
Rhode Island	100.0%	3.2%	56.0%	42.3%	1.7%
Michigan	100.0%	3.1%	72.7%	25.7%	1.6%
Pennsylvania	100.0%	3.1%	67.5%	30.8%	1.7%
Massachusetts	100.0%	3.1%	57.5%	40.9%	1.6%
Alaska	100.0%	3.1%	69.0%	29.9%	1.1%
Oklahoma	100.0%	2.9%	76.5%	22.2%	1.4%
Ohio	100.0%	2.8%	73.1%	25.4%	1.6%
Kentucky	100.0%	2.7%	75.7%	22.8%	1.5%
Indiana	100.0%	2.7%	74.5%	23.9%	1.5%
Colorado	100.0%	2.7%	66.1%	32.0%	1.8%
Missouri	100.0%	2.7%	74.8%	23.6%	1.6%
West Virginia	100.0%	2.6%	77.1%	21.6%	1.3%
Washington	100.0%	2.5%	61.8%	36.7%	1.5%
Oregon	100.0%	2.5%	63.3%	35.1%	1.6%
Idaho	100.0%	2.3%	69.4%	29.0%	1.5%
New Hampshire	100.0%	2.2%	59.5%	38.9%	1.5%
Kansas	100.0%	2.2%	71.8%	26.9%	1.3%

Wisconsin	100.0%	1.9%	70.1%	28.6%	1.3%	
Montana	100.0%	1.9%	75.4%	23.6%	1.0%	
Wyoming	100.0%	1.8%	76.1%	22.6%	1.3%	
South Dakota	100.0%	1.8%	80.2%	18.8%	1.0%	
Maine	100.0%	1.7%	64.9%	33.8%	1.3%	
Nebraska	100.0%	1.6%	73.1%	25.9%	1.0%	
Minnesota	100.0%	1.6%	67.9%	31.0%	1.1%	
Vermont	100.0%	1.6%	63.6%	35.1%	1.3%	
Iowa	100.0%	1.6%	75.5%	23.3%	1.2%	
North Dakota	100.0%	1.1%	78.2%	21.2%	0.5%	
Puerto Rico	100.0%	7.4%	78.7%	19.2%	2.1%	

Note: Parent may be either parent or parent-in-law of the householder. Child may be the natural born, adopted or stepchild the householder. Relationship refers to how each person is related to the householder.

[1] Individual types may include a small number of households with members from additional generations, for example, grandparents or great-grandparents of the householders for which tabulated data are not available.

[2] Total represents only those three types of households specified in the table.

Source: U.S. Census Bureau, 2000 Census, special tabulation. Internet release date: September 7, 2001.

Table 4
Cohort Changes in Occupied Housing Units Built Before 1950

Age of Cohort in 1999 and Year Born			Cohort Changes Between 1989-1999			
All Households			Non-Hispanic Whites	All Minorities	Married Couples	All Other HH Types
	<25	Born after 1974	931,794	549,935	325,592	1,156,137
	25-34	Born 1965-74	2,448,362	1,222,927	1,683,466	1,987,823
	35-44	Born 1955-64	-321,230	189,998	171,850	-303,082
	45-54	Born 1945-54	-511,900	-56,620	-396,802	-171,718
	55-64	Born 1935-44	-541,524	-166,061	-491,481	-216,104
	65-74	Born 1925-34	-688,011	-260,812	-804,209	-144,614
	75-84	Born 1915-24	-1,386,859	-341,180	-1,114,947	-613,092
	85+	Born before 1915	-2,420,530	-437,593	-941,260	-1,916,863
		Total	-2,489,898	700,594	-1,567,791	-221,513
Owners						
	<25	Born after 1974	163,064	65,896	90,596	138,364
	25-34	Born 1965-74	1,432,437	345,800	1,068,652	709,585
	35-44	Born 1955-64	972,649	417,614	765,688	624,575
	45-54	Born 1945-54	63,576	224,373	28,616	259,333
	55-64	Born 1935-44	-291,482	29,770	-319,132	57,420
	65-74	Born 1925-34	-440,552	-88,246	-687,757	158,959
	75-84	Born 1915-24	-1,020,967	-216,722	-967,038	-270,651
	85+	Born before 1915	-1,931,140	-277,842	-837,458	-1,371,524
		Total	-1,052,415	500,643	-857,833	306,061
Renters						
	<25	Born after 1974	768,730	484,039	234,996	1,017,773
	25-34	Born 1965-74	1,015,925	877,127	614,814	1,278,238
	35-44	Born 1955-64	-1,293,879	-227,616	-593,838	-927,657
	45-54	Born 1945-54	-575,476	-280,993	-425,418	-431,051
	55-64	Born 1935-44	-250,042	-195,831	-172,349	-273,524
	65-74	Born 1925-34	-247,459	-172,566	-116,452	-303,573
	75-84	Born 1915-24	-365,892	-124,458	-147,909	-342,441
	85+	Born before 1915	-489,390	-159,751	-103,802	-545,339
		Total	-1,437,483	199,951	-709,958	-527,574

Source: Joint Center tabulations of 1989 and 1999 American Housing Survey.

Table 4 (cont'd)
Cohort Changes in Occupied Housing Units Built 1950-1969

Age of Cohort in 1999 and Year Born			Cohort Changes Between 1989-1999			
All Households			Non-Hispanic Whites	All Minorities	Married Couples	All Other HH Types
<25	Born after 1974		754,722	498,929	332,520	921,131
25-34	Born	1965-74	2,005,804	1,212,109	1,757,601	1,460,312
35-44	Born	1955-64	-413,690	256,489	81,977	-239,178
45-54	Born	1945-54	-650,824	-87,189	-593,818	-144,195
55-64	Born	1935-44	-670,387	4,553	-611,962	-53,872
65-74	Born	1925-34	-887,385	-104,332	-962,554	-29,163
75-84	Born	1915-24	-1,391,065	-181,961	-1,353,862	-219,164
85+	Born before 1915		-1,696,457	-207,352	-753,795	-1,150,014
		Total	-2,949,282	1,391,246	-2,103,893	545,857
Owners						
<25	Born after 1974		187,568	37,605	116,666	108,507
25-34	Born	1965-74	1,310,778	338,302	1,170,501	478,579
35-44	Born	1955-64	642,162	493,350	658,343	477,169
45-54	Born	1945-54	-168,406	116,500	-293,068	241,162
55-64	Born	1935-44	-454,250	64,275	-513,982	124,007
65-74	Born	1925-34	-693,567	-14,313	-891,322	183,442
75-84	Born	1915-24	-1,240,522	-117,358	-1,250,856	-107,024
85+	Born before 1915		-1,282,123	-132,039	-660,451	-753,711
		Total	-1,698,360	786,322	-1,664,169	752,131
Renters						
<25	Born after 1974		567,154	461,324	215,854	812,624
25-34	Born	1965-74	695,026	873,807	587,100	981,733
35-44	Born	1955-64	-1,055,852	-236,861	-576,366	-716,347
45-54	Born	1945-54	-482,418	-203,689	-300,750	-385,357
55-64	Born	1935-44	-216,137	-59,722	-97,980	-177,879
65-74	Born	1925-34	-193,818	-90,019	-71,232	-212,605
75-84	Born	1915-24	-150,543	-64,603	-103,006	-112,140
85+	Born before 1915		-414,334	-75,313	-93,344	-396,303
		Total	-1,250,922	604,924	-439,724	-206,274

Source: Joint Center tabulations of 1989 and 1999 American Housing Survey.

Table 4 (cont'd)
Cohort Changes in Occupied Housing Units Built 1970-1984

Age of Cohort in 1999 and Year Born			Cohort Changes Between 1989-1999			
All Households			Non-Hispanic Whites	All Minorities	Married Couples	All Other HH Types
<25	Born after 1974		1,088,728	665,535	377,214	1,377,049
25-34	Born	1965-74	1,952,273	1,333,956	1,773,683	1,512,546
35-44	Born	1955-64	-1,388,821	-47,959	-631,677	-805,103
45-54	Born	1945-54	-1,232,457	-110,787	-1,218,117	-125,127
55-64	Born	1935-44	-1,002,024	-167,084	-899,987	-269,121
65-74	Born	1925-34	-561,265	-71,567	-731,544	98,712
75-84	Born	1915-24	-774,155	-92,585	-740,210	-126,530
85+	Born before 1915		-1,167,296	-104,630	-400,669	-529,676
		Total	-3,085,017	1,404,879	-2,471,307	1,132,750
Owners						
<25	Born after 1974		197,189	43,174	92,704	147,659
25-34	Born	1965-74	1,270,601	377,174	1,111,670	536,105
35-44	Born	1955-64	232,581	283,366	242,734	273,213
45-54	Born	1945-54	-616,323	15,147	-837,064	235,888
55-64	Born	1935-44	-705,995	-59,201	-734,760	-30,436
65-74	Born	1925-34	-435,760	-33,133	-592,335	123,442
75-84	Born	1915-24	-640,600	-51,959	-688,258	-4,301
85+	Born before 1915		-643,354	-41,961	-363,411	-321,904
		Total	-1,341,661	532,607	-1,768,720	959,666
Renters						
<25	Born after 1974		891,539	622,361	284,510	1,229,390
25-34	Born	1965-74	681,672	956,782	662,013	976,441
35-44	Born	1955-64	-1,621,402	-331,325	-874,411	-1,078,316
45-54	Born	1945-54	-616,134	-125,934	-381,053	-361,015
55-64	Born	1935-44	-296,029	-107,883	-165,227	-238,685
65-74	Born	1925-34	-125,505	-38,434	-139,209	-24,730
75-84	Born	1915-24	-133,555	-40,626	-51,952	-122,229
85+	Born before 1915		-523,942	-62,669	-97,417	-489,194
		Total	-1,743,356	872,272	-762,746	-108,338

Source: Joint Center tabulations of 1989 and 1999 American Housing Survey.

Table 4 (cont'd)
Cohort Changes in Occupied Housing Units Built Since 1985

Age of Cohort in 1999 and Year Born			Cohort Changes Between 1989-1999			
All Households			Non-Hispanic Whites	All Minorities	Married Couples	All Other HH Types
<25	Born after 1974		877,162	367,700	381,932	862,930
25-34	Born	1965-74	3,319,266	1,066,795	2,758,654	1,627,407
35-44	Born	1955-64	2,360,687	939,183	2,501,300	798,570
45-54	Born	1945-54	1,742,594	590,379	1,579,610	753,363
55-64	Born	1935-44	1,154,780	243,390	942,732	455,438
65-74	Born	1925-34	844,422	157,596	549,965	452,053
75-84	Born	1915-24	436,521	57,011	167,669	325,863
85+	Born before 1915		-14,289	3,540	-20,160	58,179
		Total	10,721,143	3,425,594	8,861,702	5,333,803
Owners						
<25	Born after 1974		256,954	67,446	202,980	121,420
25-34	Born	1965-74	2,478,984	510,948	2,272,343	717,589
35-44	Born	1955-64	2,499,434	801,721	2,521,798	779,357
45-54	Born	1945-54	1,643,533	424,615	1,526,788	541,360
55-64	Born	1935-44	1,100,794	198,473	922,318	376,949
65-74	Born	1925-34	729,069	103,687	494,717	338,039
75-84	Born	1915-24	318,341	38,459	155,528	201,272
85+	Born before 1915		-28,209	8,004	-37,091	16,886
		Total	8,998,900	2,153,353	8,059,381	3,092,872
Renters						
<25	Born after 1974		620,208	300,254	178,952	741,510
25-34	Born	1965-74	840,282	555,847	486,311	909,818
35-44	Born	1955-64	-138,747	137,462	-20,498	19,213
45-54	Born	1945-54	99,061	165,764	52,822	212,003
55-64	Born	1935-44	53,986	44,917	20,414	78,489
65-74	Born	1925-34	115,353	53,909	55,248	114,014
75-84	Born	1915-24	118,180	18,552	12,141	124,591
85+	Born before 1915		13,920	-4,464	-3,660	13,116
		Total	1,722,243	1,272,241	781,730	2,212,754

Source: Joint Center tabulations of 1989 and 1999 American Housing Survey.

Table 4 (cont'd)
Cohort Changes in Occupied Housing Units Built Since 1970

Age of Cohort in 1999 and Year Born			Cohort Changes Between 1989-1999			
All Households			Non-Hispanic Whites	All Minorities	Married Couples	All Other HH Types
<25	Born after 1974		1,965,890	1,033,235	759,146	2,239,979
25-34	Born	1965-74	5,271,539	2,400,751	4,532,337	3,139,953
35-44	Born	1955-64	971,866	891,224	1,869,623	-6,533
45-54	Born	1945-54	510,137	479,592	361,493	628,236
55-64	Born	1935-44	152,756	76,306	42,745	186,317
65-74	Born	1925-34	283,157	86,029	-181,579	550,765
75-84	Born	1915-24	-337,634	-35,574	-572,541	199,333
85+	Born before 1915		-1,181,585	-101,090	-420,829	-471,497
		Total	7,636,126	4,830,473	6,390,395	6,466,553
Owners						
<25	Born after 1974		454,143	110,620	295,684	269,079
25-34	Born	1965-74	3,749,585	888,122	3,384,013	1,253,694
35-44	Born	1955-64	2,732,015	1,085,087	2,764,532	1,052,570
45-54	Born	1945-54	1,027,210	439,762	689,724	777,248
55-64	Born	1935-44	394,799	139,272	187,558	346,513
65-74	Born	1925-34	293,309	70,554	-97,618	461,481
75-84	Born	1915-24	-322,259	-13,500	-532,730	196,971
85+	Born before 1915		-671,563	-33,957	-400,502	-305,018
		Total	7,657,239	2,685,960	6,290,661	4,052,538
Renters						
<25	Born after 1974		1,511,747	922,615	463,462	1,970,900
25-34	Born	1965-74	1,521,954	1,512,629	1,148,324	1,886,259
35-44	Born	1955-64	-1,760,149	-193,863	-894,909	-1,059,103
45-54	Born	1945-54	-517,073	39,830	-328,231	-149,012
55-64	Born	1935-44	-242,043	-62,966	-144,813	-160,196
65-74	Born	1925-34	-10,152	15,475	-83,961	89,284
75-84	Born	1915-24	-15,375	-22,074	-39,811	2,362
85+	Born before 1915		-510,022	-67,133	-101,077	-476,078
		Total	-21,113	2,144,513	18,984	2,104,416

Source: Joint Center tabulations of 1989 and 1999 American Housing Survey.