Section II - A Statistical Portrait

This section analyzes U.S. Census and other data sources to explore changes over time in the demography and economic well-being of the middle income group. Chapter 7 on the changing demography of income groups was written by Richard Fry, senior researcher; and Chapter 8 on trends in income, expenditures, wealth and debt was written by Rakesh Kochhar, senior researcher. Research assistant Felisa Gonzales helped with fact-checking and the preparation of charts.

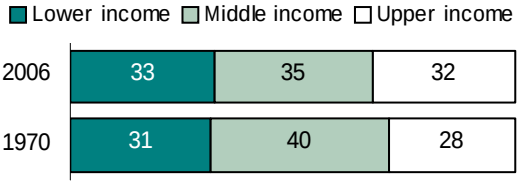
Chapter 7: Middle Income Demography, 1970-2006

Overview

This section of the report uses census data to examine how the demographic characteristics of adults in the lower, middle and upper income groups changed from 1970 to 2006. By our definition, a person is considered middle income if that person lives in a household with an annual income that falls within 75% to 150% of the median household income, which in 2006 was $44,620 to $89,241 (adjusted to 2008 dollars) for a household of three. A person whose median household income is above that range is considered in the upper income group; a person whose household income is below that range is in the lower income group. We use 1970 as the starting point for our analysis because it is the closest census year to what many economists consider an inflection point between the post-World War II era (1947-73) of rapid economic advancement for the middle class and the more recent era (1973-present), which has been characterized by more modest gains for the middle class. We use 2006 as the end point for our analysis because it is the most recent year available of the American Community Survey.

This analysis finds that the middle income group, as a share of the total adult population, has shrunk in size. In 1970, 40% of adults were in middle income households. By 2006, just 35% of adults were in the middle income category (Figure 1). This small but notable "hollowing out" of the middle income group has been accompanied by increases in the share of adults in both the lower income category and the upper income category. However, the percentage increases since 1970 have been greater in the upper income category (plus 3.6 percentage points) than in the lower income category (plus 1.2 percentage points).

Figure 1
Income Status of Adults
(% of adults in income category)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

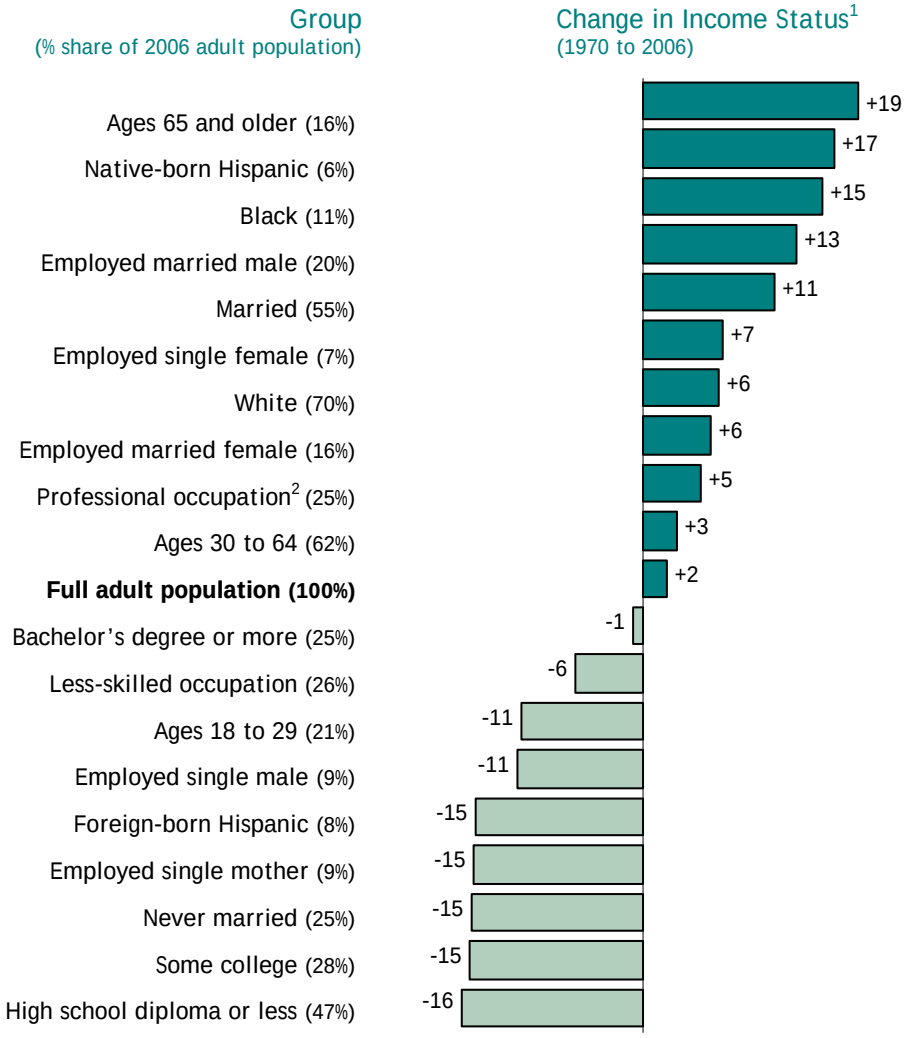
Our analysis also finds that some demographic groups have been economic winners during this period and that others have been losers (Figure 2). For the purposes of this analysis, winning means a greater likelihood of being in a higher income category; losing means a greater likelihood of being in a lower income category. Among the key findings:

- **Education.** The least educated adults have experienced the greatest decline in their income position. In 1970, 36% of adults with a high school diploma or less were in lower income households. In 2006, 46% of these adults were in lower income households. Also, fewer of these adults were in the upper income tier in 2006 (17%) than in 1970 (23%). Adults with one to three years of college also lost considerable ground.

- **Age.** Seniors (those ages 65 and older) have experienced big improvements in their income position since 1970. A much smaller share of senior citizens were lower income in 2006 (45%) than in 1970 (58%), and a larger share were in the upper income group—21% in 2006 versus 16% in 1970. By

contrast, younger adults (ages 18-29) saw their income position decline—they were more likely to be lower income in 2006 (39%) than in 1970 (30%).

Figure 2
Winners and Losers
Change in Income Status for Assorted Adult Groups, 1970 to 2006



Notes: [1]This figure represents the increase since 1970 in the group's percentage in the upper income category added to the decrease in the group's percentage in the lower income category. [2]Managerial and professional occupations, including doctors, lawyers and business professionals.

Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

- **Occupation.** Workers in less-skilled occupational categories have lost ground; they were more likely to be lower income in 2006 (42%), compared with 1970 (36%). By contrast, workers in managerial and professional occupations were more likely to be upper income in 2006 (57%) than in 1970 (52%).

- **Race and Ethnicity.** Whites, blacks, Asian-Americans and native-born Hispanics all improved their income positions from 1970 to 2006, while foreign-born Hispanics (i.e., immigrants) saw their income position decline. Looking at these changes from the perspective of the adult population as a whole, the effect of this rise in income status for all major racial and ethic groups was largely offset by the effect of the compositional change in the population during this period. In 1970, just 14% of the adult population was made up of minorities; by 2006, 30% of the adult population was made up of minorities. These minority groups, on average, have lower incomes than whites. So even though these minority groups improved their income status during this period, their increased share of the total population had the effect of moderating the overall income gains experienced by the full population.

- **Marriage.** In 1970 about three-in-ten married adults were in the upper income tier; by 2006 nearly four-in-ten such adults were in the upper tier. Unmarried adults, by contrast, lost ground. For example, among adults who had never married, 34% were in the upper income category in 1970. By 2006, only 27% of never-married adults were upper income.

- **Marriage and Gender.** Since 1970, working husbands have fared better than working wives. The likelihood of working husbands living in an upper income household rose 11 percentage points since 1970. By contrast, the share of working wives in the high income household category rose six percentage points since 1970. The difference is largely explained by the fact that in 1970 a large percentage of working wives were already in two-earner households, whereas a much smaller percentage of working husbands were in two-earner households.

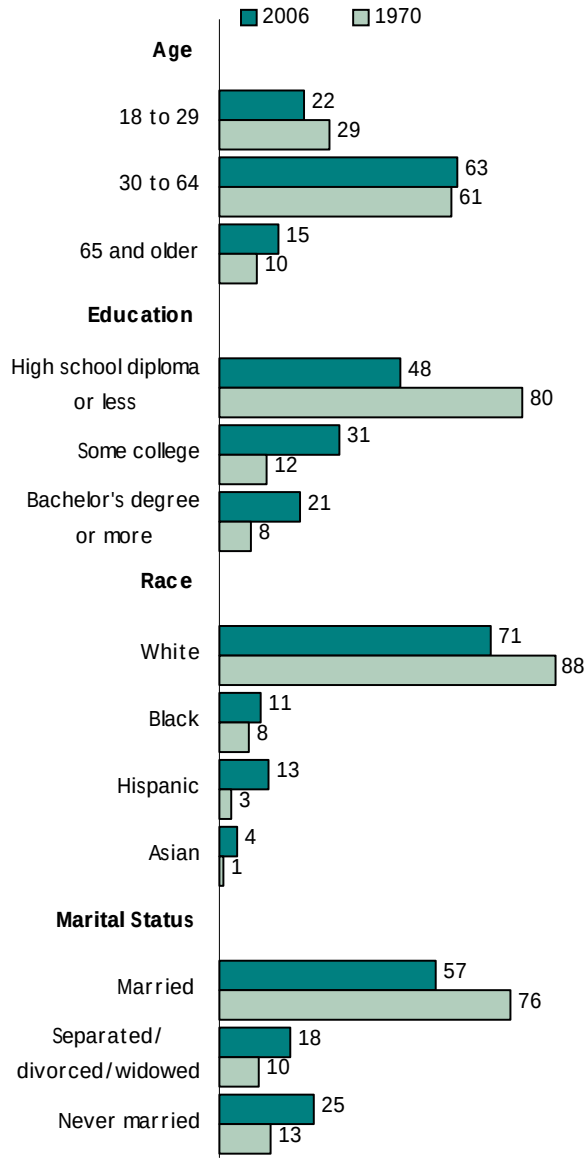
- **Working Singles and Gender.** Single working women have experienced much greater improvement in their income position since 1970 than have single working men. In 2006, 32% of these females who do not live with children or other family members were in upper income households, an increase from 28% in 1970. By contrast, unmarried working males were less likely to be in upper income households in 2006 (36%) than in 1970 (43%).

This report also finds that adults in middle income households in 2006 have different characteristics than those in 1970 middle income households (Figure 3). To some extent these changes are to be expected, because the full adult population has different characteristics than it did in 1970. However, on a number of demographic fronts, the changes in the middle income group have been different from the changes among the general population. Here is a summary of some of the key changes in the characteristics of middle income adults and, for comparison, the changes in the full adult population:

- **Age**. Middle income adults have aged. In 1970, the average middle income adult was 41 years old. By 2006, the average middle income adult was 45, largely due to the rising presence of senior citizens among middle income adults. Among the full adult population (ages 18 and older), the increase in average age was not as great over this period—it went from 44 years in 1970 to 46 years in 2006.

- **Education.** Middle income adults have become much better educated over time. In 1970, just one-in-five adults in the middle income group had attained more than a high school diploma. By 2006, more than half of middle income adults had completed more than a high school education. The improvement in educational attainment of middle income adults was concentrated among those with some college (but not completing a bachelor's degree or advanced degree). In 2006, 31% of middle income adults had completed one to three years of college, an increase from 12% of adults in this category in 1970. Among the full adult population, those with some college education increased to 28% in 2006 from 12% in 1970.

Figure 3
Demographic Characteristics of Middle Income Adults, 1970 and 2006
(%)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

- **Race and Ethnicity.** As with the full adult population, middle income adults were more likely to be racial and ethnic minorities in 2006 than in 1970. In 1970 nearly nine-in-ten middle income adults were non-Hispanic whites. By 2006, about seven-in-ten middle income adults were non-Hispanic white. The Hispanic share of middle income adults rose from 3% in 1970 to 13% in 2006. Asian-Americans rose from less than 1% of middle income adults in 1970 to 4% in 2006. Non-Hispanic blacks grew from 8% of middle income adults in 1970 to 11% in 2006.

- **Marriage and Parenthood.** From 1970 to 2006 middle income adults became much less likely to be married—and also less likely to have children living at home. In 1970 more than half (54%) of middle income adults were married with their own children living in the household. By 2006, married parents

comprised less than a third (32%) of all middle income adults. Among the full adult population (ages 18 and over), the decline in married parenthood was not as great over this period—in 2006, 28% of all adults were married with their own children living in the household, down from 44% of all adults in 1970.

- **Work, Marriage, Gender.** In 1970 one-third of middle income adults were working husbands. In 2006 one-fifth of middle income adults were working husbands. By contrast, working wives have become more prevalent among middle income adults since 1970. They now comprise 17% of middle income adults.

Data Sources

This analysis uses U.S. Decennial Census microdata files for 1970 to 2000 and the American Community Survey (ACS) file for 2006. The U.S. Census Bureau has been collecting long-form census information in the new ACS since 2000. The 2006 ACS questionnaire is very similar in content and form to the 2000 Decennial Census long-form questionnaire, and, by design, the information in the 2006 ACS is highly comparable to the Decennial Census.[1] The universe for this analysis is adults ages 18 and older. Only adults residing in households (97% of all adults in 2006) are included in this analysis. The other 3% lived in group quarters such as dormitories, hospitals, nursing homes and correctional facilities. We do not include these adults in our analysis because it is problematic to determine the manner in which their income and resources are pooled. The 1970 sample is a 1% sample of adults. The other years used a 0.333% sample of adults. The unweighted numbers of adults residing in households are shown in Table 1.

Table 1
Sample Adults in Households

Year	Sample size
1970	1,274,973
1980	523,242
1990	599,259
2000	669,254
2006	728,179

Source: Pew Research Center tabulations of the 1970-2000 Decennial Censuses and the 2006 American Community Survey

Methodology for Determining "Middle Income"

The determination of whether a household is "middle income" is based on common techniques in the economic literature on income dispersion or polarization (Wolfson, 1994). Because households do not all have the same number of members, we examine the distribution of household income adjusted for household size or "equivalent household income" (see the appendix section "Adjusting for Household Size" for the rationale for adjusted household income). In preliminary analyses regarding the demographic characteristics of households by income category, alternative adjustment factors were tried, including an alternative with no adjustment for household size. The conclusions regarding the change over time in the demographic characteristics of the middle income category were not sensitive to the adjustment factor.

[1] It is also the case that there have been important changes in the census questionnaire since 1970 that raise comparability issues over time. For example, the educational attainment question was revamped in the 1990 census. Another well-known change is that the census allowed for the reporting of multiple racial identities commencing with the 2000 census. Some of the data comparability issues over time are dispatched by the fact that we utilized the Integrated Public Use Microdata Samples (IPUMS) made available by the University of Minnesota Population Center. The IPUMS has constructed consistent variables that span the entire 36 year-period of analysis. For example, it has a single consistent racial classification variable (RACESING) and a consistent educational attainment variable (EDUCREC).

We define a middle income household as one with an adjusted household income between 75% and 150% of the median adjusted household income. This procedure specifies a fixed income range needed to be "middle income," rather than a fixed middle percentage of households. For example, in 2006 the median unadjusted household income was $48,197. The median household income adjusted for household size was $32,067. The fixed income or dollar band that defines a middle income household in 2006 is then 75% to 150% of $32,067, or $24,050 to $48,101. Unfortunately, this range is in terms of adjusted household income, and few readers are familiar with their "adjusted household income." For illustrative purposes, this range is converted to an equivalent income range for three-person households, approximately the average size of households in the U.S. For three-person households the fixed dollar band defining middle income household in 2006 is $41,657 to $83,313. In January 2008 dollars, the band defining a middle income household is $44,620 to $89,241 (the appendix section on "Deflation of Income, Expenditures and Wealth" discusses the handling of changes in prices).

Examining the median adjusted household income in earlier years and applying the 75% to 150% of the median criterion, the income bands defining a middle income household for a size of three in the years analyzed are shown in Table 2.

Table 2
Definition of Middle Income Household for a Household Size of Three
(January 2008 dollars)

Year	Income Range
1969	$31,755 to $63,509
1979	$37,356 to $74,712
1989	$41,386 to $82,771
1999	$45,920 to $91,841
2006	$44,620 to $89,241

Source: Pew Research Center tabulations of the 1970-2000 Decennial Censuses and the 2006 American Community Survey

Because median household income rose from 1970 to 2000, this procedure for defining a middle income household has raised the income threshold needed to be considered middle income over time. Since 2000, the median adjusted household income declined, resulting in a lower threshold for 2006.

The above procedure defines a middle income household on the basis of an income range; this enables us to ask how many households or adults fall into the middle income category at any given time and to examine the characteristics of these adults. A common alternative way to look at income polarization is to set a fixed percentage range of adults (say, the middle 20% or middle 40%) as "middle income" and examine the spread of household incomes of that fixed middle percentage of adults and whether the range of incomes is widening or narrowing over time (Danziger and Reed, 1999; Wolfson, 1994). For our purposes, it makes little difference whether we define "middle income" on the basis of a fixed range of income or a fixed range of adults. Either way, what is being examined are the characteristics of a broad swath of adults in the middle of the distribution, and the demographic changes that are apparent are not very sensitive to how wide or narrow the net is cast in the middle.

Finally, a substantive analytical choice concerns the unit of analysis. Should we examine the characteristics of the head of the household or all the adults in the household? That is, do we investigate middle income households (as represented by their head) or adults residing in middle income households? For many characteristics it does not matter, because changes over time in the characteristics of the head of the household are very similar to the changes in the adult population. However, this is not the case with regard to gender. Since 1970, the U.S. adult population has become slightly less female (from 53% female in 1970 to 52% female in 2006). The share of households headed by women, however, has more than doubled during this period, from 21% in 1970 to 45%

in 2006.[2] The report presents the results of analyses showing how the incomes of all the adults in the household have changed over time and, thus, large changes by gender are not apparent. Results on the changes in the distribution of households, rather than adults, across income categories display much greater changes by gender.

How Many Middle Income?

In 2006 there were nearly 218 million adults ages 18 and older residing in U.S. households (Table 3). About 77.1 million adults (35%) had adjusted household incomes in the middle income category in 2006. Over 71 million adults (33%) resided in households with adjusted incomes below middle income. Over 69 million adults (32%) had adjusted household incomes in the upper income category. So, roughly speaking, the census income analysis reveals that in 2006 adults split about evenly one-third, one-third and one-third across the lower income, middle income and upper income categories.

The share of adults in middle income households has steadily declined since 1970. In 1970, 51 million, or 40%, of the nation's 127 million adults resided in middle income households. Thus, the portion of adults in middle income households has declined from 40% in 1970 to 35% in 2006. The decline in the percentage of adults that are middle income has been accompanied by an increase in the percentage of adults in both ends of the distribution. The share of adults in households with lower incomes has risen from 31.5% in 1970 to about 33% in 2006. At the upper end, 28% of adults were in high income households in 1970 and that share has increased to 32% in 2006. So the adult income distribution has "hollowed out," or become more polarized, since 1970. The share of adults in the middle income group has grown smaller, while the lower and upper income groups have become larger.[3]

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[2] This largely reflects the growth in single-parent households but also change over time in the gender of the head in married-couple households.

[3] Numerous economic studies have documented the "shrinking middle class" in the U.S. Some of them report, however, that the decline in the share of those in the middle of the income distribution is due almost entirely to an increase in concentration of people in higher income ranges and not increased mass in lower income ranges. For example, Burkhauser, *et. al.* (1999) find that 90% of the shrinkage out of the middle income during the 1980s slid up into the above middle income category and only 10% shifted into the lower income category. Since our primary purpose is not to measure the change in the size of the middle class but rather to examine its demographic composition, we have not exhaustively attempted to account for the differences in regard to where the shrinking middle went. Note, however, that Burkhauser, *et. al*. examine a shorter time frame: 1980 to 1990. Their analysis is based on the March Current Population Survey, not Decennial Census data. Finally, they define middle income as those with adjusted household incomes between 75% and 5 times the U.S. poverty line, rather than a range around the median adjusted household income.

Table 3. The Distribution of Adults by Income Category, 1970 to 2006

	Thousands				Percent Distribution			
Year	Lower Income	Middle Income	Upper Income	Total	Lower Income	Middle Income	Upper Income	Total
1970	40,119	51,337	36,042	127,497	31.5	40.3	28.3	100.0
1980	48,845	61,878	46,250	156,973	31.1	39.4	29.5	100.0
1990	57,623	66,180	54,701	178,505	32.3	37.1	30.6	100.0
2000	65,714	74,100	61,640	201,454	32.6	36.8	30.6	100.0
2006	71,033	77,107	69,388	217,527	32.7	35.4	31.9	100.0

Source: Pew Research Center tabulations of the 1970-2000 Decennial Censuses and the 2006 American Community Survey

Change Since 1970, by Demographic Groups

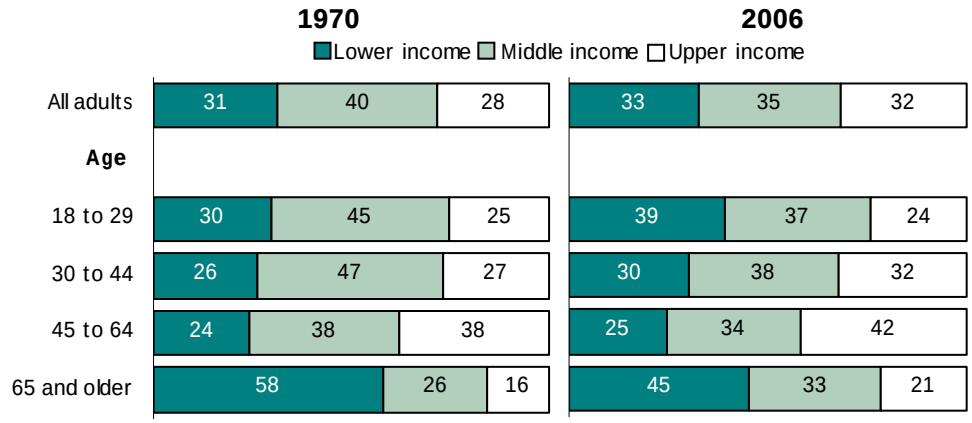
From 1970 to 2006, some adult population groups have fared much better than others, and these variances relate to age, racial and ethnic identity, marital status, gender and occupation.

Note that this analysis compares the 1970 income profile of adults with the 2006 income profile of adults. It is a comparison of two snapshots at different points in time. The analysis is not longitudinal in nature, as the data do not follow the same individuals over time.

Age. There have been sharp changes in the income status of young adults and senior citizens since 1970. Their outcomes have changed in opposite directions. The income status of young adults between the ages of 18 to 29 fell markedly over the 36 years. In 1970, 45% of 18- to 29-year-olds lived in middle income households (Figure 4). In 2006 just 37% of this age group resided in middle income households. The share of 18- to 29-year-olds in the lower income category rose from 30% in 1970 to 39% in 2006.

By contrast, the income status of seniors (those ages 65 and older) has markedly improved since 1970. In 1970, 58% of seniors resided in low income households and about one-quarter of seniors were middle income (Figure 4). By 2006, just 45% of seniors were in lower income households; meanwhile, the share of seniors who were middle income had risen to one-third. And the percentage of seniors residing in upper income households also rose—from 16% in 1970 to 21% in 2006.

Figure 4
Income Status of Adults, by Age, 1970 and 2006
(% of adults in income category)

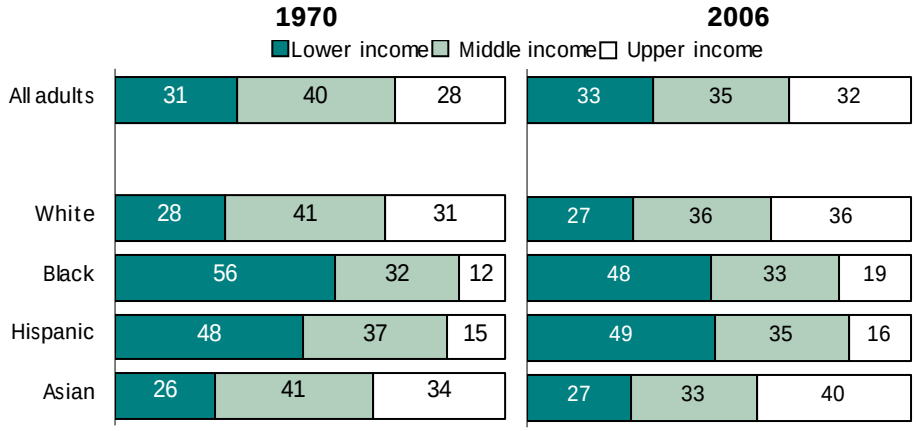


Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Race and Ethnicity. Relative to the rest of the population, African-Americans experienced improvements in their household income profile from 1970 to 2006. The proportion of black adults living in lower income households fell sharply, from 56% in 1970 to 48% in 2006 (Figure 5). The share in the middle group rose slightly, to 33% in 2006, from 32% in 1970. And the share in the upper group rose by more than half, to 19% in 2006, from 12% in 1970.

White adults also had income gains during this period, though they were not as dramatic as those of blacks. The share of white adults in the upper income category increased from 31% in 1970 to 36% by 2006. Their share in the middle group fell by a similar amount—from 41% in 1970 to 36% in 2006. And their share in the lower group fell slightly, from 28% in 1970 to 27% in 2006.

Figure 5
Income Status of Adults, by Race and Ethnicity, 1970 and 2006
(% of adults in income category)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Asian-American adults also experienced income gains. The share of Asian adults in upper income households rose from about one-third in 1970 to four-in-ten in 2007; the share in the middle group fell by a nearly identical amount.

Hispanics experienced little change in their income status during this period—with nearly identical shares in all three income groups in both 1970 and 2006.

Since adults of most racial/ethnic origins experienced either declines or little change in the likelihood of being lower income since 1970, how did the aggregate share of adults in low income households rise from 31% in 1970 to 33% in 2006? The answer rests with the changing composition of the U.S. population (Table 4). Even as most racial and ethnic groups were working their way up the income ladder during this time period, the composition of the overall population was also changing. White adults became less prevalent, while minority adults (especially Hispanics) became more prevalent. The white share of adults declined from 86% in 1970 to 70% in 2006. Because minority adults were still far more likely than whites to be lower income, the aggregate share of adults in lower income households rose even though adults of most racial/ethnic groups experienced declines or little change.

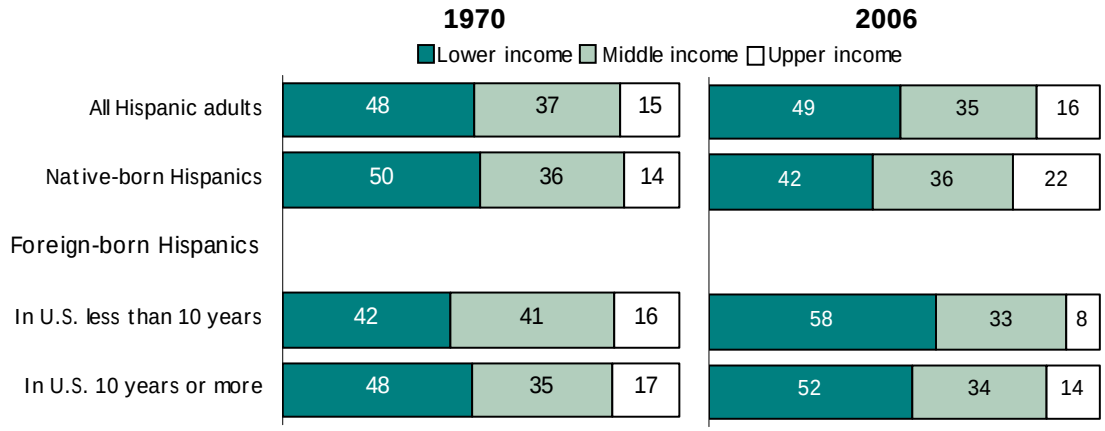
Table 4
Adult Population, by Race and Ethnicity
(% share)

Race/Ethnicity	1970	2006
White	86	70
Black	10	11
Hispanic	3	13
Asian	1	5

Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Also, it should be noted that the lack of change in the overall income profile of Hispanic adults conceals important differences within the Hispanic population. As Figure 6 shows, native-born Hispanic adults have experienced gains similar to those of African-American adults. The share of lower income native-born Hispanic adults declined from 50% in 1970 to 42% in 2006. In 1970, 14% of native-born Hispanics were upper income. By 2006, 22% of native-born Hispanics were in the highest category. By contrast, foreign-born Hispanic adults experienced declines in their income status over the 36 years, and this was especially true for Hispanic immigrants who had been in the country for less than 10 years. In 1970, 42% of these recently arrived Hispanic adults were in lower income households. In 2006, 58% of recently arrived Hispanic adults were in the lower income category. The income outcomes of Hispanic immigrants have declined for a variety of reasons. Among them, the share of recent immigrants originating from Mexico has increased since 1970 (Fry, 2006), and Mexican immigrants tend to have lower earnings than other Hispanic immigrants (Duncan, Hotz, and Trejo, 2006). Furthermore, in 1980 Mexican and Central American immigrants had very low average wages relative to other workers (Schoeni, McCarthy, and Vernez, 1996), and workers with the lowest wages have experienced the smallest wage gains since 1980.

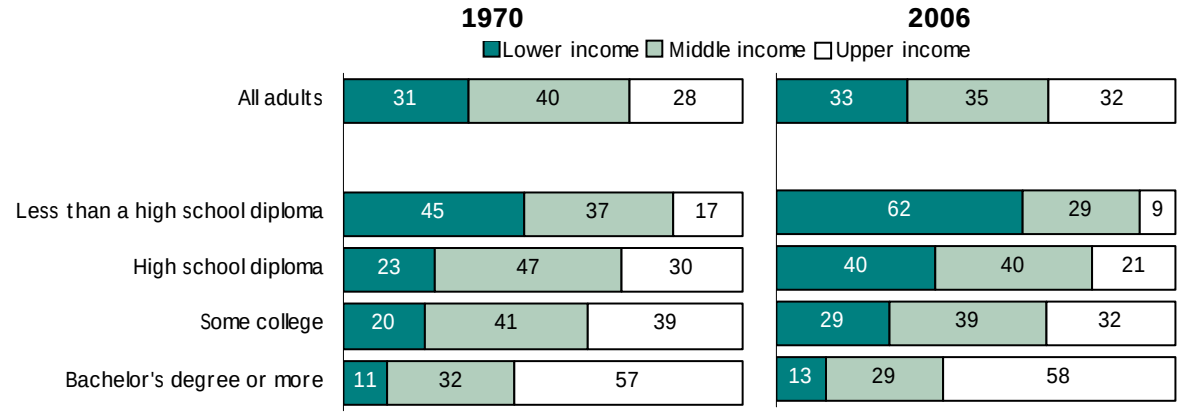
Figure 6
Income Status of Hispanic Adults, by Nativity, 1970 and 2006
(% of adults in income category)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Education. Adults with lower educational attainment saw their relative income position decline sharply during this period (Figure 7). In 1970, 45% of adults who did not complete a high school diploma were in lower income households. By 2006, 62% of these least educated adults were lower income. Adults who had a high school diploma (but no years of college education) fared no better—they also experienced a 17 percentage point increase in the lower income ranks (from 23% in 1970 to 40% in 2006). Adults with some college education (but not a bachelor's degree or more) fared a bit better, but also were more likely to be lower income in 2006 relative to 1970. In 1970 two-in-ten adults with some college education were lower income. In 2006, nearly three-in-ten (29%) adults with some college were lower income. The only education group whose income prospects roughly remained unchanged over the 36 years were adults who had attained a bachelor's degree or more education.

Figure 7
Income Status of Adults, by Education, 1970 and 2006
(% of adults in income category)

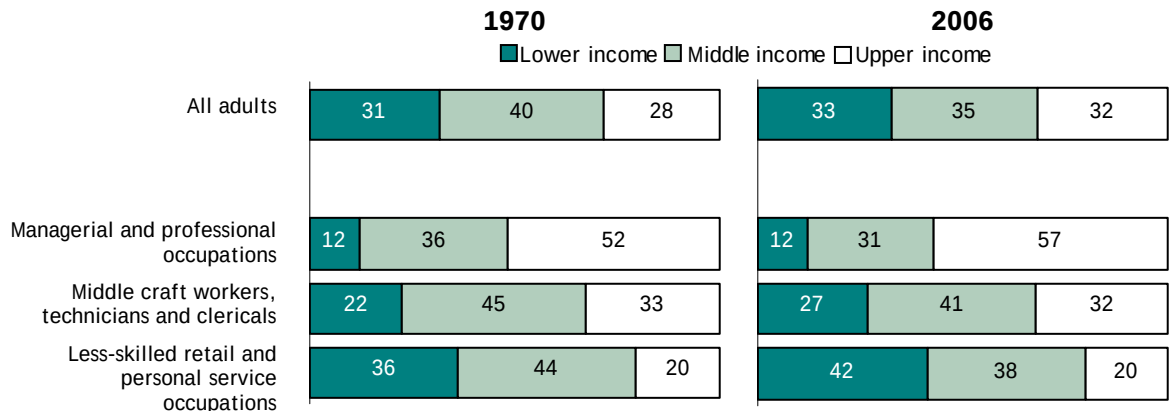


Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Because adults at every level of educational attainment have experienced a decline in status, one might expect that in the aggregate the percentage of adults in the lower income category would have increased more than actually occurred (from 31% of adults in the lower income category in 1970 to 33% in 2006). But here again, changes in characteristics of the full population explain why income status has not worsened more. Perhaps because of the declining income fortunes of the lesser educated, Americans have steeply upgraded their educational attainment levels. Older, less-educated adults have died. In addition, each successive wave of young adults has obtained more education than the preceding one (Stoops, 2004). In the absence of the upgrading of American adults' education that occurred, simple analytics indeed suggest that many more adults would be in the lower income category.

Occupation. Earnings are the key source of income for many households, and most adults have some ties to the work world.[4] Though the census has nearly 900 occupational categories, we examined the relationship between occupation and household income status using an occupational typology that has three broad tiers. Sometimes referred to as "elite jobs," "good jobs," and "less-skilled jobs," the assignment is made on the basis of the adult's occupation and industry (Rose, 2007). Nonetheless, the broad categorization is designed to describe the occupational status and earnings hierarchy. The lower occupational tier consists of mostly low-paying jobs and includes factory operatives, truck drivers, longshoremen, salesclerks, service workers and farm workers. The upper tier of managers and professionals includes doctors, lawyers, managers, accountants, architects, engineers and business professionals such as sales representatives and stock and real estate brokers. The middle tier skilled blue-collar and clerical and administrative support category includes supervisors, managers of retail and fast-food outlets, craft workers, police officers, firefighters, paralegals, clericals and health and science technicians. Today, many of the jobs in this middle tier are held by adults with some postsecondary education but not a bachelor's degree.

Figure 8
Income Status of Adults, by Occupation, 1970 and 2006
(% of adults in income category)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

[4] In census data, any adult who has worked in the prior five years has an occupational classification.

Similar to the household income changes observed for the educational hierarchy, the income profile for adults in the middle and bottom tiers of the occupational hierarchy has not changed favorably. Adults with less-skilled jobs in retail and personal services, operatives, laborers and farm workers are increasingly likely to be in lower income households. In 1970, 36% of adults with lower status retail and personal service occupations were in lower income households (Figure 8). In 2006, 42% of adults with the same type of occupation were in the lower income category.

Adults with middle-tier "good" jobs also have diminished household incomes since 1970. In 1970, 22% of adults in the technician and clerical tier were in lower income households. In 2006, 27% of adults in these mid-tier jobs were in the lower income category.

At the top end of the occupational hierarchy, adults in managerial and professional occupations were more likely to be in upper income households. In 1970, 52% of adults in "elite" or professional and managerial occupations were in upper income households. By 2006, 57% of adults in professional and managerial jobs were in high income households.

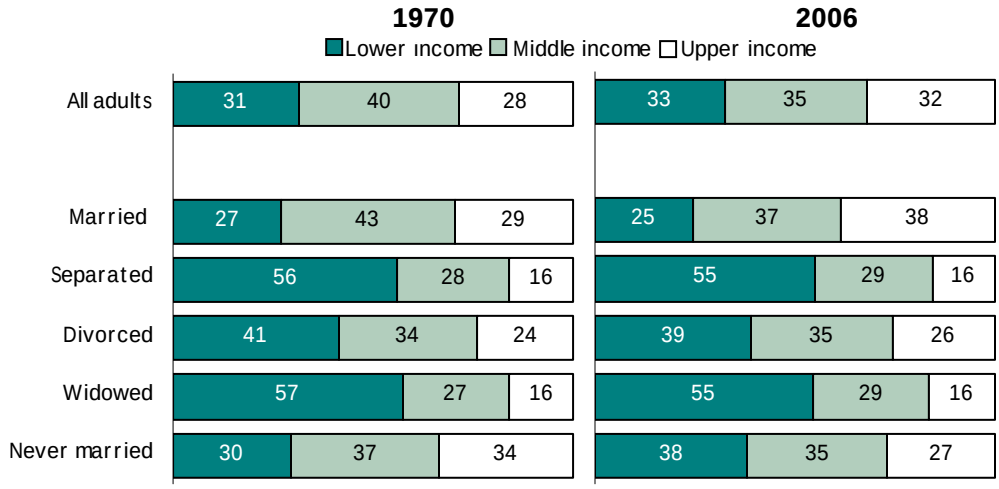
Since the broad occupational hierarchy is designed to mimic the earnings hierarchy, it is partly to be expected that the managers and professionals have fared the best in terms of change in household income status. Analyses of earnings show that earnings gains since 1979 have been strongly related to the earnings level. That is, the earnings of the most highly paid workers have risen to a much greater degree than the earnings of lesser paid workers (Goldin and Katz, 2007). However, the divergent income fortunes of adults by occupational status reflect factors above and beyond direct earnings differences. Recall that our income status measure is based not on personal earnings but on household income. Managers and professionals are increasingly likely to have multiple earners in their household due to their greater likelihood of being married.

Marital Status. Married adults have experienced much greater gains in their income status than have unmarried adults. In 1970 about three-in-ten married adults living with their spouses had upper incomes (Figure 9). By 2006 nearly four-in-ten such adults were in upper income households.

Among unmarried adults, those who were never married experienced larger declines in income status than did other unmarried people.[5] The share of never-married adults in the lower income category rose from 30% in 1970 to 38% in 2006. In 1970, more than a third of these single adults were in upper income households. By 2006, only about a quarter of these singles were in the highest income category.

[5] Never-married adults do not necessarily live alone. Some, for example, reside with their married parents. However, it is true that, by definition, no married adults living with their spouses live alone, whereas some never-married adults do live alone.

Figure 9
Income Status of Adults, by Marital Status, 1970 and 2006
(% of adults in income category)



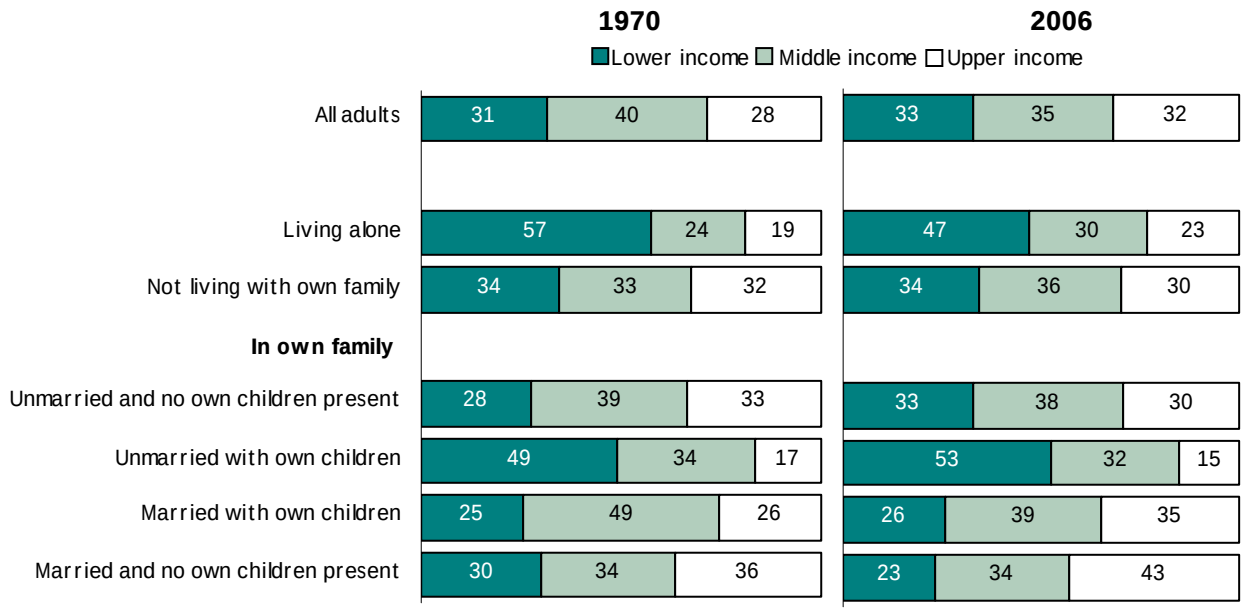
Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Living Arrangements. All major categories of married adults have improved their income status since 1970, but the nature and extent of their gains depends to a degree on whether they have children living with them (Figure 10). As the bottom row of Figure 10 shows, in 1970, 30% of married adults without children present were in the lower income category. By 2006, 23% were in the lower income category. The share of these adults in the middle category remains unchanged, and thus the gains were all into the upper income status; the share in this category rose from 36% in 1970 to 43% in 2006.

As the second row from the bottom shows, the income profile of married adults with children present hollowed out in the middle. In 1970 almost half of married adults with kids[6] at home (49%) were in middle income households. By 2006 just 39% of married adults with children were middle income. The shrinkage in the share in the middle was accompanied mainly by growth in the share that was upper income—to 35% in 2006, from 26% in 1970. The share in the bottom group also rose, but only marginally—to 26% in 2006, from 25% in 1970.

[6] This includes stepchildren and adopted children as well as biological children, and children of any age or marital status.

Figure 10
Income Status of Adults, by Family Living Arrangements, 1970 and 2006
(% of adults in income category)

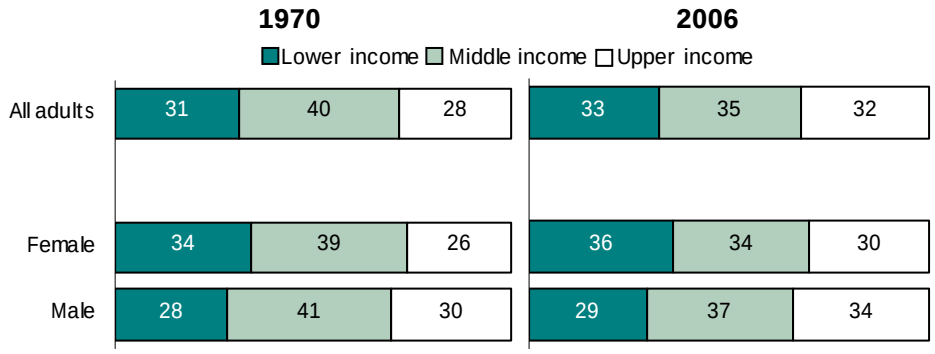


Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

The fortunes of unmarried adults depend on their living arrangements. Unmarried adults residing with family have clearly experienced declines in their income status. This group includes both single parents (the third row from the bottom) as well as unmarried adults (the fourth row from the bottom) who reside with a sibling or parent(s), i.e., "boomerangers" in common parlance. In both instances, the share of unmarried adults residing with family who had incomes in the lowest category rose from 1970 to 2006. By contrast, unmarried adults living alone have fared much better. About 57% of adults living alone were in the lower income category in 1970. By 2006, 47% of adults living alone were in the lower income category.

Gender. Men and women experienced similar changes in their income status (Figure 11). Both genders were less likely to be middle income in 2006 compared with 1970, with a small increase in the shares of each gender in the lower income category and a larger increase for both in the upper income category. However, the similarity in these aggregate numbers conceals some key differences in the changes in the income profiles of men and women by marital and work status.

Figure 11
Income Status of Adults, by Gender, 1970 and 2006
(% of adults in income category)

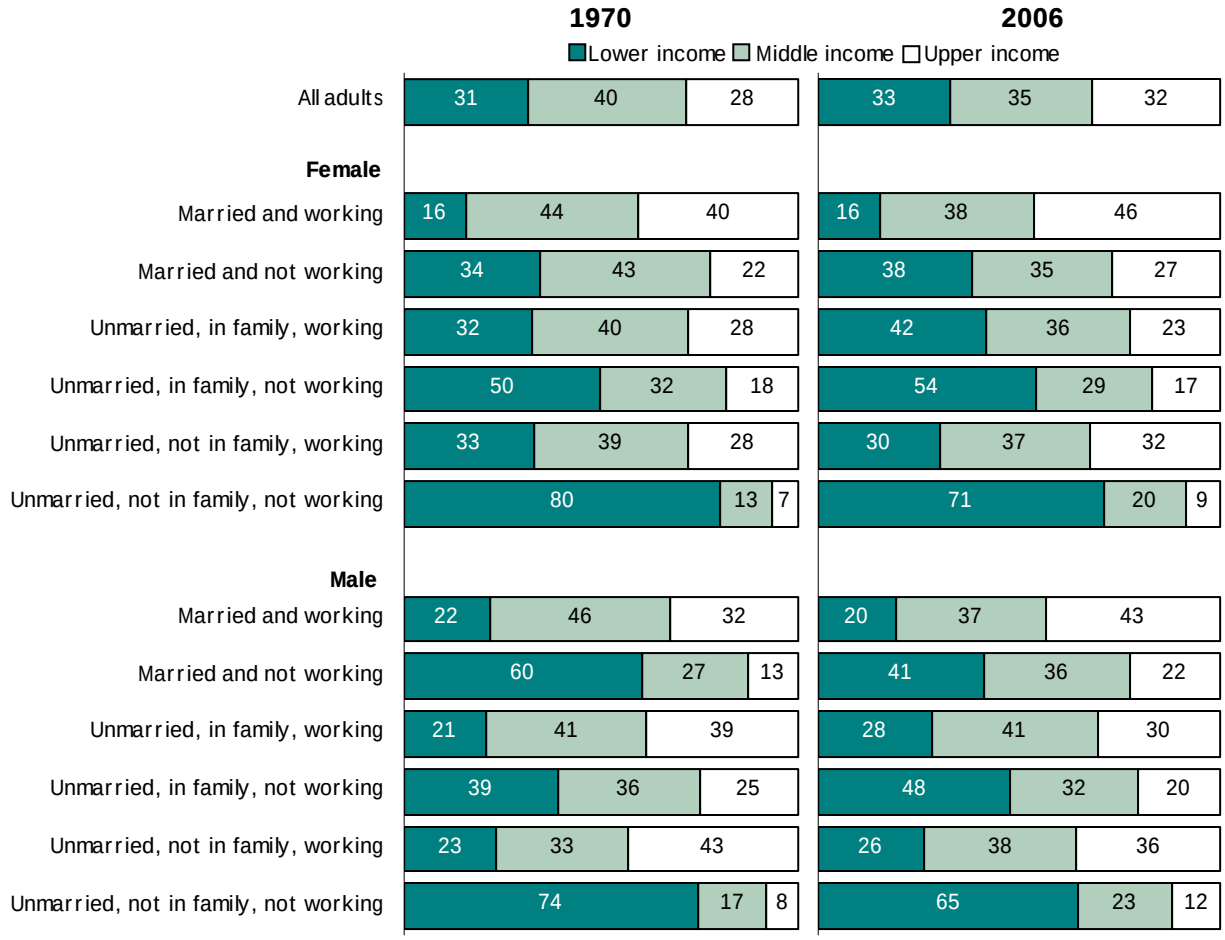


Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Gender, Marriage and Work Status. While all adults with spouses have gained in their income status, working husbands have gained more than working wives. Among working husbands, there has been a large hollowing out of the middle (Figure 12). In 1970, 46% of working husbands were middle income. By 2007, 37% of working husbands were middle income. But the shrinking middle was accompanied solely by expansion into the upper income category. The share of working husbands in the upper income category grew from 32% in 1970 to 43% in 2006. By contrast, working wives have not gained as much. In 2006, 46% of working wives were high income, up from 40% in 1970.

The differential gains to working husbands in contrast to working wives likely stems in part from differences in the work effort of husbands and wives. In 1970 most working wives' spouses already worked, so the upside potential to expand the household's income by the husband's entry into the labor force was limited. This was not the situation with working husbands. In 1970, nonworking wives significantly outnumbered working wives. As we discuss further below, the work status of wives has radically changed and in 2006 working wives outnumber nonworking wives. In income terms, married husbands have benefited handsomely from their wives' expanded entry into the work world.

Figure 12
Income Status of Adults, by Gender, Marital Status and Work, 1970 and 2006
(% of adults in income category)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

It is also instructive to examine the hollowing out of the income profile of nonworking wives. In 1970, 43% of nonworking wives were middle income. By 2006, 35% of nonworking wives were middle income. The shrinking proportion of middle income nonworking wives was accompanied by an increase in the share of nonworking wives who were in the lower income category (from 34% in 1970 to 38% in 2006). By contrast, working wives were no more likely to be in the lower income category from 1970 to 2006. This may explain some of the motivation for wives to go to work. The chances that a household will fall below middle income if the wife does not work have increased relative to 1970. In 2006 nonworking wives were almost 2.5 times more likely than working wives to be lower income. In 1970 they were only about twice as likely.

The fortunes of unmarried adults also diverge by gender. Examining unmarried adults who do not reside with family (i.e., excluding single parents and "boomerangers"), the income status of working females clearly

improved since 1970. In 1970, 28% of working unmarried females (not residing with family) were in the upper income ranks. By 2006, 32% of these females had upper tier incomes. In contrast, working unmarried males clearly have experienced a decline in their income fortunes since 1970. In 1970, 43% of working unmarried males (not residing with family) were upper income. By 2006, 36% of working unmarried males were upper income. Although working unmarried males continue to be more likely than their female counterparts to be both upper income and middle income, there has been a huge convergence in their income statuses over the 36 years. In 1970 working unmarried men were much more likely to be upper income than working unmarried women (43% versus 28%). Due to gains for working unmarried women and declines for working unmarried men, in 2006 working unmarried men were only slightly more likely than working unmarried women to be upper income (36% versus 32%).

These changes have resulted in a sharp reversal in the income consequences associated with marriage for working men. In 1970 unmarried working men were more likely than their married counterparts to be upper income (43% versus 32%). In 2006 the outcomes were nearly reversed: 36% of unmarried working men were upper income, compared with 43% of married men. Marriage is associated with greater income benefits for men in 2006 than it was 36 years earlier.

The Changing Portrait of Middle Income Adults

Middle income adults in 2006 do not closely resemble middle income adults in 1970. To some extent, the changes are not surprising because American adults in general have different characteristics in 2006 than they had in 1970. For example, the adult population has aged a bit. In 1970 the average adult was 44 years old. By 2006, the average age had increased to 46. It is also well known that racial/ethnic minorities have become a growing fraction of the adult population during this time period. In 1970 nearly nine-in-ten adults were non-Hispanic whites. By 2006, just seven-in-ten adults were non-Hispanic white. Fewer adults were married in 2006 (52%) than in 1970 (69%). Finally, among married women, in 2006 a much smaller fraction (40%) did not work outside the home, compared with 1970 (60%).

While the full population has changed in all of these basic demographic characteristics, the middle income population has often changed even more. In this section, we highlight changes in the characteristics of middle income adults that are even more pervasive than the changes that have occurred among all adults.

Middle income adults are much older than they were in 1970. In 2006, the average age of middle income adults was 45, up from 41 years in 1970. The aging of the middle income population reflects big changes at both ends of the age spectrum. At one end, many fewer middle income adults are young adults. In 1970 nearly three-in-ten (29%) middle income adults were 18 to 29 years old. By 2006, about two-in-ten (22%) middle income adults were ages 18 to 29. At the other end, middle income adults are increasingly seniors ages 65 and older. In 1970 only 10% of middle income adults were seniors. By 2006, 15% of the middle income adult population were seniors. The number of middle income adults has increased by 50% since 1970, from 51 million in 1970 to 77 million in 2006 (Table 3). The number of middle income seniors has more than doubled (from 5 million to 12 million), so that a rising percentage of middle income adults are ages 65 and older.

Americans are more educated than ever (Stoops, 2004), and the education of middle income adults has risen sharply. In 1970 only one-in-five middle income adults had completed education above a high school diploma.

By 2006 a majority of middle income adults had earned more than a high school diploma. The gains in postsecondary education among middle income adults have been especially pronounced among adults who have some college education but do not have a bachelor's degree or more. In 1970 one-in-ten middle income adults had finished some college. By 2006, nearly one-in-three middle income adults had finished some college.

A rising proportion of middle income adults have completed a bachelor's degree or more education, but growth in the ranks of those who have received at least a bachelor's degree has been more pervasive among upper income households than among middle income households. In 1970, 7 million upper income adults had at least a bachelor's degree. By 2006 there were nearly 32 million upper income adults who had at least a bachelor's degree. Those with a bachelor's degree or more education have become a bigger share of upper income adults (in 2006 almost half of upper income adults had at least a bachelor's degree), in part because of the appreciable growth in real earnings of those who have at least a bachelor's degree since 1980 (Council of Economic Advisers, 2006). An additional factor is the growing divergence between college-educated adults and other adults in the likelihood of being presently married (Goldstein and Kenney, 2001; National Marriage Project, 2006). Trends in marital selection have also likely propelled those with a bachelor's degree into upper income households. Those with higher levels of education are not only more likely to be married than those with less education, but increasingly those with at least a bachelor's degree are more likely to marry another college graduate rather than a person with some college (Schwartz and Mare, 2005).

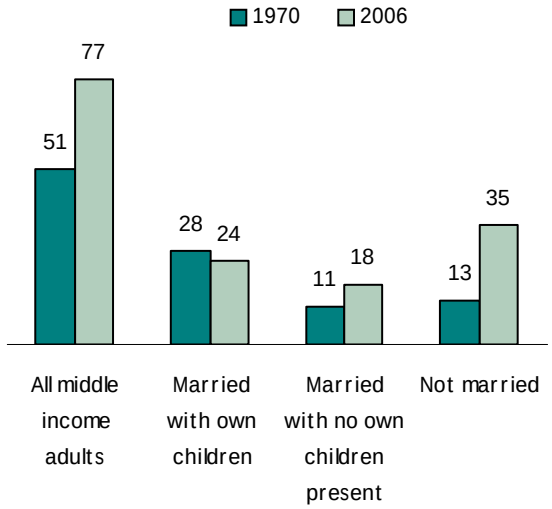
Middle income adults—like all adults—are increasingly likely not to be married. In 1970 three-quarters of middle income adults were married. By 2006 barely half (54%) of middle income adults were married. The ranks of the married among upper income adults also dwindled, but not as much: seven-in-ten above middle income adults were married in 1970, a proportion that declined to six-in-ten in 2006.

The entire decline in marriage among middle income adults has occurred among married adults with children. In 1970 more than half of middle income adults were married and parents of children who were living at home. By 2006 less than one-third of middle income adults were married parents with children at home. The decline in married parenthood has been so stark that the absolute number of married middle income parents fell by four million between 1970 and 2006 (Figure 13). During this same period, the total number of middle income adults increased by 26 million.

The ranks of middle income married adults who do not have children in the home have risen modestly. The share of middle income adults who were married without kids present rose from 21% in 1970 to 23% in 2006 and in absolute terms rose from 11 million married adults without kids present in 1970 to 18 million in 2006 (Figure 13).

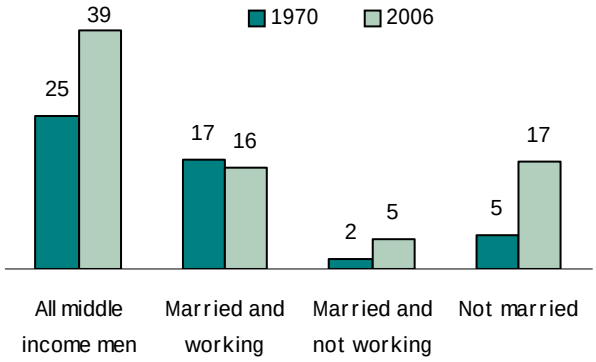
The prevalence of married working men has also diminished among middle income adults. In 1970 more than a third of middle income adults were married working men. In 2006 about a fifth of middle income adults were married working men. Again, the ranks of all middle income adults expanded by 26 million over the 36 years, but the number of middle income married working men fell—from 17 million in 1970 to 16 million in 2006 (Figure 14). In part, this decline is due to the general social trend of men being less likely to be married. But this is only part of the explanation. Married working men have also experienced large improvements in their household income status. In the upper income group, their ranks swelled in this time frame, from 12 million in 1970 to 19 million in 2006 (Figure 15). In short, the big demographic change here is that men have become less likely to be married, but among those men who are married, there is a growing likelihood that they are upper income.

Figure 13
Middle Income Adults, by Marital Arrangements, 1970 and 2006
(millions)



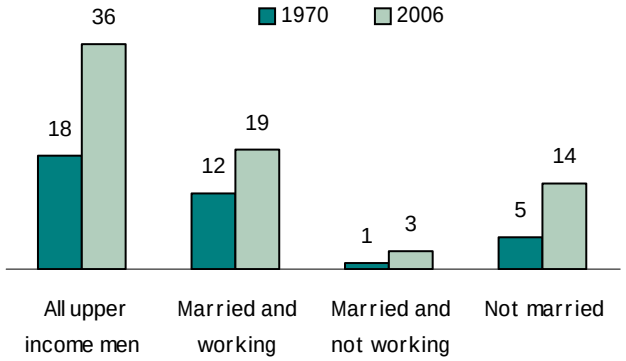
Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Figure 14
Middle Income Men, 1970 and 2006
(millions)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Figure 15
Upper Income Men, 1970 and 2006
(millions)



Source: Pew Research Center tabulations of the 1970 Decennial Census and the 2006 American Community Survey

Appendix Table 1

Characteristics of the Adult Population, Middle Income and All, 1970 to 2006

(% distribution)

	Adults in Middle Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Age												
18 to 29	29	32	25	22	22	-7	26	29	25	21	21	-5
30 to 44	31	31	36	35	30	-1	27	27	33	32	28	2
45 to 60	30	26	24	28	32	2	32	28	26	30	34	2
60 and older	10	12	14	15	15	6	15	15	17	16	16	1
Total	100	100	100	100	100		100	100	100	100	100	
Race/Ethnicity and Nativity												
White	88	84	81	75	71	-17	86	82	78	73	70	-16
Black	8	9	9	10	11	3	10	10	10	11	11	2
Foreign-born Hispanic in the U.S. 10 years or less	1	1	2	2	3	2	1	1	2	2	3	2
Foreign-born Hispanic in the U.S. more than 10 years	0	1	2	3	4	4	0	1	2	4	5	4
Native-born Hispanic	2	3	4	5	6	4	2	3	4	5	6	4
Asian	1	1	2	4	4	4	1	2	3	4	5	4
Other	0	1	1	1	1	1	0	1	1	1	1	1
Total	100	100	100	100	100		100	100	100	100	100	
Marital Status												
Married, spouse present	75	68	63	59	54	-20	69	63	59	56	52	-17
Married, spouse absent	1	1	1	2	2	1	2	1	1	2	2	1
Separated	1	2	2	2	2	1	2	2	2	2	2	0
Divorced	3	6	8	10	11	8	4	7	9	10	11	7
Widowed	6	6	5	5	5	-1	9	8	7	7	6	-2
Never married	13	18	20	22	25	12	15	19	21	22	25	11
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 1 (continued)

Characteristics of the Adult Population, Middle Income and All, 1970 to 2006

(% distribution)

	Adults in Middle Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Education												
Less than a high school diploma	41	28	17	13	11	-30	45	32	21	16	14	-31
High school diploma	39	41	38	36	36	-2	33	36	34	33	33	-1
Some college	12	18	29	32	31	19	12	17	26	29	28	16
Bachelor's degree or more	8	13	16	19	21	13	10	15	19	23	25	15
Total	100	100	100	100	100		100	100	100	100	100	
Own Family and Presence of Own Children												
Living alone	5	9	10	11	12	7	9	12	13	14	14	5
Not living with own family	2	5	7	8	9	7	3	5	7	9	9	6
In own family												
Unmarried with no own children present	12	13	14	13	16	3	12	13	13	12	15	2
Unmarried with own children	5	6	7	8	9	4	6	7	8	9	10	3
Married with own children	54	45	40	36	32	-22	44	38	34	32	28	-16
Married with no own children present	21	22	23	23	23	2	25	25	24	24	24	-1
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 1 (continued)

Characteristics of the Adult Population, Middle Income and All, 1970 to 2006

(% distribution)

	Adults in Middle Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Gender, Family and Work												
Female												
Married and working	15	17	19	18	17	2	14	16	17	17	16	2
Married and not working	22	16	12	11	10	-12	21	16	12	11	10	-11
Unmarried, in family, working	6	7	8	8	9	3	6	7	8	8	9	3
Unmarried, in family, not working	4	4	3	4	4	0	5	5	5	5	5	-1
Unmarried, not in family, working	3	5	6	7	7	4	3	5	6	6	7	3
Unmarried, not in family, not working	1	2	3	3	3	2	4	5	5	5	5	1
Male												
Married and working	34	29	25	23	21	-13	30	26	23	21	20	-10
Married and not working	3	5	6	7	6	3	5	6	6	7	6	1
Unmarried, in family, working	5	6	8	7	9	4	5	6	7	7	8	3
Unmarried, in family, not working	2	2	2	2	3	0	2	2	2	3	3	0
Unmarried, not in family, working	3	5	7	8	9	7	3	6	7	8	9	5
Unmarried, not in family, not working	1	1	1	2	2	1	2	2	2	3	3	1
Total	100	100	100	100	100		100	100	100	100	100	
Occupational Classification												
Managerial and professional occupations	14	17	20	22	22	8	15	18	23	24	25	10
Middle craft workers, technicians and clerical	33	32	33	33	32	-1	29	29	29	29	27	-2
Less-skilled retail and personal service occupations	36	32	30	28	28	-8	33	29	27	26	26	-7
No occupational classification	17	19	17	18	18	1	22	24	21	21	22	0
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 2

Characteristics of the Adult Population, Lower Income and All, 1970 to 2006

(% distribution)

	Adults in Lower Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Age												
18 to 29	25	30	28	26	26	1	26	29	25	21	21	-5
30 to 44	22	22	28	29	26	4	27	27	33	32	28	2
45 to 60	25	22	20	22	26	1	32	28	26	30	34	2
60 and older	28	26	25	22	22	-5	15	15	17	16	16	1
Total	100	100	100	100	100		100	100	100	100	100	
Race/Ethnicity and Nativity												
White	77	72	68	62	59	-18	86	82	78	73	70	-16
Black	17	17	17	16	17	-1	10	10	10	11	11	2
Foreign-born Hispanic in the U.S. 10 years or less	1	2	3	5	5	4	1	1	2	2	3	2
Foreign-born Hispanic in the U.S. more than 10 years	1	2	3	6	7	6	0	1	2	4	5	4
Native-born Hispanic	3	5	6	7	7	4	2	3	4	5	6	4
Asian	1	1	2	4	4	3	1	2	3	4	5	4
Other	1	1	1	1	1	1	0	1	1	1	1	1
Total	100	100	100	100	100		100	100	100	100	100	
Marital Status												
Married, spouse present	60	53	48	44	40	-20	69	63	59	56	52	-17
Married, spouse absent	2	1	2	3	3	1	2	1	1	2	2	1
Separated	4	4	4	4	4	0	2	2	2	2	2	0
Divorced	5	8	11	12	13	8	4	7	9	10	11	7
Widowed	16	15	13	12	11	-5	9	8	7	7	6	-2
Never married	14	19	22	26	29	16	15	19	21	22	25	11
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 2 (continued)

Characteristics of the Adult Population, Lower Income and All, 1970 to 2006

(% distribution)

	Adults in Lower Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Education												
Less than a high school diploma	64	51	37	29	26	-38	45	32	21	16	14	-31
High school diploma	24	31	37	38	40	15	33	36	34	33	33	-1
Some college	8	12	20	24	25	17	12	17	26	29	28	16
Bachelor's degree or more	3	6	7	9	10	6	10	15	19	23	25	15
Total	100	100	100	100	100		100	100	100	100	100	
Own Family and Presence of Own Children												
Living alone	16	19	19	20	20	4	9	12	13	14	14	5
Not living with own family	3	5	7	9	10	6	3	5	7	9	9	6
In own family												
Unmarried with no own children present	11	11	12	13	15	4	12	13	13	12	15	2
Unmarried with own children	10	12	14	15	16	6	6	7	8	9	10	3
Married with own children	36	31	28	27	23	-13	44	38	34	32	28	-16
Married with no own children present	24	22	19	17	17	-7	25	25	24	24	24	-1
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 2 (continued)

Characteristics of the Adult Population, Lower Income and All, 1970 to 2006

(% distribution)

	Adults in Lower Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Gender, Family and Work												
Female												
Married and working	7	8	9	9	7	1	14	16	17	17	16	2
Married and not working	23	18	14	13	12	-11	21	16	12	11	10	-11
Unmarried, in family, working	6	8	9	10	12	5	6	7	8	8	9	3
Unmarried, in family, not working	9	8	8	8	8	0	5	5	5	5	5	-1
Unmarried, not in family, working	3	5	5	6	6	3	3	5	6	6	7	3
Unmarried, not in family, not working	10	11	11	11	11	1	4	5	5	5	5	1
Male												
Married and working	20	17	15	13	12	-8	30	26	23	21	20	-10
Married and not working	10	10	9	9	8	-2	5	6	6	7	6	1
Unmarried, in family, working	3	4	6	6	7	3	5	6	7	7	8	3
Unmarried, in family, not working	3	3	3	4	4	1	2	2	2	3	3	0
Unmarried, not in family, working	2	4	5	6	7	5	3	6	7	8	9	5
Unmarried, not in family, not working	4	4	4	5	6	2	2	2	2	3	3	1
Total	100	100	100	100	100		100	100	100	100	100	
Occupational Classification												
Managerial and professional occupations	6	7	8	10	9	3	15	18	23	24	25	10
Middle craft workers, technicians and clerical	21	20	22	23	22	1	29	29	29	29	27	-2
Less-skilled retail and personal service occupations	38	32	34	32	33	-5	33	29	27	26	26	-7
No occupational classification	35	40	36	34	35	0	22	24	21	21	22	0
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 3

Characteristics of the Adult Population, Upper Income and All, 1970 to 2006

(% distribution)

	Adults in Upper Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Age												
18 to 29	23	26	21	16	16	-7	26	29	25	21	21	-5
30 to 44	25	28	34	32	29	3	27	27	33	32	28	2
45 to 60	43	38	35	41	44	1	32	28	26	30	34	2
60 and older	8	8	10	11	11	2	15	15	17	16	16	1
Total	100	100	100	100	100		100	100	100	100	100	
Race/Ethnicity and Nativity												
White	93	90	87	83	80	-13	86	82	78	73	70	-16
Black	4	5	6	7	7	3	10	10	10	11	11	2
Foreign-born Hispanic in the U.S. 10 years or less	0	0	0	1	1	0	1	1	2	2	3	2
Foreign-born Hispanic in the U.S. more than 10 years	0	1	1	2	2	2	0	1	2	4	5	4
Native-born Hispanic	1	2	3	3	4	3	2	3	4	5	6	4
Asian	1	2	3	5	6	5	1	2	3	4	5	4
Other	0	0	0	1	1	0	0	1	1	1	1	1
Total	100	100	100	100	100		100	100	100	100	100	
Marital Status												
Married, spouse present	72	68	65	66	63	-9	69	63	59	56	52	-17
Married, spouse absent	1	1	1	1	2	1	2	1	1	2	2	1
Separated	1	1	1	1	1	0	2	2	2	2	2	0
Divorced	3	6	8	9	9	6	4	7	9	10	11	7
Widowed	5	4	4	4	3	-2	9	8	7	7	6	-2
Never married	17	20	21	19	22	4	15	19	21	22	25	11
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 3 (continued)

Characteristics of the Adult Population, Upper Income and All, 1970 to 2006

(% distribution)

	Adults in Upper Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Education												
Less than a high school diploma	27	17	7	5	4	-23	45	32	21	16	14	-31
High school diploma	36	36	27	22	21	-14	33	36	34	33	33	-1
Some college	17	21	30	30	29	12	12	17	26	29	28	16
Bachelor's degree or more	20	27	36	43	46	26	10	15	19	23	25	15
Total	100	100	100	100	100		100	100	100	100	100	
Own Family and Presence of Own Children												
Living alone	6	8	9	10	10	4	9	12	13	14	14	5
Not living with own family	3	5	7	9	8	5	3	5	7	9	9	6
In own family												
Unmarried with no own children present	15	15	14	12	13	-1	12	13	13	12	15	2
Unmarried with own children	4	3	4	4	5	1	6	7	8	9	10	3
Married with own children	40	36	34	32	31	-9	44	38	34	32	28	-16
Married with no own children present	32	32	31	33	32	0	25	25	24	24	24	-1
Total	100	100	100	100	100		100	100	100	100	100	

Appendix Table 3 (continued)

Characteristics of the Adult Population, Upper Income and All, 1970 to 2006

(% distribution)

	Adults in Upper Income Households						All Adults					
	1970	1980	1990	2000	2006	Change 1970 to 2006	1970	1980	1990	2000	2006	Change 1970 to 2006
Gender, Family and Work												
Female												
Married and working	20	21	23	23	23	3	14	16	17	17	16	2
Married and not working	17	13	10	10	9	-8	21	16	12	11	10	-11
Unmarried, in family, working	6	6	6	5	6	1	6	7	8	8	9	3
Unmarried, in family, not working	4	3	2	2	3	-1	5	5	5	5	5	-1
Unmarried, not in family, working	3	4	6	6	7	4	3	5	6	6	7	3
Unmarried, not in family, not working	1	1	1	2	1	0	4	5	5	5	5	1
Male												
Married and working	34	31	29	28	28	-6	30	26	23	21	20	-10
Married and not working	2	3	4	5	4	2	5	6	6	7	6	1
Unmarried, in family, working	7	8	8	6	7	0	5	6	7	7	8	3
Unmarried, in family, not working	2	2	2	2	2	0	2	2	2	3	3	0
Unmarried, not in family, working	5	8	9	9	10	5	3	6	7	8	9	5
Unmarried, not in family, not working	0	1	1	1	1	1	2	2	2	3	3	1
Total	100	100	100	100	100		100	100	100	100	100	
Occupational Classification												
Managerial and professional occupations	28	31	40	43	45	16	15	18	23	24	25	10
Middle craft workers, technicians and clerical	34	33	31	29	27	-7	29	29	29	29	27	-2
Less-skilled retail and personal service occupations	24	22	19	16	16	-8	33	29	27	26	26	-7
No occupational classification	14	14	11	12	12	-2	22	24	21	21	22	0
Total	100	100	100	100	100		100	100	100	100	100	

Chapter 8: Trends in Income, Expenditures, Wealth and Debt

Overview

This chapter examines trends in economic well-being through the prisms of income, wealth and expenditures, which together yield a more complete measure of changes in Americans' financial circumstances than can any single yardstick. All three indicators tell essentially the same story: Since the 1970s and 1980s, the United States has been a society characterized by rising prosperity *and* rising inequality.

During this period, income, wealth and expenditures have risen in real dollars for all three income tiers—lower, middle and upper. At the same time, the gaps between all three income tiers have also grown, and they have grown across all three indicators. The wealth gap is by far the biggest of the three, and it has grown the most since the 1980s.[7]

Looking just at more recent trends, from 1999 to 2006, this analysis finds that incomes declined slightly for all three income tiers. This decline has not eliminated long-term gains in income since 1970. However, it comes at time when all adults—and especially those in the middle income tier—have taken on more debt. The growth in debt is linked to the boom in the housing market that began in the 1990s and lasted through 2006. It is beyond the scope of this report to analyze what impact the recent drop in housing prices and turmoil in mortgage markets will have on the financial well-being of homeowners and all Americans. But the findings presented here provide a context for—and perhaps foreshadow—current developments.

In this chapter, income and expenditure data have been adjusted for family or household size and scaled to reflect a three-person family or household. Dictated by the availability of data, the income analysis spans the 1969-2006 period, wealth trends are measured from 1983 to 2004, and expenditures are estimated for the 1980 to 2006 period. Major findings include:

Income

- The median income of all U.S. households increased from $42,339 in 1969 to $59,493 in 2006, an increase of 41% (incomes estimated for three-person households and adjusted to 2008 dollars).[8] Incomes of middle income households increased from $45,775 to $63,955, or by 40%. In 2006, the median income of lower income households was $25,201, up 42% compared with 1969. The median income of households in the upper tier increased the most (50%), from $85,172 in 1969 to $128,040 in 2006.

- The income gap across the three tiers narrowed in the 1970s with the income of lower income households increasing at the fastest rate. However, the income gap surged in the 1980s as incomes of households in the upper tier increased at nearly double the rate for lower income households. The gap remained steady in the 1990s and has increased modestly in the current decade.

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[7] All references to gaps in income, wealth and expenditures across income tiers are to percentage gaps, not absolute gaps.

[8] Incomes of all U.S. households are scaled to reflect a three-person household. According to this scale, median household income in 2006 (expressed in 2008 dollars) is $34,348 for a one-person household; $48,576 for a two-person household; $59,493 for a three-person household; and $68,697 for a four-person household. The scaling process is similar to, but not the same as, converting household income to per capita income (see the appendix section "Adjusting for Household Size" for further details).

- Median incomes of households in all three tiers in 2006 are lower than in 1999, having failed to fully recover from the 2001 recession and the subsequent economic slowdown. Incomes of households in the lower tier have decreased the most, followed by middle income and upper income households. The latest economic slowdown, led by the credit meltdown in the housing market, is likely to prolong the recovery period.

Wealth

- The median wealth of all U.S. families increased from $69,902 in 1983 to $104,645 in 2004, a gain of 50% (wealth is the difference between assets and debt; all figures are adjusted to 2008 dollars). Almost all of this increase occurred in the 1990s.

- This rise in median wealth was much greater for upper income families (123%) than for middle income families (29%) and lower income families (24%). As a result wealth disparities in 2004 were quite large: median wealth was $439,390 for upper income families, $98,286 for middle income families, and just $16,000 for lower income families.

- Mean values of assets owned by families increased between 1983 and 2004. The increase was highest for upper income families (111%), less for middle income families (93%) and the least for lower income families (74%).

- Families in all three income tiers took on more debt between 1983 and 2004. But the growth in mean debt levels was highest for lower income families (165%) and middle income families (162%). Upper income families raised their mean debt level by 123% over this period.

- The median debt-to-asset ratio increased the most for middle and lower income families. The ratio increased from 0.25 in 1983 to 0.40 in 2004 for the middle tier, and from 0.29 to 0.42 for the lower tier. The increase in the debt-to-asset ratio for upper income families was far less, as it nudged up from 0.21 in 1983 to 0.27 in 2004. Another measure of debt—the debt-to-income ratio—more than doubled for middle income families and doubled for lower and upper income families.

- Increases in the homeownership rate and rising house prices are key factors in the growing debt obligations of families. About three-quarters of the new debt taken on by upper and middle families, and about two-thirds of the new debt of lower income families, was due to debt secured by a family's primary residence. Also, between 1983 and 2004, the debt-to-income ratio increased more for homeowners than for non-homeowners.

- The value of the primary residence accounted for about 50% of the assets of lower and middle income families in both 1983 and 2004, and about 25% of the assets of upper income families in these years.

Expenditures

- Median expenditures by all U.S. families increased from $37,838 in 1980/81 to $44,790 in 2005/06, an increase of 18% (expenditures estimated for three-person families and adjusted to 2008 dollars). Upper income families raised their expenditures the most, from $56,946 to $75,025, or by 32%. Expenditures of middle income families were up modestly (15%) from $39,116 to $44,812. Similarly, expenditures of lower income families increased 16%, from $23,162 to $26,834.

- The expenditure gap across the three tiers, reflecting trends in income, increased the most in the 1980s. In that decade, expenditures by upper income families increased by 19% but they increased only 6% for the middle tier and 9% for the lower tier. The gap further widened in the 1990s, but narrowed slightly after 2000.

- Expenditures on housing, transportation, and food and beverages consume the lion's share of the family budget. In 2005/06 the proportion of total expenditures devoted to these items ranged from 72% for lower income families to 68% for middle income families and 62% for upper income families.

- From 1980/81 to 2005/06, families in all three tiers devoted a growing share of their budgets to housing, medical care, education, pensions, insurance, charity and other items; and a reduced share to food and beverages, apparel, transportation and recreation.

Income, Wealth and Expenditures—Three Windows into Economic Well-Being

No single economic yardstick can draw a comprehensive picture of the economic well-being of a family or, for that matter, an income group. Income is the most widely used yardstick, but, due to changing economic circumstances, family income is often subject to sharp, short-term fluctuations (Congressional Budget Office, 2007; Hertz, 2006). A family that is considered in the middle income group one year may be in the lower income group the next, or vice versa. Thus, it is useful to supplement the analysis of trends in income with trends in wealth and expenditures.

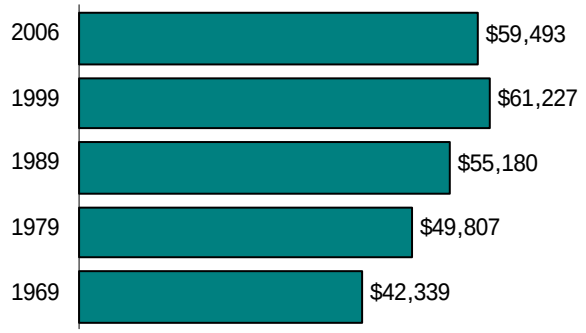
Wealth, unlike income, represents a stock of assets, minus outstanding debt, accumulated over time. Among other things, wealth provides retirement income, protection against short-term economic shocks, and security and social status for future generations. Consumer expenditures are often considered a better indicator of well-being than annual income because they are more closely related to a family's long-term, or permanent, income (Johnson, Smeeding and Torrey, 2005; Meyer and Sullivan, 2007). For instance, families can draw upon their savings to maintain their lifestyle if income flow is temporarily disrupted. There also are families, such as the retired, with low income but relatively high level of expenditures.

The focus of this chapter is on recent trends in income, wealth and expenditures—in the aggregate, and also for lower, middle and upper income families. The analysis also reports on the gaps in income, wealth and expenditures across income groups, and how the gaps have changed over time. The section on wealth explores the level of debt held by families and the role of housing in increasing the level of indebtedness. Finally, the section on expenditures examines how the distribution of those expenditures across commodities varies by income group.

Data on income are drawn from the Decennial Censuses of 1970, 1980, 1990 and 2000, and the 2006 American Community Survey. The income data collected in the censuses pertain to the preceding year, i.e. 1969, 1979, 1989 and 1999. The income data from the 2006 ACS span two calendar years: 2005 and 2006.[9] For the sake of convenience we use 2006 as the reference for income data from the 2006 ACS. The wealth analysis is based on Survey of Consumer Finances data for 1983, 1992 and 2004 (earlier data are not available). Expenditure data are derived from the Consumer Expenditure Surveys for 1980/81, 1990/91, 2000/01 and 2006.[10] Because of the way the data are collected and reported, the unit of analysis for income is the household and the unit of analysis for wealth and expenditures is the family.[11]

As in the preceding chapter, families, or households, are divided into three groups based on their income level after the income has been adjusted for differences in family or household size (see the appendix section "Adjusting for Household Size"). The middle income group consists of families or households whose income is between 75% and 150% of the median level of income in the U.S. This process is conducted independently for each of three data sources. All income and expenditure data reported in this chapter have been adjusted for family or household size and are scaled to reflect a three-person family or household. However, wealth data are not adjusted for family size because it is difficult to associate a current family size with a stock of wealth. In part, that is because wealth is accumulated and "consumed" over an extended period of time during which family structure may change significantly. It is also typical for at least part of a family's wealth to be passed on for the benefit of future generations.

Figure 1
Median Household Income, 1969 to 2006
(January 2008 dollars)
Incomes are adjusted for household size and then scaled to reflect a three-person household



Note: See the appendix section "Adjusting for Household Size" for an explanation of how income data are adjusted for household size. The income data are deflated by the CPI-U-RS (see the appendix section "Deflation of Income, Expenditures and Wealth").

Source: Pew Research Center tabulations of data from the Decennial Censuses and the 2006 American Community Survey

I. Income

The median real income of U.S. households has increased since 1969 (Figure 1). In 2006, the median household income in the U.S. was $59,493 (expressed in January 2008 dollars). That was 41% higher than the median income of U.S. households in 1969 ($42,339). The

[9] The 2006 ACS was conducted from January 2006 to December 2006. Each month respondents were asked to report their income over the preceding 12-month period. In principle, therefore, respondents in January 2006 report income for January 2005 to December 2005, respondents in February 2006 report income for February 2005 to January 2006, and so on. Respondents in December 2006 should report income for December 2005 to November 2006.

[10] The expenditure data collected in the 2006 interviews for the Consumer Expenditure Survey refer, in part, to expenditures made in 2005.

[11] See the appendix sections "Households and Families in Census Data" and "A Note on Data Sources" for general definitions of households and families and more specific treatments of the terms within a data source (the Consumer Expenditure Survey, for example, collects data for "consumer units"). Generally speaking, a family consists of either related individuals or unrelated individuals who live together and make joint financial decisions. A household consists of all residents in a housing unit, including lodgers, maids, etc.

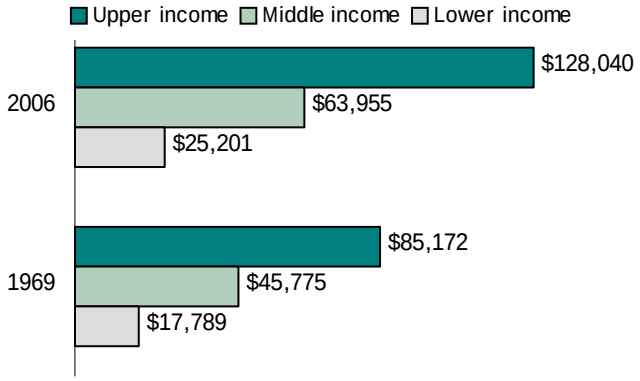
increase in income was steady through most of this time period, increasing 18% in the 1970s, 11% in the 1980s and 11% in the 1990s.

However, the median household income in 2006 was less than in 1999, declining from $61,227 in 1999 to $59,493, or a loss of 3%. The year 1999 was the peak of a nearly 10-year economic expansion. The year 2006 was not far removed from a nearly three-year period that included a recession in 2001 and an economic slowdown that persisted through 2003. Thus, the income data show that households have not yet recovered entirely from the effects of the last recession and economic slowdown. The recovery may take longer still because the economy currently appears to be in the midst of another slowdown caused by credit problems in the housing market.

Estimates of income in this section of the report and the preceding section reflect controls for household size. These adjustments are meant to reflect the reality that households with the same incomes but different numbers of persons face different budget constraints. Thus, the income data are adjusted to control both for size differences across households at a point in time and changes in household size over time. After incomes have been adjusted for household size, they can be scaled to reflect a household of any given size. The estimates reported here are scaled to reflect the income of a three-person household. The appendix section "Adjusting for Household Size" describes this process in greater detail.

Controlling for household size has a substantial impact on estimates of changes in household income over time. That is because average household size in the United States has fallen from 3.1 people in 1970 to 2.5 in 2006, a decrease of 19%. If no adjustments are made to reflect this drop in household size, real median household income in the U.S. is estimated to have increased from $41,834 in 1969 to $51,626 in 2006, or 23%.[12] As noted above, after adjusting for changes in household size, median household income is estimated to have increased 41% in the same period.

Figure 2
Median Household Income, by Income Group, 1969 and 2006
(January 2008 dollars)
Incomes are adjusted for household size and then scaled to reflect a three-person household



Note: See the appendix section "Adjusting for Household Size" for an explanation of how income data are adjusted for household size. The income data are deflated by the CPI-U-RS (see the appendix section "Deflation of Income, Expenditures and Wealth").

Source: Pew Research Center tabulations of data from the Decennial Censuses and the 2006 American Community Survey

Incomes of Lower, Middle and Upper Income Households

Economywide gains in incomes were reflected in the trends for lower and middle income households. Incomes for both groups increased at about the

[12] Census Bureau estimates of household income, derived from the Current Population Survey, are not adjusted for household size and show a similar increase from 1970 to 2006 (DeNavas-Walt, Proctor and Smith, 2007).

average rate between 1969 and 2006. However, the incomes of upper income households increased by more. Consequently, upper income households have pulled away from lower and middle income households since 1969.

The median real income of middle income households in 2006, adjusted for household size and scaled to reflect a three-person household, was $63,955 (Figure 2). That was 40% higher than their income in 1969 ($45,775). Thus, the income gain for middle income households was about the same as the economywide change in household income (41%).

The median real income of lower income households in 2006 was $25,201. That was 42% higher than 1969, when the median income for this group was $17,789. Thus, the incomes of lower income households also increased at about the economywide pace. The median income of upper income households increased from $85,172 in 1969 to $128,040 in 2006. That represented an increase of 50%, well above the average and greater than the increase for lower income and middle income households.

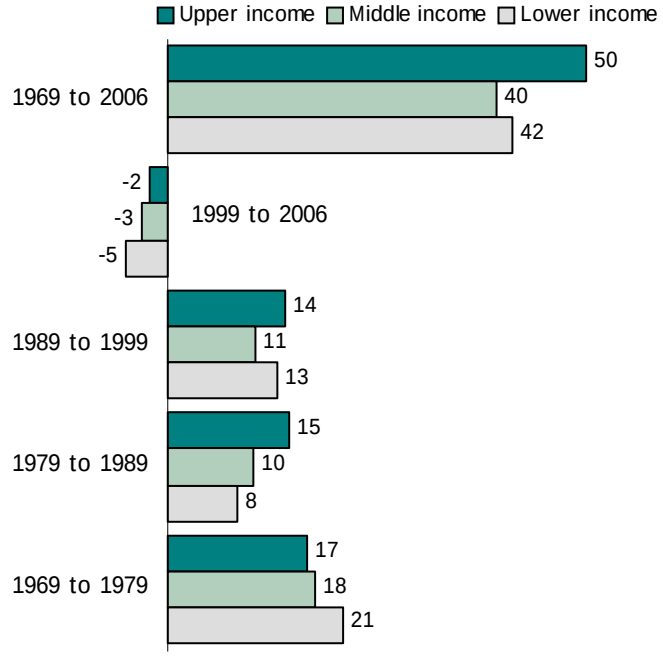
Trends in Incomes of Lower, Middle and Upper Income Households

The overall trend in income growth masks some differences across the decades and income groups. The 1970s were the years of strongest growth in incomes for all groups. Moreover, the gap between upper and lower income households narrowed in that period. These trends were reversed in the 1980s as the largest gains flowed to upper income households. To a lesser extent, the trends from the 1980s persisted through the 1990s. Incomes of all households decreased between 1999 and 2006, and the decline was larger for lower income households than upper income households.

The strongest growth in income for all households occurred between 1969 and 1979.[13] In that decade, growth in median real income ranged from 17% for upper income households to 18% for middle income households and 21% for lower income households (Figure 3). Thus, the gap

Figure 3
Percentage Change in Real Median Household Income, by Decade

Incomes are adjusted for household size and then scaled to reflect a three-person household



Note: See the appendix section "Adjusting for Household Size" for an explanation of how income data are adjusted for household size. The income data are deflated by the CPI-U-RS (see the appendix section "Deflation of Income, Expenditures and Wealth").

Source: Pew Research Center tabulations of data from the Decennial Censuses and the 2006 American Community Survey

[13] Not coincidentally, the greatest decrease in household size occurred in the 1970s. The mean household size in the United States at the turn of each decade was as follows: 1970–3.1, 1980–2.7, 1990–2.6, 2000–2.6, 2006–2.5.

in income between lower income and upper income households narrowed during the 1970s.

Income growth slowed for all households in the 1980s. Lower income households suffered the greatest deceleration as their incomes increased only 8% in the 1980s compared with 21% the previous decade. For middle income households, income growth diminished from 18% to 10%. However, income growth for upper income households decelerated only a little, from 17% in the 1970s to 15% in the 1980s. In contrast to the 1970s, therefore, household income inequality in the 1980s was on the rise.

The economic expansion in the 1990s slowed the trend toward rising income inequality. Income growth for upper income households declined slightly, from 15% in the 1980s to 14% in the 1990s. However, lower and middle income households saw their incomes increase at faster rates in the 1990s. For lower income households, income growth accelerated from 8% to 13% and for middle income households income growth essentially maintained its pace, shifting up from 10% to 11%.

The recession in 2001 and the economic slowdown that followed eroded gains in incomes for the three tiers of households. From 1999 to 2006, the median income of lower income households decreased 5% and the income of middle income households fell 3%. Upper income households lost the least, as their median income decreased 2%. For all households, incomes in 2006 were below the levels attained in 1999.

II. Wealth

Differences in wealth across lower, middle and upper income families are much greater than differences in income.[14] Moreover, the wealth gap has increased by more than the income gap in recent years. Gains in wealth for upper income families have been especially striking. While the wealth of all families has increased since the early 1980s, there are also notable increases in the level of indebtedness, especially among lower and middle income families. The growth in family debt appears linked to the housing boom that started in the 1990s and lasted through 2006.

Wealth, unlike income, represents not an annual flow but an accumulation of assets, minus outstanding debt, over time. Changes in wealth, or net worth, are determined by changes in the value of assets owned by households compared with changes in their holding of debt, or liabilities. Net worth will increase as long as asset values, in absolute amount, increase by more than debt holdings. Overall economic trends will influence wealth just as they influence income. But wealth is also subject to more specific forces in financial markets. And some market trends, such as the recent run-up in housing prices, can be double-edged swords, raising asset values and debt holdings at the same time.

This section uses data from the Survey of Consumer Finances to develop estimates of wealth for lower, middle and upper income families. The survey has been conducted on a triennial basis since 1983, and the latest dataset available is for 2004. The unit of observation in the SCF is the family, and families are classified into lower, middle and upper income groups using the same methods as detailed in the appendix section "Adjusting for Household Size." However, unlike income and expenditure data, wealth is not adjusted for family size. In part, that is because wealth is accumulated and "consumed" over an extended period of time during which family

[14] A family may include unrelated individuals living together as long as they are financially interdependent.

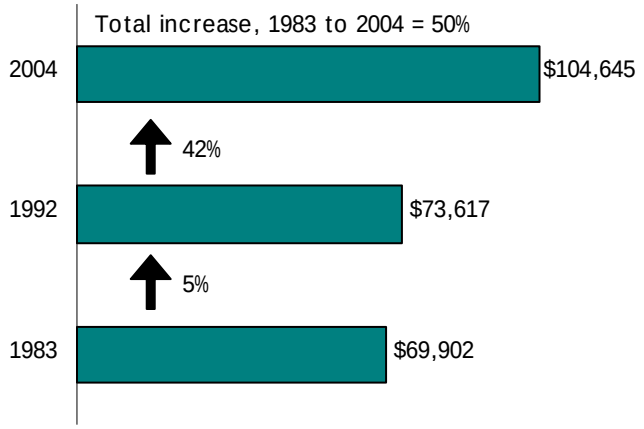
structure may have changed. Also, at least a part of a family's wealth is typically passed on for the benefit of future generations.

Changes in Wealth of U.S. Families

In 2004, the median wealth of U.S. families was $104,645 (expressed in January 2008 dollars). That was 50% higher than their wealth in 1983 ($69,902). The increase in wealth contrasts with a 31% gain in family income between 1983 and 2004.[15]

Almost all of the wealth gain for families in the U.S. occurred in the 1990s. Between 1992 and 2004 median wealth increased from $73,617 to $104,645, or 42%. Median wealth changed little in the preceding decade, nudging up from $69,902 in 1983 to $73,617 in 1992 (Figure 4).

Figure 4
Median Net Worth of U.S. Families
(January 2008 dollars)



Note: Net worth is the difference between the assets owned and liabilities held by a family. Net worth is deflated by the CPI-U-RS.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

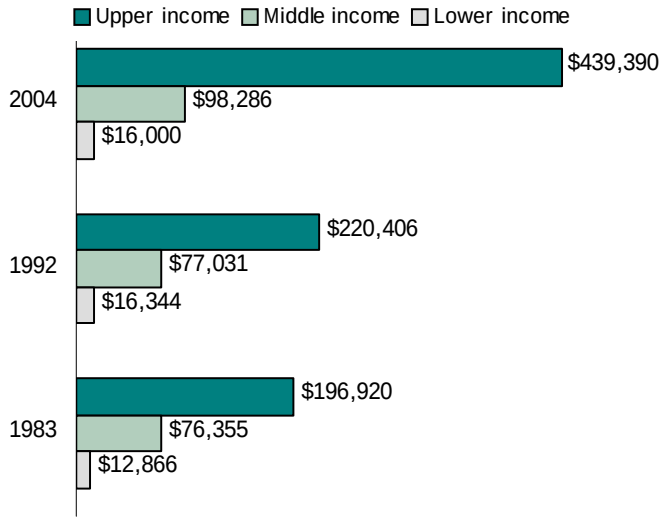
Wealth of Lower, Middle and Upper Income Families

Not surprisingly, the wealth of families is strongly correlated with their income. However, differences in wealth across lower, middle and upper income families are far greater than differences in income. The spread in wealth has also widened considerably over time as the greatest gains in wealth since 1983 have accrued to upper income families.

In 1983, the median wealth of middle income families was $76,355 (Figure 5). This was much higher than the wealth of lower income families—$12,866—but it was less than half the wealth of upper income families—$196,920.

Regardless of income level, family wealth increased by modest amounts between 1983

Figure 5
Median Net Worth of Lower, Middle and Upper Income Families
(January 2008 dollars)



Note: Net worth is the difference between the assets owned and liabilities held by a family. Net worth is deflated by the CPI-U-RS.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

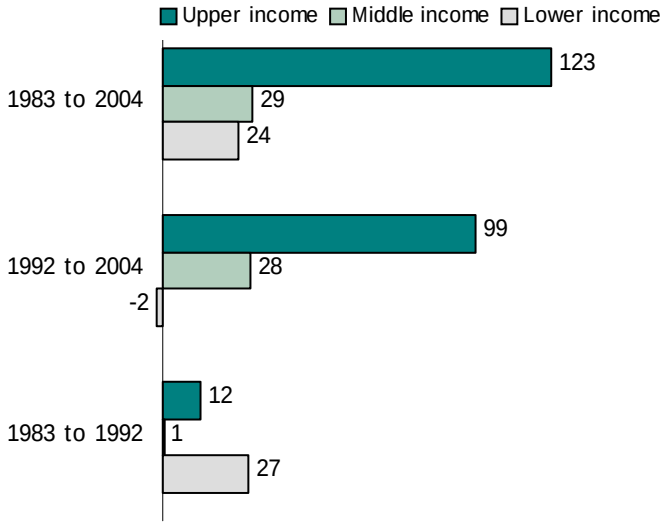
[15] This estimate is based on SCF data. It is the change in median real family income adjusted for changes in family size.

and 1992. The wealth of lower income families increased to $16,344, from $12,866. For middle income families, net worth was essentially unchanged, inching up from $76,355 in 1983 to $77,031 in 1992. The gain for upper income families was also relatively modest, from $196,920 in 1983 to $220,406 in 1992, an increase of 12% over the nine-year period. As a result, there was no notable change in the spread of wealth across lower, middle and upper income families between 1983 and 1992.

However, there were sharp differences across families in the accrual of wealth between 1992 and 2004. The wealth of lower income families remained unchanged—$16,000 in 2004 compared with $16,344 in 1992. Middle income families did see their net worth increase—from $77,031 in 1992 to $98,286 in 2004. But their gain was far removed from the gain for upper income families, who doubled their wealth between 1992 and 2004, from $220,406 to $439,390.

There are striking contrasts across families in the cumulative change in wealth between 1983 and 2004. Upper income families increased their net worth by 123% during this time period (Figure 6). However, the gains for other families were more modest—29% for middle income families and 24% for lower income families. Thus, with respect to wealth, lower and middle income families have lost significant ground to upper income families since 1983. In 1983, the net worth of upper income families was 2.6 times the net worth of middle income families. By 2004, that ratio had increased to 4.5. The ratio of the wealth of upper income families to the wealth of lower income families increased from 15.3 in 1983 to 27.5 in 2004.

Figure 6
Percentage Change in Real Median Net Worth of Lower, Middle and Upper Income Families



Note: Net worth is the difference between the assets owned and liabilities held by a family. Net worth is deflated by the CPI-U-RS.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

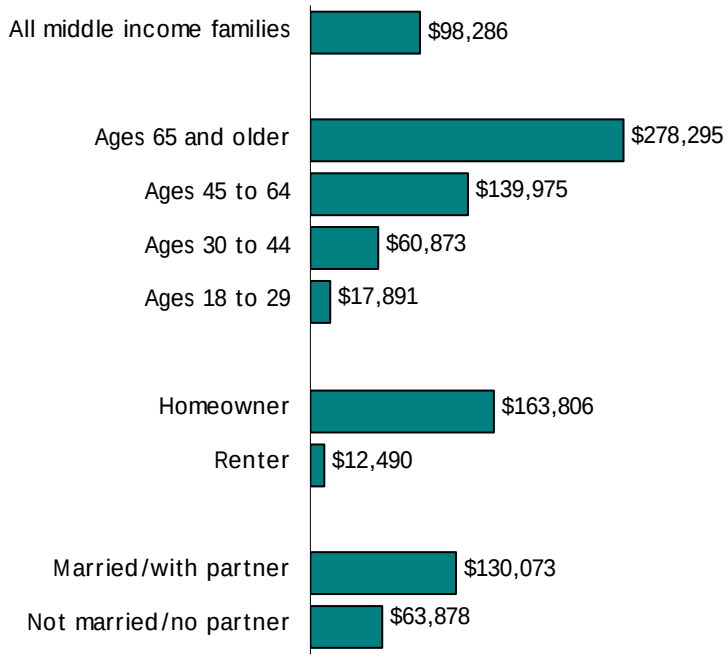
Variations in Wealth With Family Characteristics

Family wealth varies significantly with the characteristics of the family. In addition to income, some socioeconomic characteristics that make a difference are the age of the family head, homeownership, marital status and race and ethnicity. Generally speaking, regardless of income, wealth increases with age, and those who are homeowners and either married or with a partner tend to have higher net worth. Also, black and Hispanic families have considerably less wealth than white families.

The relationship between wealth and age is unsurprising because wealth represents a stock—it is the cumulative effect of acquiring assets, less liabilities, over time. Among middle income families in 2004, net worth of families whose heads were 18 to 29 years old was only $17,891 (Figure 7). However, the net worth of middle income families whose heads were 65 or older was $278,295.

Another characteristic strongly correlated with the stock of wealth is homeownership. The median wealth of middle income homeowners in 2004 was $163,806, much greater than the median wealth of middle income renters ($12,490). Similarly, married heads of families or those with partners had accumulated much higher levels of wealth compared with other middle income families—$130,073 versus $63,878.

Figure 7
Median Net Worth of Middle Income Families in 2004, by Characteristic of Head of Family
(January 2008 dollars)



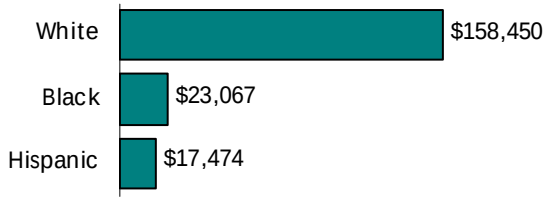
Note: Net worth is the difference between the assets owned and liabilities held by a family. Net worth is deflated by the CPI-U-RS.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

The general patterns of differences in wealth by age, homeownership and marital status observed in 2004 also existed in 1983 and 1992. Similarly, these patterns exist among lower and upper income families in all years.

Among all U.S. families in 2004, the median net worth of white families was $158,450 (Figure 8). That was seven times higher than the wealth of black families ($23,067) and nine times greater than the wealth of Hispanic families ($17,474).[16]

Figure 8
Median Net Worth of All Families in 2004, by Race and Ethnicity
(January 2008 dollars)



Note: Net worth is the difference between the assets owned and liabilities held by a family. Net worth is deflated by the CPI-U-RS. The terms "white" and "black" are used to refer to the non-Hispanic components of each population.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

[16] Because of sample sizes available in the Survey of Consumer Finances it is not feasible to report the wealth of lower, middle and upper income families by race and ethnicity. A detailed analysis of wealth by race and ethnicity is available in Kochhar (2004).

Net Worth, Assets and Liabilities

A family's net worth will increase as long as the value of its assets, in absolute amount, increases by more than its liabilities. Thus, a family can take on more debt but still increase its net worth as long as its assets holdings increase by a sufficient amount. This section presents trends in the *mean* net worth, assets and liabilities of lower, middle and upper income families.[17] There are notable differences across income groups in this regard, especially with respect to changes in the level of debt. Subsequent sections present evidence on the composition of assets and liabilities held by families from different income groups.

Between 1983 and 2004, all U.S. families, as well as lower, middle and upper income families separately, increased the values of the assets they owned by more than their level of debt. For all U.S. families, the real mean value of assets increased by $313,524 from 1983 to 2004. In contrast, the real mean value of debt increased only by $52,506. The net result was an increase of $261,018 in mean net worth (Table 1).

Table 1
Mean Net Worth, Assets and Liabilities of Lower, Middle and Upper Income Families
(January 2008 dollars)

	1983	2004	Change 1983 to 2004
All families			
Assets	$279,560	$593,085	$313,524
Liabilities	$36,478	$88,984	$52,506
Net Worth	$243,083	$504,101	$261,018
Upper income families			
Assets	$681,838	$1,435,897	$754,058
Liabilities	$79,222	$177,059	$97,837
Net Worth	$602,616	$1,258,838	$656,222
Middle income families			
Assets	$159,278	$307,926	$148,647
Liabilities	$28,253	$73,919	$45,666
Net Worth	$131,025	$234,006	$102,981
Lower income families			
Assets	$71,800	$125,275	$53,475
Liabilities	$10,085	$26,739	$16,654
Net Worth	$61,715	$98,536	$36,821

Note: Net worth is the difference between the assets owned and liabilities held by a family. All figures are deflated by the CPI-U-RS.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

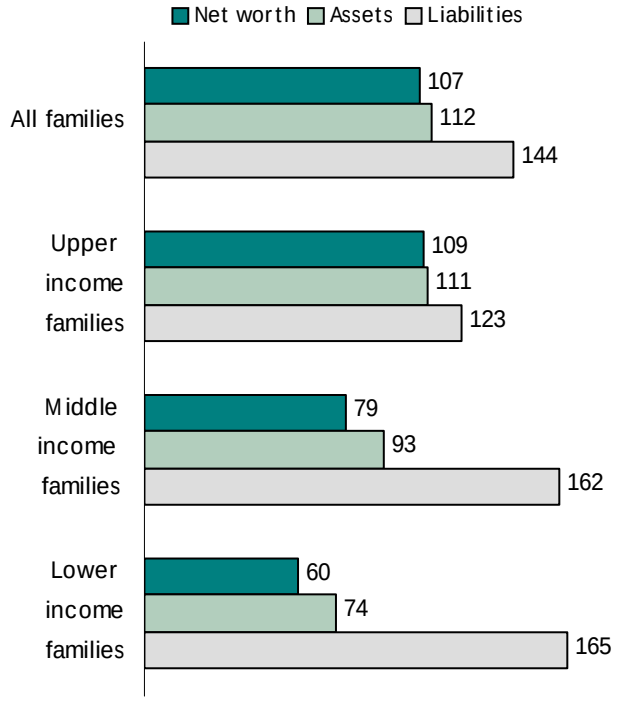
[17] Mean, rather than median, values are presented here because mean liabilities can be subtracted from mean assets to yield mean net worth. The same cannot be done with median values of assets and liabilities. Mean values of net worth, assets and liabilities are typically higher than the medians because they are pulled up by high levels of assets and liabilities at the top end of the distribution.

What is observed for all U.S. families is also true for lower, middle and upper income families. For each type of family, the absolute increase in asset values was well in excess of increases in debt holdings. The net result was an increase in mean net worth of $36,821 for lower income families, $102,981 for middle income families, and $656,222 for upper income families.

However, even as families were accumulating wealth, they were seeing greater rates of growth in their liabilities than in their assets. This was especially true among lower and middle income families. The debt held by lower income families increased by 165% between 1983 and 2004, more than double the 74% increase in their assets. Similarly, middle income families increased their debt level by 162%, much higher than the 93% increase in their asset values (Figure 9).

Only upper income families witnessed roughly balanced growth in assets and liabilities between 1983 and 2004. For these families, debt levels increased 123% and asset values increased 111%. The fact that lower and middle income families have taken on debt at a faster rate than upper income families helps explain why their net worth has increased at a slower rate.

Figure 9
Percentage Change in Real Mean Net Worth, Assets and Liabilities, 1983 to 2004



Note: Net worth is the difference between the assets owned and liabilities held by a family. Net worth is deflated by the CPI-U-RS.

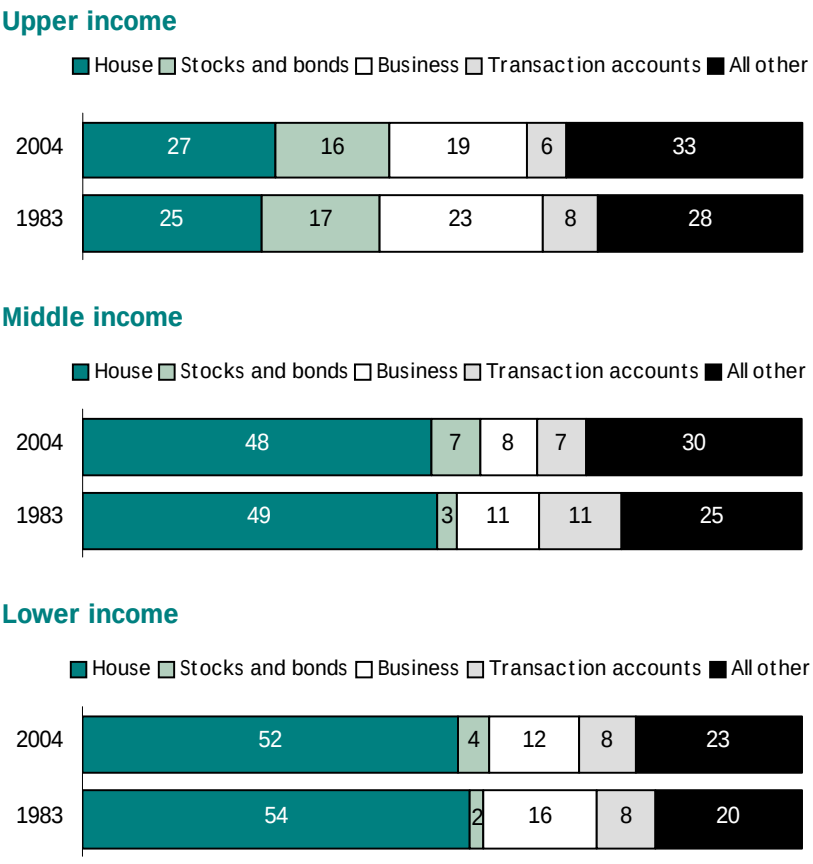
Source: Pew Research Center tabulations of Survey of Consumer Finances data

The Composition of Assets

Families with different levels of income not only differ in the level of their wealth but also in the composition of that wealth. Generally speaking, the diversity of a family's assets increases with its income and wealth. One type of asset stands out from the rest: for most families, the primary asset in their portfolio is their house.[18] But here, too, there are differences across families. An owned home is the dominant asset for lower and middle income families, but its importance is greatly diminished for upper income families.

Among lower and middle income families, the value of their house accounted for about 50% of the total mean value of assets in both 1983 and 2004 (Figure 10). But for upper income families, the value of the house accounted for only about one-quarter of the total mean value of assets in both 1983 and 2004. Upper income families also have sizable shares of their assets in the form of stocks, bonds and owned businesses. Thus, the portfolios of upper income families are more diverse.

Figure 10
The Percentage Distribution of Assets Owned by Families, 1983 and 2004



Note: The chart shows the percentage distribution of the mean value of assets for lower, middle and upper income families, including families that own no assets. Transaction accounts include money market accounts, checking accounts, savings accounts, call accounts, and certificates of deposit.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

On the whole, the asset distribution of lower and middle income families did not change much between 1983 and 2004. The shares of stocks and bonds increased slightly and the shares of business equity and transactions accounts decreased slightly. Larger shares of the portfolios for lower and middle income families were also accounted for by all other assets, a category that includes retirement accounts, the value of secondary residences and the value of vehicles owned. A similar pattern is observed for upper income families.

[18] More specifically, the reference is to a family's primary residence.

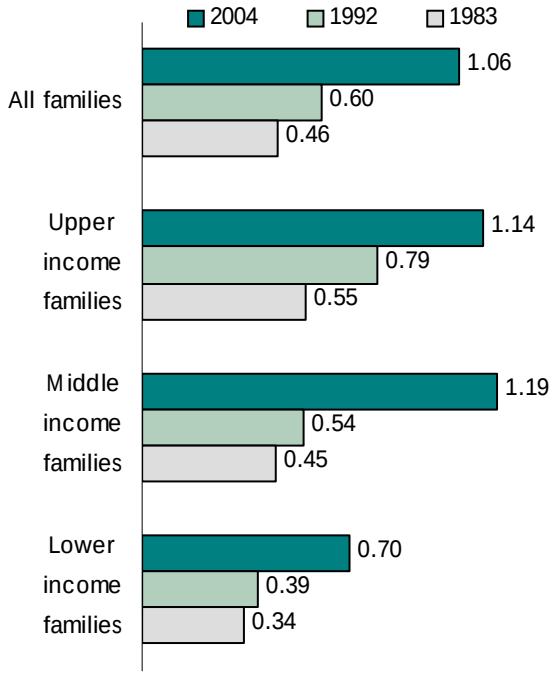
Debt and the Role of Debt Secured by Housing

Debt, as noted above, has risen faster than the value of assets owned by families since 1983. This trend is manifested in both a rising ratio of debt to family income and a rising ratio of debt to a family's assets. Most of the increase in these measures of indebtedness took place in the 1990s.

Housing is an important factor behind increases in the debt held by U.S. families. In addition to being the principal component of family assets, housing serves as the principal collateral for family debt. Three factors appear to have pushed up the amount of debt secured by housing in the recent past: rising homeownership rates between 1992 and 2004, especially among middle and upper income households; rising home prices in the 1990s; and a greater likelihood of securing debt with housing than with other means (Dynan and Kohn, 2007).

The recent turmoil in the housing market has led to dramatic drops in home prices and record high rate of foreclosures.[19] These developments, no doubt, have had an impact on the net worth of families. Because of the lack of data beyond 2004, this section is not able to offer an analysis of how recent, sharp declines in home prices have impacted the net worth and indebtedness of families. But the trends through 2004 offer a context for, and perhaps even foreshadow, more recent developments.

Figure 11
The Median Debt-to-Income Ratio for Households with Debt Holdings



Note: The chart shows the median value of the ratio of total debt to income computed for each family in the sample. The sample includes only families with debt holdings and positive income levels. Those families encompassed 70% of the sample in 1983, 73% in 1992 and 77% in 2004.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

Rising Level of Indebtedness

For all U.S. families, the real mean level of debt increased 144% between 1983 and 2004 (Table 1). The real median debt level (not shown in Table 1) increased even faster—from $5,070 in 1983 to $25,294 in 2004, or by 399%. One result of the rapid growth in debt is that households now carry more debt relative to their income and assets than in 1983.

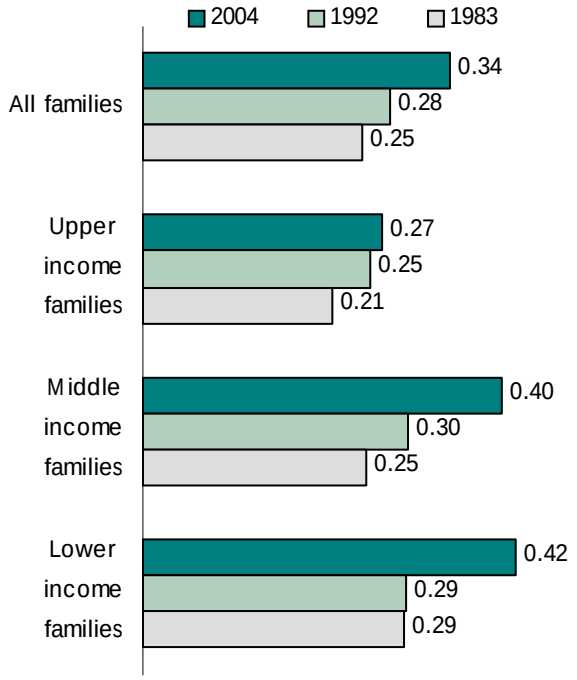
The median value of the debt-to-income ratio for U.S. families with some debt was 1.06 in

[19] The National Association of Realtors® reports that the national median sales price of existing single-family homes decreased 5.8% from the fourth quarter of 2006 to the fourth quarter of 2007 (http://www.realtor.org/Research.nsf/Pages/MetroPrice). The S&P/Case-Shiller® Home Price Index, which measures the change in repeat-sales prices in 20 metropolitan areas, fell 10.7% between January 2007 and January 2008. According to Realty Trac Inc., foreclosure activity in February 2008 was nearly 60% higher than in February 2007 (http://www.realtytrac.com/ContentManagement/pressrelease.aspx?ChannelID=9&ItemID=4284&accnt=64847).

2004 (Figure 11). In other words, in 2004, half the families in the U.S. with some debt (those with debt-to-income ratios higher than the median) were holding an amount that exceeded their annual income—for a family with an income of $50,000 this implies a total debt level of $53,000 at the median debt-to-income ratio. The median debt-to-income ratio was up sharply compared with 1992, when it stood at 0.60—again, for a family with an income of $50,000 this implies a total debt level of $30,000. The increase in this ratio had been more modest between 1983 and 1992—from 0.46 to 0.60.

The increase in the ratio of debt to income between 1983 and 2004 was prevalent among all income levels. In particular, the ratio more than doubled among middle income families between 1992 and 2004. For those families, the median debt-to-income ratio was 0.45 in 1983 and 0.54 in 1992. But it jumped to 1.19 by 2004. The debt-to-income ratio among lower and upper income families doubled between 1983 and 2004—increasing from 0.34 to 0.70 for lower income families and from 0.55 to 1.14 for upper income families.

Figure 12
The Median Debt-to-Asset Ratio



Note: The chart shows the median value of the ratio of total debt to assets computed for each family in the sample. The sample includes only families with debt holdings and positive levels of assets. Those families encompassed 69% of the sample in 1983, 72% in 1992 and 76% in 2004.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

A related indicator of increased debt levels is the debt-to-asset ratio. That, too, increased for U.S. families with some debt. In 1983, the median debt-to-asset ratio for all families with some debt was 0.25 (Figure 12). That means that for half the families with some debt, asset values exceeded debt holdings by at least a ratio of 4 to 1—for a family with assets totaling $100,000, debt level would be $25,000 at the median debt-to-asset ratio. By 2004, the median debt-to-asset ratio had increased to 0.34. In other words, for half of all families, asset values now exceeded debt holdings by a ratio of 3 to 1.

The most notable increase in the debt-to-asset ratio occurred among lower and middle income families with some debt. In 1983, the median of the debt-to-asset ratio for middle income families was 0.25. By 2004 that ratios had increased to 0.40. For lower income families, the ratio increased from 0.29 in 1983 to 0.42 in 2004.

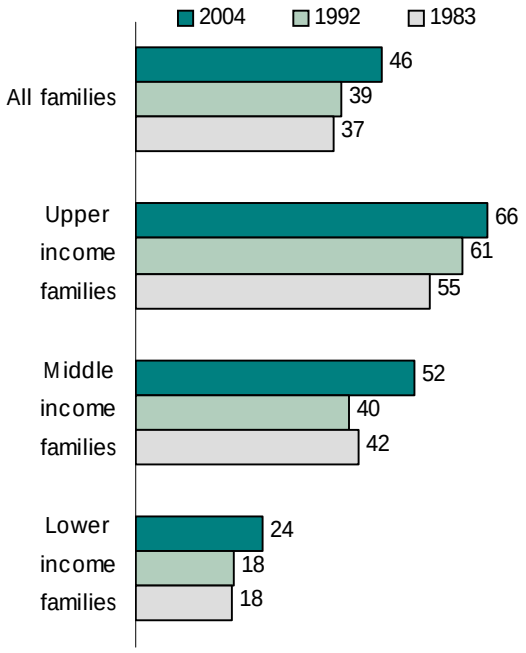
The Role of Housing in Family Debt

One of the reasons housing has assumed a more important role in debt holdings is an increase in the homeownership rate. After remaining steady at about 63% between 1983 and 1992, the homeownership rate among U.S. families increased to 69% in 2004. The most notable gains between 1992 and 2004 were among middle income families, whose homeownership rate increased from 66% to 73%, and upper income families, whose homeownership rate went up from 82% to 88%.

Increases in the homeownership rate mean that more families are holding debt secured by their primary residence. In 1983, 37% of U.S. families held debt secured by their primary residence, such as mortgage debt, home equity loans and lines of credit (Figure 13). That proportion increased slightly to 39% by 1992 and then jumped to 46% by 2004. Underlying this increase was the proportion of middle income families with some debt secured by their primary residence. For middle income families, the proportion increased from 40% in 1992 to 52% in 2004. The proportion of lower income families with debt secured by their primary residence, unchanged between 1983 and 1992, climbed from 18% in 1992 to 24% in 2004.

Increases in the rate of homeownership also push up overall levels of debt in part because homeowners hold more debt. It was shown above that the median debt-to-income ratio for U.S. families was 1.06 in 2004. But, among homeowners, the median debt-to-income ratio was 1.47 and it was only 0.26 among non-homeowners, a difference of 1.21 (Figure 14). The spread in the debt-to-

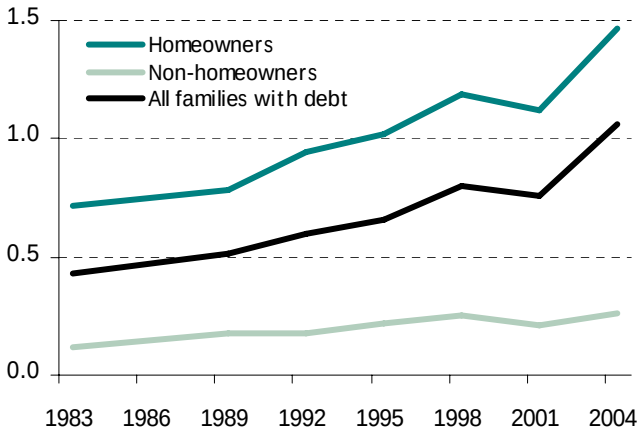
Figure 13
Percentage of Families with Debt Secured by Primary Residence



Note: Debt secured by primary residence includes mortgage debt and home equity loans and lines of credit.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

Figure 14
Median Debt-to-Income Ratio of Families, by Homeownership: 1983 to 2004



Note: Karen Dynan of the Federal Reserve Board graciously provided the data for this chart.

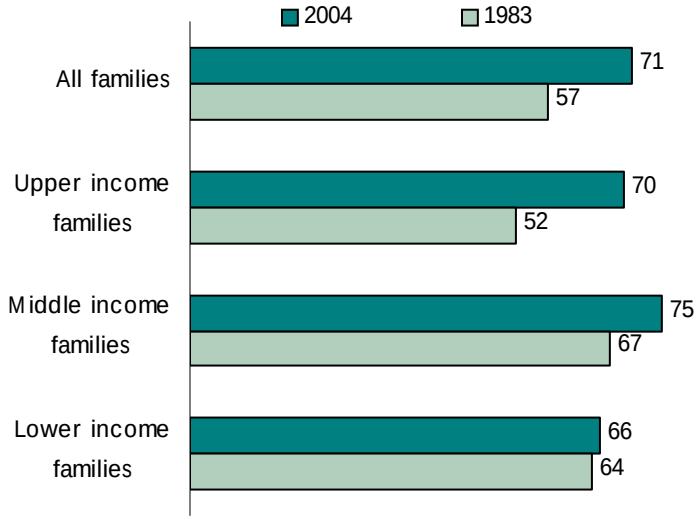
Source: Dynan, Karen E., and Donald L. Kohn. "The Rise in U.S. Household Indebtedness: Causes and Consequences," Finance and Economics Discussion Series 2007-37, Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, Washington, D.C. (August 8, 2007)

income ratio between homeowners and others has also increased over time, mostly since 1992. In 1983, the debt-to-income ratios for homeowners and others were 0.72 and 0.12 respectively, or a gap of 0.60. In 1992 the debt-to-income ratios for homeowners and others were 0.94 and 0.18 respectively, a separation of 0.76.

Higher rates of homeownership have been accompanied by increases in the proportion of family debt that is secured by housing. Among U.S. families, 57% of total debt in 1983 was secured by primary residences (Figure 15). That share increased to 71% by 2004. Among lower income and middle income families, about two-thirds of debt in 1983 was secured by their primary residence. That share did not change between 1983 and 2004 for lower income households. However, there were notable increases for middle income and upper income households—from 67% to 75% for middle income households and from 52% to 70% for upper income households.

Consistent with the rising importance of debt secured by primary residences is the fact that most of the *increase* in family debt since 1983 is also attributable to this type of debt. For all U.S. families, three-fourths of the increase in debt between 1983 and 2004 was due to higher levels of debt secured by housing (Figure 16). A similar statement can be made about middle and upper income families. For middle income families, 78% of the increase in debt since 1983 was due to debt secured by the primary residence. Among upper income families, 75% of the increase in debt could be traced to debt secured by housing.

Figure 15
Percentage of Total Debt Secured by Primary Residence, 1983 and 2004



Note: The chart shows the ratio of the mean value of debt secured by the primary residence to the mean value of total debt. Debt secured by primary residence includes mortgage debt and home equity loans and lines of credit. Mean values of debt are computed over all families, including families that hold no debt.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

Figure 16
Proportion of Total Change in Debt Accounted For by the Increase in Debt Secured by Primary Residence, 1983 to 2004

Note: The chart shows the ratio of the change in the mean value of debt secured by the primary residence to the change in the mean value of total debt. Debt secured by primary residence includes mortgage debt, home equity loans and lines of credit. Mean values of debt are computed over all families, including families that hold no debt.

Source: Pew Research Center tabulations of Survey of Consumer Finances data

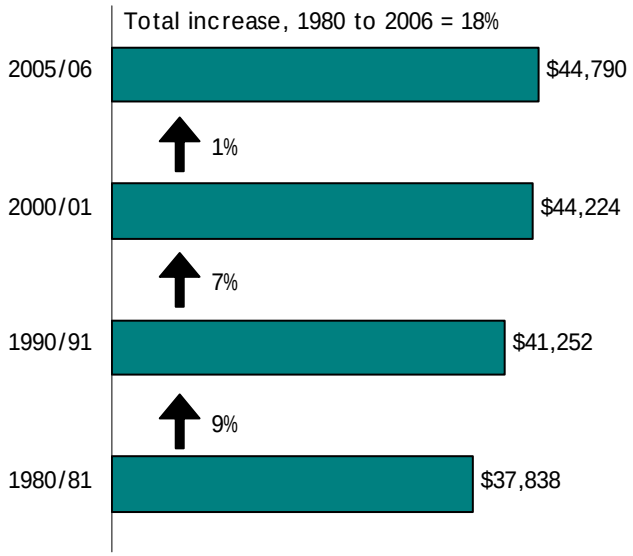
III. Expenditures

Consumer expenditures show less variation across income groups than income or wealth. One reason is that consumers adjust expenditures to reflect longer term expectations of income. For example, a temporary decline in income, perhaps due to an unemployment spell, may be offset by borrowing or dipping into savings to maintain the existing level of expenditures.[20] Also, the lower income group includes retirees whose income flows are relatively low but whose consumption is maintained through past accumulation of savings.

Nonetheless, trends in expenditures, like the trends in income and wealth, show a tendency toward rising inequality. Real median expenditures for all U.S. families, and for lower, middle and upper income families, have increased since 1980. However, the largest increases in expenditures are accounted for by upper income families, and the expenditure gap has grown in recent decades.[21]

The median level of expenditure by U.S. families in 2005/06 was $44,790 (expressed in January 2008 dollars).[22] Median expenditures in 2005/06 represented an 18% increase compared with expenditures in 1980/81 ($37,838). The growth in expenditures was steady in the first two decades—9% in the 1980s and 7% in the 1990s—but expenditures increased only 1% between 2000 and 2006 (Figure 17).

Figure 17
Median Family Expenditures, 1980 to 2006
(January 2008 dollars)
Expenditures are adjusted for family size and then scaled to reflect a three-person family



Note: The unit of observation in the Consumer Expenditure Survey is the "consumer unit." A consumer unit is typically a family but can include unrelated individuals who make expenditure decisions jointly. See the appendix section "Adjusting for Household Size" for an explanation of how expenditure data are adjusted for family size. The income data are deflated by the CPI-U-RS (see the appendix section "Deflation of Income, Expenditures and Wealth").

Source: Pew Research Center tabulations of data from the Consumer Expenditure Survey

[20] See Johnson, Smeeding and Torrey (2005), Johnson and Shipp (1997), and Rogers and Gray (1994) for comparative analyses of family well-being measured through the prisms of income or consumption.

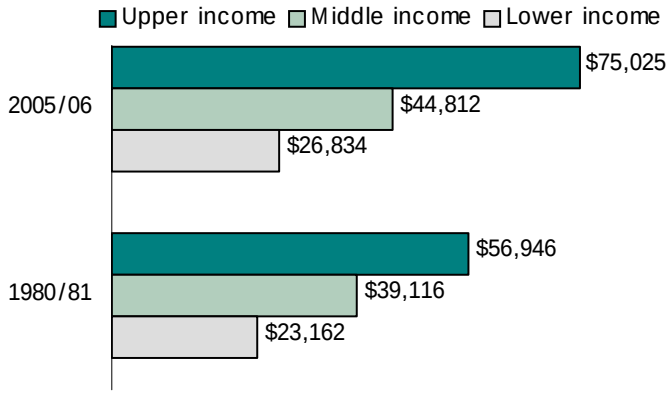
[21] As noted earlier, a family may include unrelated individuals who live together and make joint financial decisions.

[22] As is the case with income data reported in this study, estimates of expenditures reflect controls for family size, both for size differences across families at a point in time and changes in family size over time. Expenditures are then scaled to reflect a three-person family. The estimates represent coverage for two years at the turn of the last two decades—1980/81, 1990/91 and 2000/01—and the mid-point of the current decade—2005/06.

Expenditures of Lower, Middle and Upper Income Families

There are notable gaps in the expenditures of lower, middle and upper income families, albeit less than the gaps in income and wealth across these groups. In 2005/06, median expenditures by lower, middle and upper income families were $26,834, $44,812 and $75,025 respectively. The ratio of expenditures by upper income families to expenditures by lower income families was 2.8. In contrast, the income ratio, based on 2006 census data for U.S. households, was 5.1, and the wealth ratio, based on 2004 Survey of Consumer Finances data, was 27.5. Real median expenditures by families increased between 1980/81 and 2005/06. In 1980/81, lower income families spent $23,162, middle income families spent $39,116 and upper income families spent $56,946 (Figure 18). The ratio of expenditures by upper income families to expenditures by lower income families was 2.5.

Figure 18
Median Family Expenditures, by Income Group, 1980 to 2006
(January 2008 dollars)
Expenditures are adjusted for family size and then scaled to reflect a three-person family



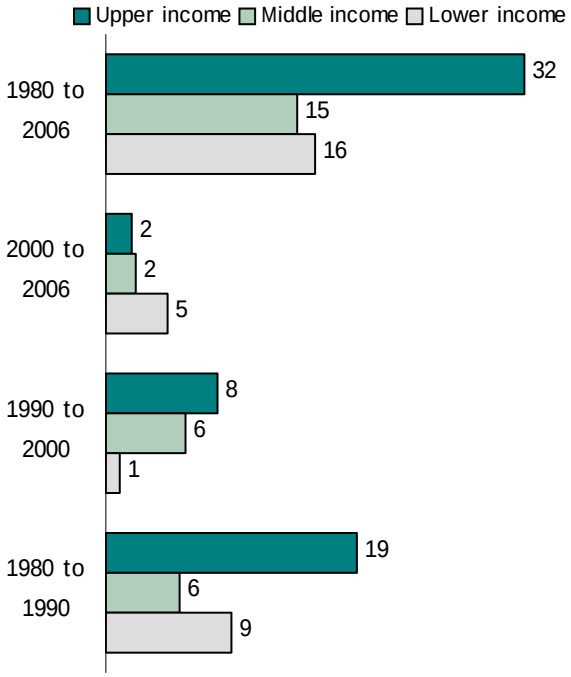
Note: The unit of observation in the Consumer Expenditure Survey is the "consumer unit." A consumer unit is typically a family but can include unrelated individuals who make expenditure decisions jointly. See the appendix section "Adjusting for Household Size" for an explanation of how expenditure data are adjusted for family size. The income data are deflated by the CPI-U-RS (see the appendix section "Deflation of Income, Expenditures and Wealth").

Source: Pew Research Center tabulations of data from the Consumer Expenditure Survey

The expenditures of upper income families increased more than the expenditures of other families in the 1980s and 1990s, but not so in the current decade. Over the entire 25-year period from 1980/81 to 2005/06, median expenditures increased 16% for the lower income groups, 15% for the middle income group and 32% for the upper income group (Figure 19). For upper income families, the largest gain in expenditures—19%—took place in the 1980s. Not coincidentally, this decade was the period of greatest growth in income inequality. Expenditure growth for upper income families moderated in the 1990s, falling to 8%. But expenditure growth also fell for lower income families, amounting to only 1% between 1990/91 and 2000/01. Among middle income families, expenditures increased 6% in both the 1980s and 1990s. Contrary to the trend in household income, expenditures increased the most for lower income families between 2000 and 2006—5% compared with 2% each for middle income and high income families.

Figure 19
Percentage Change in Real Median Family Expenditures

Expenditures are adjusted for family size and then scaled to reflect a three-person family



Note: The unit of observation in the Consumer Expenditure Survey is the "consumer unit." A consumer unit is typically a family but can include unrelated individuals who make expenditure decisions jointly. See the appendix section "Adjusting for Household Size" for an explanation of how expenditure data are adjusted for family size. The income data are deflated by the CPI-U-RS (see the appendix section "Deflation of Income, Expenditures and Wealth").

Source: Pew Research Center tabulations of data from the Consumer Expenditure Survey

Distribution of Expenditures

The three most important items in a family budget are housing, transportation, and food and beverages. On average, U.S. families devoted 66% of their budget to these three commodity groups in 2005/06. Housing, including utilities, home maintenance and furnishings, is the single most important item and consumed 34% of an average family budget that year.[23] Transportation, encompassing vehicle purchases, gasoline and public transportation, accounted for 18% of total expenditures. Food and beverages, including food away from home, consumed 14% of family expenditures (Table 2).

Table 2
The Distribution of Expenditures by Major Commodity Groups: All U.S. Families, 1980/81 and 2005/06
Expenditures (in current dollars) are adjusted for family size and then scaled to reflect a three-person family

	1980/81	2005/06
Mean expenditures	$17,690	$52,684
Percent distribution		
Total	100.0	100.0
Food and beverages	20.2	13.9
Housing	28.2	33.9
Transportation	20.0	18.1
Apparel	5.4	2.8
Medical care	4.6	5.9
Education	1.1	1.6
Recreation	6.2	5.3
Personal care and tobacco	2.0	1.4
Pensions, insurance, charity and other	12.4	17.1

Note: The unit of observation in the Consumer Expenditure Survey is the "consumer unit." A consumer unit is typically a family but can include unrelated individuals who make expenditure decisions jointly. See the appendix section "Adjusting for Household Size" for an explanation of how expenditure data are adjusted for family size.

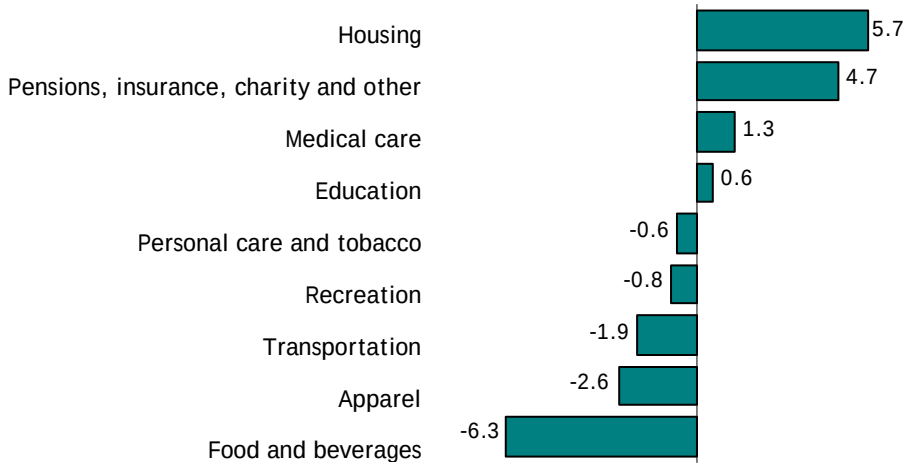
Source: Pew Research Center tabulations of data from the Consumer Expenditure Survey

[23] Total average expenditures and their distribution encompass all families. Housing expenditures include rent (for renters), mortgage interest, property taxes, etc. (for homeowners), utilities, home maintenance and furnishings. Payments on the mortgage principal are excluded.

The collective importance of the three major commodity groups has remained about the same over time. In 1980/81 their share in total expenditures was 68%. However, there has been a sizable shift in the proportions of expenditures devoted to food and beverages on the one hand and housing on the other. In keeping with a long-term trend, the share of food and beverages dropped from 20% to 14% between 1980/81 and 2005/06.[24] At the same time, the share of housing increased by six percentage points, from 28% to 34%. The share of transportation decreased slightly from 20% to 18% (Table 2).

Other than housing, items consuming greater shares of average family expenditures are medical care; education; and pensions, insurance, charity and other. After food and beverages, expenditures on apparel, as a share of total expenditures, have declined the most since 1980/81 (Figure 20).

Figure 20
Percentage Point Change in Share of Expenditures on Major Consumer Items
All U.S. Families, 1980/81 to 2005/06



Note: The unit of observation in the Consumer Expenditure Survey is the "consumer unit". A consumer unit is typically a family but can include unrelated individuals who make expenditure decisions jointly.

Source: Pew Research Center tabulations of data from the Consumer Expenditure Survey

The patterns of overall expenditures and changes in them over time also apply to the budgets of lower, middle and upper income families. Housing, transportation, and food and beverages are major components of any family's expenditures. But there are some notable differences across the three income groups.

For lower income families, housing, transportation, and food and beverages accounted for 72% of expenditures in both 1980/81 and 2005/06 (Table 3). Reflecting the trend for all families, the share of expenditures on food and beverages fell by six percentage points, from 24% to 18%. But housing consumed a greater share of lower-income family expenditures, up from 31% to 37%, and the share of transportation was unchanged at 17%.

Middle income families, compared with lower income families, spend a smaller share of their overall budget on these three commodity groups: 69% in 1980/81 and 68% in 2005/06. Again, the share of food and beverages fell by six percentage points, while the share of expenditures going to housing increased from 27% to 34%. A similar pattern is observed for upper income families, who spent 66% of their total budget on these commodities in 1980/81 and 62% in 2005/06.

[24] Historical data on food expenditures are analyzed in Jacobs and Shipp (1990). Also, see "At issue: Tracking changes in consumers' spending habits," *Monthly Labor Review* vol. 122, no. 9 (September 1999).

One notable difference across income groups is that lower income families devote much more of their budget to out-of-pocket medical expenditures than upper income families. In 2005/06, lower income families spent 8% of their budget on medical expenses, compared with 7% for middle income families and 5% for upper income families.

Another difference of note is that expenditures on pensions, insurance, charity and other items increase sharply with income. In 2005/06, lower income families allocated about 10% of their budget to these items. That compares with 15% among middle income families and 22% among upper income families.

Over time, expenditure patterns changed in similar fashions across income groups. The largest decrease in the share of expenditures was for food and beverages, and the extent of the drop was similar across income groups. The trend toward larger, more expensive homes also appears to have pushed up the share of total expenditures allocated to housing by all income groups, although it increased more for lower and middle income families than for upper income families. The rising costs of medical care and education have also meant larger shares of expenditures are devoted to them. However, private health insurance and public sharing of expenditures on these items seems to have limited the increase in the share of the family budget that goes to these items.[25]

Table 3
The Distribution of Expenditures by Major Commodity Groups: Lower, Middle and Upper Income Families,1980/81 and 2005/06
Expenditures (in current dollars) are adjusted for family size and then scaled to reflect a three-person family

	Lower Income Families		Middle Income Families		Upper Income Families	
	1980/81	2005/06	1980/81	2005/06	1980/81	2005/06
Mean expenditures	$11,891	$30,317	$17,348	$47,807	$25,951	$85,559
Percent distribution						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Food and beverages	24.1	17.6	20.6	14.7	17.4	11.7
Housing	31.2	37.4	26.8	33.7	27.6	32.5
Transportation	17.0	17.1	21.3	19.4	20.7	17.6
Apparel	5.3	2.7	5.2	2.5	5.5	3.0
Medical care	6.8	7.9	4.7	6.6	3.3	4.7
Education	0.9	1.5	1.0	1.3	1.2	2.0
Recreation	5.3	4.5	6.2	5.0	6.7	5.9
Personal care and tobacco	2.4	1.9	2.1	1.5	1.7	1.0
Pensions, insurance, charity and other	7.0	9.5	12.1	15.2	15.9	21.6

Note: The unit of observation in the Consumer Expenditure Survey is the "consumer unit." A consumer unit is typically a family but can include unrelated individuals who make expenditure decisions jointly. See the appendix section "Adjusting for Household Size" for an explanation of how expenditure data are adjusted for family size.

Source: Pew Research Center tabulations of data from the Consumer Expenditure Survey

[25] Data from the Centers for Medicare and Medicaid Services show that out-of-pocket payments as a share of total personal health care expenditures have fallen from 39.6% in 1970 to 14.6% in 2006. The shares of private health insurance and federal payments have increased commensurately (http://www.cms.hhs.gov/NationalHealthExpendData/downloads/tables.pdf). Also, see Acs and Sabelhaus (1995).

Section II Appendix

Adjusting for Household Size

Household income data reported in this study are adjusted for the number of persons in a household. That is done in recognition of the reality that a four-person household with an income of, say, $50,000 faces a tighter budget constraint than a two-person household with the same income. In addition to comparisons across households at a given point in time, this adjustment is useful for measuring changes in the income of households over time. That is because average household size in the United States has decreased from 3.1 persons in 1970 to 2.5 persons in 2006, a drop of 19%. Ignoring this demographic change would mean ignoring a commensurate loosening of the household budget constraint.

At its simplest, adjusting for household size could mean converting household income into per capita income. Thus, a two-person household with an income of $50,000 would be acknowledged to have more resources than a four-person household with the same total income. The per capita income of the smaller household would be $25,000, double the per capita income of the larger household.

A more sophisticated framework for household size adjustment recognizes that there are economies of scale in consumer expenditures. For example, a two-bedroom apartment may not cost twice as much to rent as a one-bedroom apartment. Two household members could carpool to work for the same cost as a single household member, and so on. For that reason, most researchers make adjustments for household size using the method of "equivalence scales" (Garner, Ruiz-Castillo and Sastre, 2003, and Short, Garner, Johnson and Doyle, 1999).

A common equivalence-scale adjustment is defined as follows:

$$\text{Adjusted household income} = \text{Household income} / (\text{Household size})^{N}$$

By this method, household income is divided by household size exponentiated by 'N,' where N is a number between 0 and 1. Note that if N = 0, the denominator equals 1. In that case, no adjustment is made for household size. If N = 1, the denominator equals household size, and that is the same as converting household income into per capita income. The usual approach is to let N be some number between 0 and 1. Following other researchers, this study uses N = 0.5 (for example, see Johnson, Smeeding and Torrey, 2005). In practical terms, this means that household income is divided by the square root of household size, or 1.41 for a two-person household, 1.73 for a three-person household, 2.00 for a four-person household, and so on.[26]

Once household incomes have been converted to a "uniform" household size, they can be scaled to reflect any household size. Because the average number of persons in a U.S. household has varied from 3.1 in 1970 to 2.5 in 2006, the income data reported in this study are computed for three-person households. That is done as follows:

$$\text{Three-person household income} = \text{Adjusted household income} * [(3)^{0.5}]$$

[26] One issue with adjusting for household size is that while demographic data on household composition pertain to the survey date, income data typically pertain to the preceding year. Because household composition can change over time, for example, through marriage, divorce or death, the household size that is measured at the survey date may not be the same as that at the time the income was earned and spent (Debels and Vandecasteele, 2008).

As discussed in the main body of the report, adjusting for household size has an effect on trends in income since 1970. However, it is important to note that once the adjustment has been made, it is immaterial whether one scales incomes to one-, two-, three- or four-person households. Regardless of the choice of household size, exactly the same results would emerge with respect to the trends in the well-being of lower, middle and upper income groups.

The method used to adjust income for household size is also applied to adjust consumer expenditure for family size. However, for reasons explained in the text, no adjustment is made to estimates of wealth.

Deflation of Income, Expenditures and Wealth

The consumer price index has undergone numerous methodological changes in the past three decades. One of the more significant revisions occurred in 1983, when the Bureau of Labor Statistics (BLS) introduced the rental-equivalence method for measuring changes in the cost of homeownership (see Stewart and Reed, 1999 for more detail on the revisions). Therefore, when deflating income data, it is desirable to use a price series that reflects a common approach to measuring price change over time.

The price index used in this study is the one used by the U.S. Census Bureau to deflate the data it publishes on household income (see DeNavas-Walt, Proctor and Smith, 2007). From 1978 onwards, this is the CPI-U-RS index as published by the BLS. For years prior to 1978, the Census Bureau made its own adjustment to the CPI-U to approximate the trend in the CPI-U-RS.

The choice of a price index does not affect the allocation of households into lower, middle or upper income categories at a point in time. That is because the same price index, regardless of which type, applies to all households and does not affect their income-based rank. However, the choice of a price index does affect measures of absolute progress over time. For example, between 1978 and 2006, the price level rose either 209.2% (CPI-U) or 183.6% (CPI-U-RS). This means that someone earning $10,000 per year in 1978 would be just as well off in 2006 earning either $20,920 (using the CPI-U) or $18,362 (using the CPI-U-RS). The difference between the two incomes is 14%.

It is also necessary to note that the income data collected in a Decennial Census actually pertain to the year preceding the census. For example, the income data collected in the 1970 census reflect household income in 1969. In the 2006 American Community Survey, income data refer to earnings in the 12 months preceding the date of the survey. Because the ACS is a rolling survey conducted from January 2006 to December 2006, the income data essentially span the period from January 2005 to November 2006. The price deflators applied to the income data in this study are for the dates reflected in the income data. Thus, income data collected in the 1970 Decennial Census are deflated by the 1969 price index, income data from the 1980 Decennial Census are deflated by the 1979 price index, and so on. Data from the 2006 American Community Survey are deflated by the average of the price indexes for 2005 and 2006.

The Choice of Time Periods

When examining trends in economic indicators over time, it is desirable to avoid comparisons across different points of the business cycle. For example, comparing income at the peak of an economic expansion with income during a recession would present a misleading portrait of underlying trends in income growth. The income comparisons in this study are based on data pertaining to 1969, 1979, 1989, 1999, and 2005/06. The first four dates are either close to or at the peak of economic expansions. However, the final date—2005/06—follows close behind a three-year period encompassing a recession and an economic slowdown.

For the consumption analysis in this study the periods of comparison are 1980/81, 1990/91, 2000/01 and 2005/06. The first three periods encompass recessions and, as just noted, 2005/06 follows a recession and an economic slowdown. With regard to the wealth analysis, the dates of reference are 1983, 1992 and 2004. Each of these years follows closely on the heels of a recession and/or slowdown.

Households and Families in Census Data

The Census Bureau defines a household as the entire group of persons who live in a single dwelling unit. A household may consist of several persons living together or one person living alone. It includes the household head and all his or her relatives living in the dwelling unit and also any lodgers, maids and other residents not related to the head of the household.

A family by contrast is composed of all related individuals in the same housing units. Single people living alone or two or more adult roommates are not considered families according to the Census Bureau approach. In the vast majority of cases, each housing unit contains either a single family or single person living alone. In the case of roommates, one person is designated the "householder" (usually whoever owns the unit or in whose name the lease is held), and the other person or persons are designated secondary individuals. In a few cases, there are households with families in which neither adult is the householder. These families are designated as either related or unrelated subfamilies, depending on whether one of the adults is related to the householder.

A Note on Data Sources

The demographic and income data in this report are derived from the Decennial Censuses of 1970, 1980, 1990 and 2000 and the 2006 American Community Survey (ACS). The ACS is the largest household survey in the United States, with a sample of about 3 million addresses. It is conducted by the U.S. Census Bureau and covers virtually the same topics as those in the long form of the decennial census. The specific microdata used in this report are the 1% samples of the decennial censuses and the 2006 ACS Integrated Public Use Microdata Series (IPUMS) provided by the University of Minnesota. Demographic tabulations from the 1980, 1990 and 2000 decennial censuses and the 2006 ACS used one-third of the cases, randomly extracted, from the IPUMS files. Tabulations of income are based on the full IPUMS files.

The IPUMS assigns uniform codes, to the extent possible, to data collected by the decennial census and the ACS from 1850 to 2006. More information about the IPUMS, including variable definition and sampling error, is available at http://usa.ipums.org/usa/design.shtml.

The Survey of Consumer Finances (SCF) is sponsored by the Federal Reserve Board and the Department of Treasury. It has been conducted every three years since 1983 and is designed to provide detailed information on the finances of U.S. families. The SCF sample consists of approximately 4,500 families. Unlike the decennial censuses and the ACS, the sampling unit in the SCF is the "primary economic unit" (PEU), not the household. As stated by the Federal Reserve Board "the PEU consists of an economically dominant single individual or couple (married or living as partners) in a household and all other individuals in the household who are financially interdependent with that individual or couple."

There are notable differences between the SCF data the Federal Reserve Board releases for public use and the data it uses to publish estimates of family income and wealth. One difference is that estimates published by the Federal Reserve Board are often based on preliminary data, whereas the public-use files represent edited versions of the data. Also, prior to public release, the Federal Reserve Board alters the data using statistical procedures that may affect the estimates, albeit not significantly. That is done for reasons of confidentiality.

The Consumer Expenditure Survey (CE) is conducted by the U.S. Census Bureau for the Bureau of Labor Statistics. The goal of the survey is to collect data on the spending patterns of American consumers. The current form of the CE dates to 1980, but it has undergone revisions in the interim that affect the comparability of data over time. The survey has two components—a quarterly Interview Survey and a weekly Diary Survey, each with its own questionnaire and sample. In the Interview Survey, families in the sample are interviewed every three months over five calendar quarters. Respondents to the Diary Survey maintain a detailed record of expenditures for two consecutive weeks. At the present time, the Interview and Diary components collect completed surveys from approximately 7,000 housing units each.

The expenditure data are collected and reported for "consumer units." Most consumer units are families, i.e. related individuals living together in a single housing unit. A consumer unit can also consist of a single person who is financially independent or two or more unrelated persons who live together and make joint expenditure decisions.

In this report, the 1980/81, 1990/91 and 2000/01 CE data were obtained from the National Bureau of Economic Research (NBER). The NBER files make adjustments to the CE microdata to simplify access for the researcher. In particular, the NBER files match the four possible quarterly records for a family to create a single annual record for that family. A drawback of this procedure is that the data are limited to families who completed all quarterly interviews. Families who exit the sample in the interim are excluded, potentially leading to attrition bias in the data. Therefore, the NBER files include sample weights that have been adjusted to limit the extent of the bias.

The 2005/06 expenditure analysis is based on public-use CE data from the BLS. Four quarterly files from 2006 are used to derive estimates for expenditures spanning the October 2005 to November 2006 period. In any given interview month, expenditure data are collected with reference to the preceding three months. In the first set of interviews in 2006 (in January 2006) data are collected for October to December 2005. In the last set of interviews in 2006 (in December 2006) data are collected for September to November 2006. Unlike the estimates from the NBER files, the analysis of the 2006 CE data is not limited to families who completed all

possible interviews. Like the NBER files, however, public-use CE files are limited to data collected in the Interview Survey. Those data account for up to 95% of total expenditures.

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