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Author

Leigh-Preston, Nancy

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**The Nation's Changing
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From 1967 to 1986
What Has Happened to
the Middle?**

Nancy Leigh-Preston

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University of California at Berkeley

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INTRODUCTION

This paper presents research on change in the U.S. earnings distribution from 1967 to 1986, with particular reference to the middle segment of the distribution. It contributes to a broader field of inquiry that has been spawned by what I call the "The Debate Over the Disappearing Middle."¹ This debate became one of the dominant themes of the 1988 Presidential Campaign:

The rich have gotten richer; the poor have gotten poorer, and those in the middle -- and that means most of us -- are getting squeezed...High paying jobs are being replaced by low-wage jobs.

This quote, from Democratic Nominee Michael Dukakis, appeared in a recent issue of *Newsweek*² along with Republican Nominee George Bush's response that 17 million new and "good jobs at good wages" have been created since the Republican Administration took office at the beginning of this decade.

The formal origins of the debate over the disappearing middle can be traced to 1983, especially to Bob Kuttner's widely read *Atlantic Monthly* article, "The Declining Middle."³ Several other articles followed his article, with titles such as the "Myth of the Disappearing Middle Class," "The Disappearance of the Middle Class," "Middle-Class Media Myth," "Is the Middle Class Doomed?," and "The Shrinking Middle Class -- Myth or Reality?"⁴ In turn, these articles have been followed by the publication of a growing body of research that attempts to answer the very broad question of what is happening to the middle class with an equally broad range of approaches. These approaches have varied in the unit of analysis; that is, household, families, individuals, or even male individuals alone. They have varied in the income variable examined; that is, household annual total income or wages, individual hourly earnings or annual wages and salaries. Most importantly, they differed in the way they define the middle segment. Some define the middle as a range centered on the median point of the distribution. This range can be equal in width on both sides of the median point (i.e., 75 percent to 125 percent), or unequal (i.e., 50 percent to 200 percent). Others divide the distribution into thirds or quintiles and examine the number of units which fall into the middle segment[s]. Another variation has been to divide the distribution into quintiles based on multiples of the median (i.e., 60 percent to 100 percent, 100 percent to 160

percent...). Until now, none of the research approaches have attempted to define the middle by defining a consumption basket that represents a middle standard of living. While this approach has some shortcomings, it has been adopted in this research for reasons that will be elaborated upon shortly.

It may be useful to point out that the question of what is happening to the middle class is a subset of a broader economic development inquiry into income inequality. The specific focus on the middle of the distribution arose because of the segment's importance to the economy and society as a whole. Levy and Michel articulate this focus:

A central theme of modern American life is the chance to enjoy a "middle-class standard of living." This standard is not officially defined anywhere, but it exists in many subtle forms throughout our society, from television advertisements to casual conversations. The middle-class American dream has come to include such material goods as a single-family home, one or two cars (including a new one), a washing machine and dryer, a dishwasher, a color TV, raising and educating children, providing for a lengthy period of retirement, and so on...⁵

The debate over the middle class is one of fundamental importance to the field of economic development planning. The middle class is widely viewed as the backbone of the U.S. economy. Much of the mass market has traditionally been structured to satisfy the demands of the middle-class consumer. The middle-class standard of living is a benchmark by which economic progress is measured. Finally, and specifically for economic development planning, a position in the middle economic class is generally considered the development goal of the lower income, and of those who endeavor to assist them. The prospects of upward mobility for disadvantaged economic groups become more limited if the middle-income segment is becoming smaller. This is still true if a shrinking middle is due to an upward shift in the income distribution, (e.g., to a growing upper-income group), since the prospects of low-earners skipping over the middle segment to become upper-earners are unlikely.

RESEARCH APPROACH

This research examines the individual earnings distribution in 1967 and 1986, using data from the March sample of the Current Population Survey. The CPS is

the largest annual survey taken in the U.S.; it provides data on income, earnings, race, sex, age, occupation, industry, and education for a representative sample ranging from around 48,000 households in 1968 to about 56,500 in 1986.

The key question in the debate over the disappearing middle class is whether there are more or fewer households able to purchase a consumer goods package generally associated with membership in the middle class. Did the United States' entrance in the 1970s into a period of slower growth, accompanied by accelerated transformation of industrial structure and labor force composition, lead to change in the size of the middle class? The question, "Are we as well off as we used to be?," refers to the way things were when Americans were experiencing the postwar boom that essentially lasted until the late 1960s. Thus, the analyses begin with the March 1968 Current Population Survey data.

Two Definitions of the Middle of the Earnings Distribution

The first definition used in this analysis attempts to get at the question of whether we are as well off as we used to be by defining the middle of the earnings distribution in relation to a level of consumption associated with a middle-class standard of living. However, this approach has several limitations, one of which is that it is difficult to compare to other analyses of the same question. Therefore, a second set of research results using a standard, arbitrarily designated middle-earnings range definition has also been produced, and will be the basis for most of the results presented.

The employed individuals of the survey have been divided into two earner data sets, one for full-time, full-year workers, and the other for part-year and/or part-time workers. Demographic, education, industry, and wage variables for the two earner groups are analyzed separately. The distinction between the two groups is quite important. Earnings are the primary means with which to purchase a middle-class standard of living. We do not, however, generally expect that a part-time worker's earnings should be sufficient to purchase a middle standard of living. If this were the case, there would appear to be very little incentive for most workers to work full-time. We do expect that the earnings of a full-time, full-year worker should be sufficient to purchase a middle standard of living. Historically, this has been the case. Further, the full-time, full-year workers' earnings were expected to purchase a middle standard of living for (specifically) *himself* and *his* household. Thus, analyzing the distribution of all earners together, as some researchers have done, misinforms the question. However, the part-time earners' distribution should

not be ignored. It should simply be analyzed separately. Changes in the earnings distribution of full-time workers could be due to the reorganization of work which, for example, carves up a full-time position into two part-time positions. Further, while the economic position of full-time workers may not appear to deteriorate, or may even appear to be improving, if the number of involuntary part-time workers is growing at the same time, then opportunities for full-time work are diminishing.

Consumer-Basket Definition of the Middle-Earnings Segment

Implicit in the historic notion of a middle-class standard of living is the idea that it could be purchased with the earnings of one full-time worker. This contention is the underlying premise for the **consumer basket definition** of the middle segment of the earnings distribution. It is derived from the Bureau of Labor Statistics household budgets for lower, moderate, and higher standards of living in 1967. These budgets were for a "typical family" of four with a 38-year-old, full-time employed husband who had 15 years or more of work experience, a wife who was a full-time homemaker, and two children -- a 13-year-old boy and an 8-year-old girl. These budgets included family consumption items (food, housing, transportation, clothing and personal care, medical care...), costs of gifts and contributions, personal life insurance, occupational expenses, and taxes (social security and disability, and personal income). For the spring of 1967, the budget costs for a BLS-designated lower standard of living were \$5,915; for a moderate standard, \$9,076; and for a higher standard of living, \$13,050.⁶

The moderate budget is the closest representation of a middle standard of living of the late 1960s available, and therefore provides the basis for the consumption-based definition of the middle of the earnings distribution. This definition creates five segments of the earnings distribution, three of which make up the middle segment. Because many individuals with widely ranging incomes consider themselves to be middle class, and because the middle class is widely believed to make up the broadest segment of our society, using a three-part middle has strong appeal.

Earnings are the primary means with which to purchase a middle standard of living. For full-time workers of the Current Population Survey, earnings, as a percent of total income, have varied between 97 percent and 98 percent. Thus, the lower, middle, and upper ranges that divide up the earnings distribution have been based on that which can purchase 97 percent of BLS's Lower, Moderate, and Higher

Budgets. The middle range has been divided into a low-middle segment, a mid-middle segment, and an upper-middle segment, using the midpoint between the moderate and lower budgets, and the moderate and higher budgets, as the midpoints of the low-middle and upper-middle ranges. (See Appendix A.)

Table 1 shows the five-part definition of the earnings distribution for 1967 and 1986. The 1986 ranges have been created by inflating the 1967 ranges with the Consumer Price Index for all Urban Consumers (CPI-U X1).

In summary, the consumer-basket based definition of the middle of the earnings distribution starts with the amount of earnings necessary to purchase 97 percent of the middle standard of living (as defined in the BLS Moderate Household Budget), inflates this figure to 1986 dollars, and determines how many workers have earnings adequate to meet that figure. It does not define a 1980s consumer basket and does not address issues of changing household composition, changing relative prices of consumer items, and changing concepts of goods and services associated with a middle-class standard of living. The consumer basket definition created here asks: "Would the same proportion of today's full-time earners be able to purchase that standard as were able to do so in 1967?" The answer to this question can provide some indication about whether we are as well off today as we used to be.

Standard Definition of the Middle-Earnings Segment

The standard definition of the middle to be used in this analysis is the same as the one used in the widely publicized analyses of Bluestone and Harrison.⁷ Accordingly, low earnings are less than 50 percent of the median earned by all earners, middle-earnings are 50 percent to 200 percent of the median, and upper earnings are those over 200 percent of the median. Table 2 presents the 1967 and 1986 dollar amounts of these ranges.

While defining the middle of the earnings distribution as a range around the median point is the predominant method used by researchers in this subject area, and is an approach with broad intuitive appeal, this researcher concurs with Ann Draper that the approach is flawed. In a dissent from fellow members of a special panel she sat on, whose recommendations were responsible for the Bureau of Labor Statistics abandoning the Lower, Moderate, and Higher family budgets from which the consumer-basket definition of the middle is derived, Draper wrote:

The postulate that adequacy at prevailing levels of living is always at median consumption, and that other standards remain in fixed percentage relationships to the median, is

inherently insupportable. In a very poor society, for example, or even our own at different periods in history, median consumption may be the minimum of needed consumption. At other times, median consumption may be well above such a minimum.⁸

To take her point further, in an economy with falling real incomes, a middle range for analysis based on a median consumption point will result in tracking a falling middle standard of living -- which can be a deceptive way to answer the question, "Are we as well off as we used to be?"

When the analyses of the changing earnings distribution are presented, it is important to note that this definition, based on the median point of the *all earners'* distribution, is applied to the distributions of *full-time* workers and *part-time* workers, thereby acting as a constant reference point. As a result, we would expect the middle and upper segments of the part-time earner distribution to be small, compared with those for the all-earner distribution, and the lower segment to be large. Of primary interest will be the degree of change in each of the segments over the period of analysis. For the full-time earners' distribution, we would expect a larger middle and upper segment relative to that of the all-earner distribution, and again, would be interested in the degree of change in all three of the segments of the full-time earners' distribution.

THE CHANGING EARNINGS DISTRIBUTION -- 1967 TO 1987

The All-Earners' Distribution

Between 1967 and 1986, CPS microdata indicates that nearly 37.5 million persons were added to the all-earner distribution.⁹ During this period, the significant change in the sex and race composition of the all-earner distribution was due to a five percent exchange between white males and white females: white males' share declined from 53 percent to 48 percent, while white females increased their share from 36 percent to 41 percent. (See Figure 1.)

Examination of change in the all-earners distribution, using the standard definition of the middle, shows that the combined decrease in the size of the lower and middle segments of 4 percent resulted in an increase in the upper segment from what was just 16 percent in 1967, to 20 percent in 1986. (See Figure 2.) Quite similar results appear when the all-earner distribution is examined using the consumer-basket definition of the middle. The lower segment decreases by over 2 percent, the low-middle and mid-middle segments decrease by less than 1 percent

each, the upper-middle segment increases by less than 1/2 percent, and the upper segment increases by nearly 4 percent.

The significant difference that appears when examining the all-earners distribution using the standard definition of the middle, compared with the consumer basket definition, is in the size of the lower earner group. This group was 31 percent in 1967, using the standard definition; it was 71 percent using the consumer-basket definition. Accordingly, over 70 percent of all earners were not able to purchase a middle standard of living in the late 1960s. Keep in mind that this figure includes part- and full-time earners. While the figure appears striking and runs contrary to notions of a broad middle class, it also reinforces the point made earlier that part- and full-time earners should be analyzed separately.

Distribution of Full-Time Earners

Standard Definition of the Middle

As would be expected, the distribution of full-time earners has larger middle- and upper-earner segments. We would not necessarily expect the full-time earner distribution to show, as it has, a more pronounced upward shift than that of all earners (Figure 3). The upper segment has increased over 6 percent, and is now nearly one third of the distribution. Low full-time earners have declined from 7 percent to 4 percent of the total. The middle-earner segment has declined almost 4 percent, but still makes up nearly 65 percent of the distribution.

When the distribution of full-time earners is examined by subgroups, the changes between 1967 and 1986 are more dramatic, and, in some cases, even surprising (Figure 3 and Appendix B-1). Among males -- particularly white males -- the low-earner group was less than 3 percent in 1986. Upper earners had gone from being close to a third of the distribution to nearly one half. Among black males, low-earners were nearly 12 percent of the distribution in 1967; by 1986 they were less than 5 percent. Middle-earners declined by an almost equal percentage, and as a result, upper earners of the black male distribution increased dramatically from under 8 percent in 1967 to over 22 percent in 1986.

The middle-earner group of the female distribution did not change much between 1967, when it was 82.5 percent, and 1986, when it was just under 81 percent. The exchange between the lower- and upper-earner segments over the period of analysis was nearly even. Among all females, low-earners were over 13 percent in 1967, but by 1986 were less than 6 percent, while upper earners who were over 4 percent in 1967 were over 13 percent in 1986. The trends for white females

are similar, but black females show dramatic change. In 1967, the low-earner group of the black female distribution was over 30 percent, but had dropped to 7.4 percent by 1986. The black female group is the only sex/race group to show an increase in its middle-earner segment during the analysis period, and it was a substantial increase -- from 67 percent in 1967 to nearly 83 percent in 1986. The upper-earner group for black females, although the smallest among the sex/race groups, did increase from around 2.5 percent in 1967 to 10 percent in 1986.

Consumer-Basket Definition of the Middle

Almost 55 percent of all full-time earners in 1967 were in the lower segment of the distribution, using the consumer-basket definition of the middle. While the size of this group declined by 1986, it was still a surprising 50 percent of all full-time earners.¹⁰ The low-middle and mid-middle group each declined around 1 percent over the 19 year period, while the upper-middle group grew slightly (less than 1 percent). The upper-earner group showed the greatest change, increasing by almost 6 percent.

Changes by the four sex/race groups are presented in Table 3 using the consumer-basket definition. The three middle groups have been aggregated to show more clearly the trends of the middle compared to the lower and upper groups. (Appendix B2 presents the trends with the three middle groups disaggregated.) White males are the only group to show a decline in the middle-earner segment. White males who are upper-earners have increased substantially, while those who are low-earners have decreased by only 1 percent. If the present trend continues, the white male distribution will become bimodal. Such is not the case with the other three sex/race groups. They all show substantial increases in the middle-earner group, smaller increases in the upper-earner group, and substantial decreases in the lower-earner group. However, the low-earner segment still ranges from 60 percent to 86 percent for these groups.

Change in the Ratio of the Medians for Full-Time Earners to All Earners

Table 4 shows that ratios of the median for full-time earners to all earners has increased and, thus, the gap between the median earnings of full-time workers and part-time workers has widened. Within the full-time-earner group, white males still have the highest ratio of median earnings to the all-earner median. However, the gap between this group and the black male, white female, and black female groups has narrowed, with the ratio of black female earnings showing the largest increase.

Distribution of Part-Time Earners

Figure 4 indicates that the relative size of part-time and full-time earners has remained very similar over the nineteen-year analysis period.¹¹ Furthermore, using the standard definition of the middle indicates that the proportions of the upper-, middle-, and low-earner segments for the entire distribution of part-time earners have remained the same.¹² The sex/race group percentages among whites have changed slightly over the 19 years of analysis. White males were 39 percent of the distribution in 1967 and declined to 36 percent by 1986, while white females increased to 51 percent in 1986, from 48 percent in 1967 (Figure 4).

Although the shares of the part-time distribution held by low, middle, and upper earners have basically remained unchanged, there have been significant changes in shares held within the four sex/race groups. Overall, the position of males has deteriorated while that of females has improved. White and black males' earnings have experienced a downward shift of nearly 4 percent and 5 percent respectively, from the middle segment to the lower segment. Four percent of white females and nine percent of black females have shifted out of the low-earner group into the middle or upper groups. (See Appendix C.)

When median earnings are examined for the four sex/race groups, we see further evidence of the deteriorating position of males, especially white males, between 1967 and 1986. Table 4 shows that the ratio between the median of the white, male, part-time earner group and the all-earner median fell by 7 percent. The ratio for black males fell 3 percent. White and black females' ratios improved. It appears that part-time male workers (and white males in particular) have lost ground over the last two decades. They have shifted out of the middle-earner segment into the lower segment, and the gap between the lower segment's earnings and those of earners overall has widened.

Comparison of Employee Benefits for Full-Time and Part-Time Earners in 1986

Employee benefits, a vital part of the national economy, represent an increasingly significant source of financial security for a large and growing number of American workers, dependents, and retirees.¹³

The financial security that employee benefits provide is very often critical for an individual's or household's ability to attain -- and retain -- a middle-class standard of living. Real average hourly earnings have not grown since the mid-1970s, while real average hourly compensation (i.e., wages and benefits) has grown consistently.¹⁴ This suggests that a benefits package is increasingly important for

maintaining a middle-class standard of living. As a percent of total compensation, benefits increased 6 percent between 1970 and 1986.¹⁵

The Current Population Survey did not collect information on benefits received by wage and salary workers at the beginning of the research period, 1967, but was doing so by the end of the period, 1986. Actual dollar amounts of benefits received are not collected, but among the information that can be obtained from 1986 CPS benefits-related data is whether an earner is included in an employer's pension plan and group health plan and, in the latter case, whether the employer paid for all or part of the group health insurance.

According to the Employee Benefits Research Institute, the two benefit categories of group health insurance and pension and profit sharing were 4.1 percent of total compensation in 1970, and 6.6 percent of total compensation in 1986. If the 1970 percentage is applied to the median wage and salary for all earners in 1967 (\$4,092), estimated median total compensation for 1967 is \$4,280.¹⁶ Applying the 1986 compensation percentages to the 1986 all-earner median produces an estimate of median total compensation for 1986 of \$14,813.

Analysis of earners' receipt of pension and health benefits from the 1986 CPS data suggests that benefits have the effect of further skewing the earners' (or, perhaps we should say, compensation) distribution. As Table 5 shows, the higher one's earnings group, the greater one's chances are of being included in an employer's pension plan or group health plan. Further, the more money one earned, the greater the likelihood that one's employer paid all, or, part of the costs of a group health plan. It can be seen from the table that these trends were present for full-time as well as part-time earners. However, the rate of benefit receipt was much lower among part-time earners.

Sectoral Analysis

A predominant theme of the debate over the disappearing middle is the alleged impact of the baby boom cohort.¹⁷ The cohort's entrance into the labor market coincides with the period of this research analysis and with the concerns that the middle class is declining. The the baby boom cohort's large size is supposed to have created labor-market crowding effects, resulting in lower wages due to increased competition for the supply of jobs, as well as in decreased opportunities for upward mobility (e.g., movement into the middle-earner group).

Given the results of the present analysis, that there has been a shrinking middle which has been accompanied by a growing upper-earner segment instead of

a growing low-earner segment, the baby boom argument does not seem very compelling. While it is true that the movement of the baby boom cohort could be having an effect on some aspects of the changing distribution of earnings, overall the results of the present analysis do not suggest that a large baby boom cohort is leading to a downward shift in the earnings distribution. It is possible that the baby boom impact may explain the relative decline in the position of the white male earner group to the rest of the labor force, but such a claim would require further demographic analysis which this researcher will not undertake for the time being. Instead, the remainder of this paper will focus on the more likely explanation for the changing earnings distribution: change in the industrial structure of the economy.

Explanations of the Changing Industrial Structure

The process of industrial transformation -- change in what is produced and how it is produced -- is manifested in the process of income distribution -- change in who gets what and how. A popular view of their connection has been that as economies shift from predominantly agricultural modes to industrial ones, they experience increasing inequality, but subsequent movement toward greater equality (e.g., growing middle-income sector) occurs as the industrialization advances.¹⁸ A more recently developed view is that *post*-industrial societies are characterized by increasing inequality.¹⁹

Bluestone and Harrison claim that our post-industrial phase is really de-industrialization. They believe the industrial foundation of the U.S. economy is eroding. Basic industry is shrinking, resources and employment are shifting increasingly into non-productive sectors, and U.S. industry has lost its competitive position in the international economy. De-industrialization is seen to lead to permanent losses of good jobs (i.e., those paying middle-level wages) in manufacturing. The jobs being created in nonmanufacturing industries offer low hourly pay, shorter hours, and less security.²⁰

On the other side of the debate are those who say de-industrialization is not occurring, or, if it is occurring, is not a cause for major concern because of growth in non- or post-industrial sectors.²¹ This growth represents a shift to a broad range of activities usually lumped together under the services or tertiary label. Lawrence says the U.S. is not de-industrializing because, although the share of manufacturing jobs has declined, the number of manufacturing jobs continues to increase. Instead, the problems of the industrial economy are due to the slow overall growth in the economy and to a currency which was allowed to stay too strong for too long.

Unlike the de-industrialists, the Lawrence view appears to deny the possibility of relating present industrial change to long-run economic cycles posited by long-wave theorists. The work of these theorists is based on observations that economic growth, investment, and technological change seem to occur in cycles. The Kondratiev long-wave cycle is the most well-known theory. It posits a cycle of economic activity (prosperity and decline) estimated to last between 45-65 years. The economy is in the downswing of the fourth Kondratiev cycle, and therein lies the origins of the present structural crisis.

Perez is one of the earlier writers who tried to explain how the technology style of the Kondratiev long wave, combined with the profit motive, generates the occupational structure. The technological style of the fourth Kondratiev wave has been the mass production of discrete identical units made with energy-intensive materials. Henry Ford's assembly line is the prototypical example. The mass-production style has been accompanied, on the organizational level, by a sharp separation of management and administration from production (e.g., guided by principles of scientific management which have led to the growth of middle management).

The technological style predicted to characterize the fifth Kondratiev (and which makes its appearance in the downswing of the fourth Kondratiev) will be based on low-cost microelectronics, and may appear as a "flexible batch production network where all activities (managerial, administrative, productive, etc.) are integrated in a total information-intensive system to turn out information-intensive products or services."²² Perez suggests that the new technology of the fifth Kondratiev produces a centrifugal occupational distribution with, on the one hand, rapid growth of highly trained employees, and, on the other hand, with rapidly trained employees whose job is to feed material or information, watch panels, or push buttons. We would expect that such a distribution would in turn produce a centrifugal (more commonly identified as bimodal or bifurcated) earnings distribution.

It also seems possible that microelectronic-based technology of the fifth Kondratiev could simply reduce the need for rapidly trained, low-wage employees through continued advances in automation. This in turn could result in fewer low-wage jobs overall, or a shift to part-time employment, or both.

Changes in the Industrial Structure between 1967 and 1986

The industrial classification system used in this analysis is adopted from that created by the Office of Technology Assessment (OTA). OTA aggregated all industries into ten production sectors "likely to be affected in similar ways by changes in technology, trade patterns, and regulation."²³ The ten production sectors are: natural resources, construction, low-wage manufacturing, medium-wage manufacturing, high-wage manufacturing, transportation and trade, transactional activities, personal services, social services, and national defense. (This analysis omits the national defense category, due to data limitations.) A description of each category is provided in Appendix E. OTA notes that the divisions of service functions in the ten production-sector classifications are modifications of the categories used by Singlemann.²⁴

Before presenting CPS data by production sector, a discussion of the rationale of using the three manufacturing groups -- low-wage, medium-wage, and high-wage -- when earners within these groups will be analyzed by their earnings segment is warranted. OTA has grouped manufacturing industries based on their *average* level of annual compensation per full-time equivalent employee in 1984. This is distinctly different from creating low-, middle-, and upper-earnings segments based on the median point, as in the standard definition of the middle employed in this analysis. It is also distinctly different from earnings segments created with the consumer-basket definition. Within those industries with either low, medium, or high average wages, there is still a distribution of earners in lower, middle, and upper segments, and shifts across these segments will inform our analysis of the changing earnings distribution. From Appendix E it can be seen that the grouping of manufacturing industries by quantitative criteria of wage levels produces sectors that are commensurate with well-recognized qualitative criteria. Low-wage manufacturing represents traditional apparel, footwear, and furniture making. Medium-wage manufacturing includes most high-technology activity. High-wage manufacturing is dominated by smokestack industries.

Figure 5 presents change in employment levels by production sector from 1967 to 1986 for the full-time and part-time earnings distributions. Low-wage manufacturing has the smallest share of employment in both distributions but has also increased in both. The medium- and high-wage manufacturing sectors, as well as the personal services sector, have all lost employment in the part-time distribution and gained employment in the full-time distribution.

In fact, every production sector of the full-time distribution has gained employment. The greatest additions to employment have occurred in the transportation and trade, transactional activities, and social services sectors. Significant shifts in the shares of employment for each of the production sectors have occurred between 1967 and 1986, as can be seen in Table 6. The share of medium-wage manufacturing employment declined 8 percent; social services gained the largest share, 6 percent, and became the largest sector; transactional activities experienced the second largest increase in share, 4 percent; and transportation and trade increased its share by less than 1 percent, but held its position as the second largest sector. As the OTA classification states, "social services support a human infrastructure," and between 1967 and 1986 this activity replaced manufacturing as the dominant employer of full-time workers. Transportation and trade became the second largest employer of full-time workers, and thus the distribution of goods overtook the actual manufacturing of goods as the activity engaging full-time workers.

For part-time workers, the two largest employing production sectors increased their dominance over the 1967-1986 period. These two sectors are the same as those for full-time workers in 1986. Transportation and trade and social services combined employed 47 percent of the part-time workers in 1967 and 56 percent in 1986. Nearly one-third of all part-time workers (32 percent) were employed in the transportation and trade sectors.

*Change in the Earnings Distribution for Full-Time Workers
within Production Sectors*

Examining production sector trends by the standard definition of the middle, Table 7 shows that the percentage of earners in the lower segment decreased for every production sector. (See Appendix F-1 for actual employment numbers.) The most dramatic declines occurred in the natural resources and personal services sectors. The only two sectors that did not experience declines in the middle segment were construction, which stayed the same, and personal services, which experienced a 12 percent increase. All sectors experienced an increase in the upper-earnings group. The most dramatic increase occurred in high-wage manufacturing and in natural resources. Figures 5 and 6 depict changes in the earnings distributions for the four largest production sectors: social services, transportation and trade, medium-wage manufacturing, and transactional activities.

Changes in the full-time workers' earnings distribution by the consumer definition of the middle are presented in Table 8 and Appendix F-2. In looking at Appendix F-2, the most striking feature may well be the fact that the lower-earnings segment is overwhelmingly the largest for each production sector, and in most of the sectors accounts for 50 percent or more of the earners. This does not fit well with notions of a broad middle class; however, the reader is reminded that the lower-earnings segment for 1986 was defined as less than \$20,592. Further, recall that this amount is supposed to provide 97 percent of the means of support for a family of four. But it is difficult to imagine that a 1986 household with the same profile as that upon which the 1967 consumer-basket definition is based (e.g., one full-time earner, a spouse who does not work outside the home, and two children), could purchase anything greater than a lower standard of living with annual earnings of less than \$20,592.

While the lower-earning segment still has the largest percentage of workers, it declined between 1967 and 1986 for every production sector except in construction and transportation and trade, where its proportion remained constant. The earnings distribution for each production sector shifted upwards over the 1967 to 1986 period, with the greatest shifts occurring in high-wage manufacturing and transactional activities sectors. The combined middle segment of low-middle-, mid-middle-, and upper-middle-earners was largest in the high-wage manufacturing, medium-wage manufacturing, construction, and social services sectors respectively.

CONCLUSION

The intent of this analysis has been to determine in which ways the earnings distributions are changing, as well as to offer one answer to the question, "Are we as well off as we used to be?" The late 1960s starting point for this analyses represents the end of the postwar-boom era and is considered a widely prosperous point in time.

Both the part-time and full-time earners' distributions have been analyzed using what has been labeled in this research as the "standard definition of the middle," which represents 50 percent to 200 percent of the median point of the all-earners distribution. Additionally, and where this research departs in approach from all other analyses of the declining-middle question, the full-time earners' distribution has been analyzed by a "consumer-basket definition of the middle" of the earnings distribution.

When reviewing the results of this analysis, which seem more favorable than not, the reader should be advised that evidence from other sources has suggested that income and earnings peaked around 1973, and have been stagnant ever since.²⁵ Thus, a pertinent question for further research is: How much better off would we be today if economic growth had continued at its pre-1970s rates?

Reviewing the results of the analyses conducted for this paper, both methods for defining the middle of the earnings distribution indicate that the relative position of full-time workers has improved over the last two decades. The position of the full-time worker has shifted upwards without exception. While the white male full-time earner group still has the highest median earnings, the gap between its earnings and all other sex/race groups has narrowed significantly.

The economic structure of this 1967-1986 period of analysis has been characterized as post-industrialism. Using the Office of Technology Assessment's production classification revealed significant sectoral shifts in employment shares. Social services replaced manufacturing as the dominant employer of full-time workers, and transportation and trade remained the second-largest employer. Thus far, the post-industrialism phase that the U.S. economy has entered into has had the effect of decreasing the percentage of low-earners and increasing the percentage of upper earners.

The analysis of part-time earners has showed that white females' share of part-time jobs increased slightly over the last two decades. They now constitute more than half of the part-time labor force. The gap between the median earnings of part-time and full-time earners has widened over the period of analysis. And although the shares of the part-time distribution held by low, middle, and upper earnings remained the same, male earners shifted downwards along the distribution.

This downshift, coupled with an 11 percent increase between 1968 and 1986 in part-time workers who would rather be working full-time, indicates that post-industrialism is creating a growing disparity between part-time and full-time earners.²⁶ This disparity, combined with the sectoral analysis, lends support to the earlier discussion of the implications of a fifth Kondratiev long wave.

Applying the consumer-basket approach to defining the segments of the earnings distribution rendered surprising results. Around 70 percent of all earners in 1967 and 1986, as well as 55 percent of full-time workers in 1967 and 50 percent in 1986, were in the lower segment of their earnings distributions. Recall that this definition was based on a lower-income household budget defined by the Bureau of Labor Statistics in 1967. The results could suggest that the traditional notion of a

broad middle class has been in error, or that the BLS household budget series was set too high originally. (However, low-budget households were not homeowners and used free recreation.) They could also suggest that the necessity of a second earner for a household's ability to consume a middle standard of living was greater in 1967 than has been generally understood.

Being a homeowner is perhaps the strongest symbol of being a member of the middle class. While the general upward shift of the earnings distribution would seem to enable us to answer affirmatively to the question, "Are we as well off as we used to be?", if we look at changes in the ability of full-time workers to purchase a home, a "yes" answer does not come so readily.

Recall that the BLS consumption package, which has been taken to represent the middle-class standard of living for this analysis, included homeownership, and, further, that the earnings of one full-time worker purchased the home. Under the consumer-basket definition, the median point of the earnings segment was \$8,304 in 1967. Inflating this to 1986 dollars, we get \$27,270. A rule of thumb by which to determine the price of a house one can afford is two-and-a-half times one's annual earnings. In 1967, this meant a house priced at just under \$21,000 could be purchased with the middle-earnings figure, while in 1986 the house would be priced at just over \$68,000. In 1968, the median sales price of existing single-family houses sold was \$20,100 (a comparable 1967 figure was unavailable).²⁷ Thus, it was clearly affordable with the middle-earnings figure. In 1986, the median sales price of existing single-family homes was \$80,300, and the median sales price of new one-family houses sold was \$92,000.²⁸ These median prices are significantly above the affordable figure for 1986. Homeownership has clearly become less attainable. For those who can afford to buy a home, the burden of doing so has increased substantially. The after-tax cash cost of homeownership (cash burden) consumed 22.2 percent of first-time buyers' income in 1967, and 33.9 percent in 1986.²⁹ The first-time buyers' income referred to here is median family income of married couple renters aged 25 to 29. We would expect the cash burden for individual full-time workers to be much higher and, in many cases, simply unbearable. As a result, more and more households require two earners to be able to buy a home.

Even though the earnings distribution shifted upwards between 1967 and 1986, and 6 percent more full-time workers became upper earners while another 65 percent maintained their position in the middle-earner group, the possibility of purchasing a home with the earnings of one full-time worker has significantly declined.

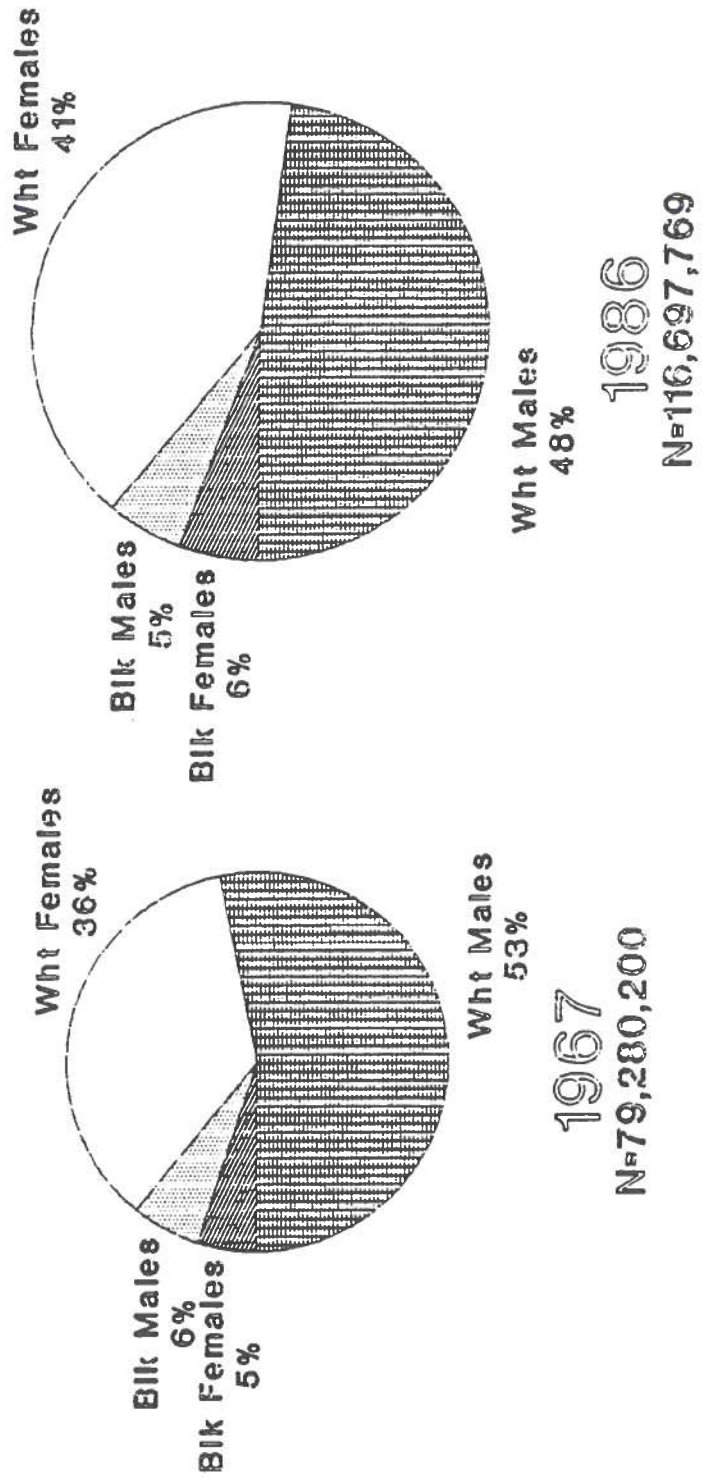
Thus, even though there are lots of new jobs, and good jobs at that, the declining opportunities for homeownership -- the single most important characteristic of middle-class status -- suggest that we are really not as well off as we used to be.

NOTES

- ¹ See Nancey Leigh-Preston, "The Debate Over the Disappearing Middle," *Berkeley Planning Journal*, Vol. 3, No. 1, 1985.
- ² *Newsweek*, 19 September 1988, pp. 22-24.
- ³ Bob Kuttner, "The Declining Middle," *The Atlantic Monthly*, July 1983, pp. 60-72.
- ⁴ See Fabian Linden, "Myth of the Disappearing Middle Class," *Wall Street Journal*, January 23, 1984; Lester Thurow, "The Disappearance of the Middle Class," *The New York Times*, 5 February 1984; Robert J. Samuelson, "Middle-Class Media Myth," *National Journal*, December 31, 1984; Barbara Ehrenreich, "Is the Middle Class Doomed?", *The New York Times Magazine*, 7 September 1986, pp.44-64; and Neal H. Rosenthal, "The Shrinking Middle Class: Myth or Reality?", *Monthly Labor Review*, March 1985.
- ⁵ Frank Levy and Richard C. Michel, "An Economic Bust for the Baby Boom," *Challenge*, March-April 1986, pp. 33-39.
- ⁶ *Three Standards of Living, For an Urban Family of Four Persons*, Spring 1967, Bulletin No. 1570-5, Bureau of Labor Statistics.
- ⁷ See Bennett Harrison and Barry Bluestone, *The Great U-Turn: Corporate Restructuring, Laissez-Faire, and the Challenge to America's High-Wage Society*, New York: Basic Books, 1988.
- ⁸ Ann Draper, "One Member Dissents," in Watts, Harold W., "Special panel suggests changes in BLS Family Budget Program," reprint from December 1980 *Monthly Labor Review*.
- ⁹ The two comparison years for this analysis represent cyclically (but not perfectly) similar years in the business cycle. 1967 was the seventh year of recovery, while 1986 was the fourth year of recovery. The distribution of earners is based on individual annual pre-tax wage and salary income. Individuals reporting negative wages and salaries have been excluded from the universe.
- ¹⁰ The budget that the consumer definition is based on is a weighted average of metropolitan and nonmetropolitan budgets. The lower budget differs from the middle and upper ones in that the family lives in rental housing, uses free recreation activities, and performs more services for itself. Op. cit. footnote 6.
- ¹¹ However, all self-employed are excluded from the analysis in 1967, and all non-incorporated self-employed are excluded from the 1987 universe, because separate data on their wages and salaries could not be obtained. The addition of their numbers could change the proportional relationship between part- and full-time earners.
- ¹² Only the standard definition of the middle will be used in discussing the changing earnings distribution for part-time earners. The consumer-basket definition of the middle is based on the purchasing power of a full-time earner, and its application to the part-time earners' distribution would be inappropriate.
- ¹³ Employee Benefit Research Institute, *EBRI issue brief*, May 1988, No. 78.

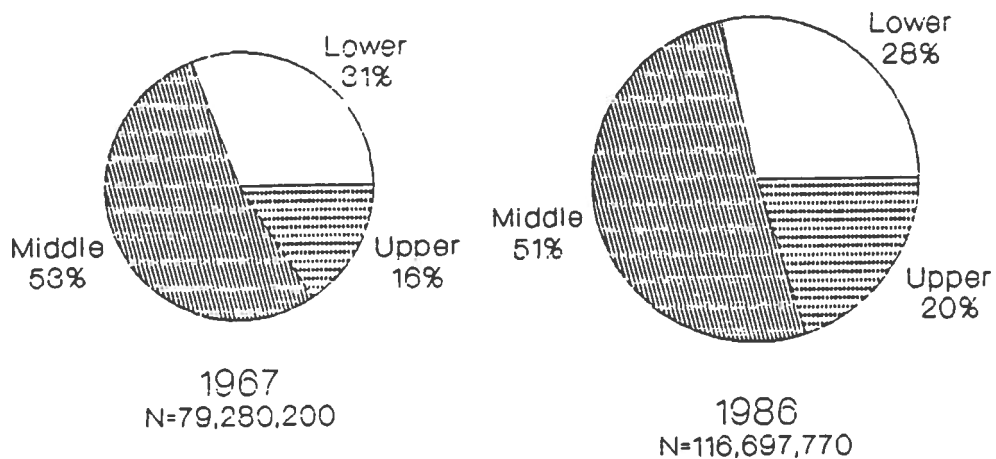
- ¹⁴ Ibid.
- ¹⁵ Employee Benefit Research Institute, *Employee Benefit Notes*, January 1988, Vol. 9, No. 1.
- ¹⁶ Total compensation referred to here is wages and salaries plus pension and health benefits. Legally required benefits (Social Security, unemployment insurance, and workers' compensation) are excluded from this estimate, as are public retirement plans and group life insurance.
- ¹⁷ The baby boom cohort is comprised of those individuals who were born between 1946 and 1964.
- ¹⁸ Williamson, Jeffrey G., and Peter H. Lindert, *American Inequality*, New York: Academic Press, 1980.
- ¹⁹ Post-industrial society has widely been labeled synonymous with service societies and economies, but there are convincing objections to the use of this label. For example, see Stephen Cohen and John Zysman, *Manufacturing Matters* (Basic Books, 1987), and Richard A. Walker, "Is There A Service Economy?", in *Science and Society* (Vol. XLIX, No. 1, Spring 1985).
- ²⁰ Bluestone, Barry, and Bennett Harrison, *The Deindustrialization of America*, New York: Basic Books, 1982. See also Magaziner, Ira C., and Robert B. Reich, *Minding America's Business*, New York: Vintage Books, 1982.
- ²¹ Lawrence, Robert Z., *Can America Compete?*, Washington, D.C.: The Brookings Institution, 1984.
- ²² Perez, Carlotta, "Structural Change and Assimilation of New Technologies in the Economic and Social Systems," *Futures*, October 1983, pp. 357-37 [??].
- ²³ U.S. Congress, Office of Technology Assessment, *Technology and the American Economic Transition: Choices for the Future*, OTA-TET-283, Washington, DC: U.S. Government Printing Office, May 1988, p. 148.
- ²⁴ See J. Singlemann, "The Sectoral Transformation of the Labor Force in Seven Industrialized Countries, 1920-1970," *American Journal of Sociology*, Vol. 83, No. 3, 1978, pp. 1224-1234.
- ²⁵ The most recent analyses presenting such results is *The State of Working America*, by Lawrence Mishel and Jacqueline Simon, Washington, DC: Economic Policy Institute, 1988.
- ²⁶ Calculated from Table B-18, "Employed civilians by full- and part-time status, race, and sex, 1968-1987," in U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived From the Current Population Survey, 1948-1987*, Bulletin 2307, August 1988.
- ²⁷ Alvin L. Arnold and Jack Kusnet, *The Arnold Encyclopedia of Real Estate*, Boston: Warren, Gorham & Lamont, 1985. Table 21.
- ²⁸ U.S. Bureau of the Census, *Statistical Abstract of the United States: 1988* (108th edition.) Washington, DC, 1987, Tables 1213 and 1215.
- ²⁹ *The State of the Nation's Housing: 1988*, Joint Center for Housing Studies of Harvard, Cambridge, Mass., Appendix Table 1.

FIGURE 1
Distribution of All Earners
By Sex and Race, 1967 and 1986

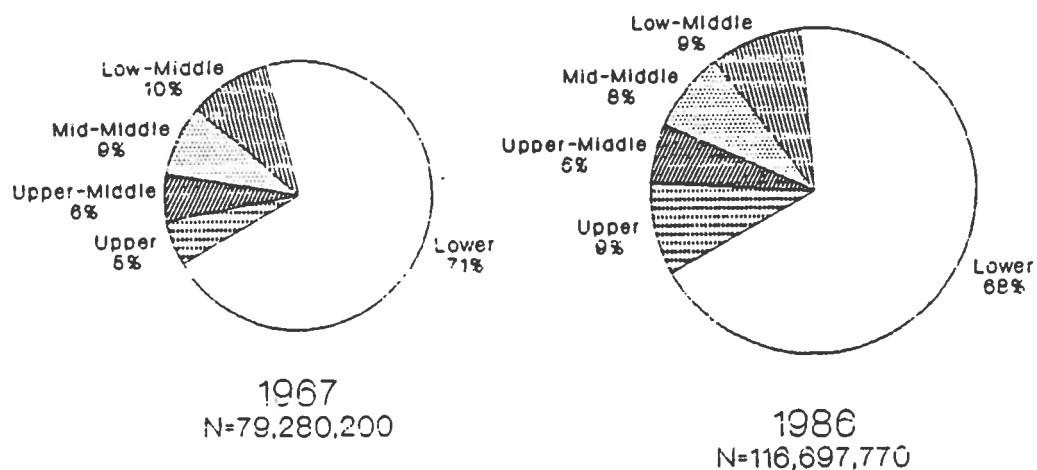


Calculated from CPS microdata files.

Distribution of All Earners, 1967--1986 Standard Definition of the Middle (50% to 200% of all earner median)



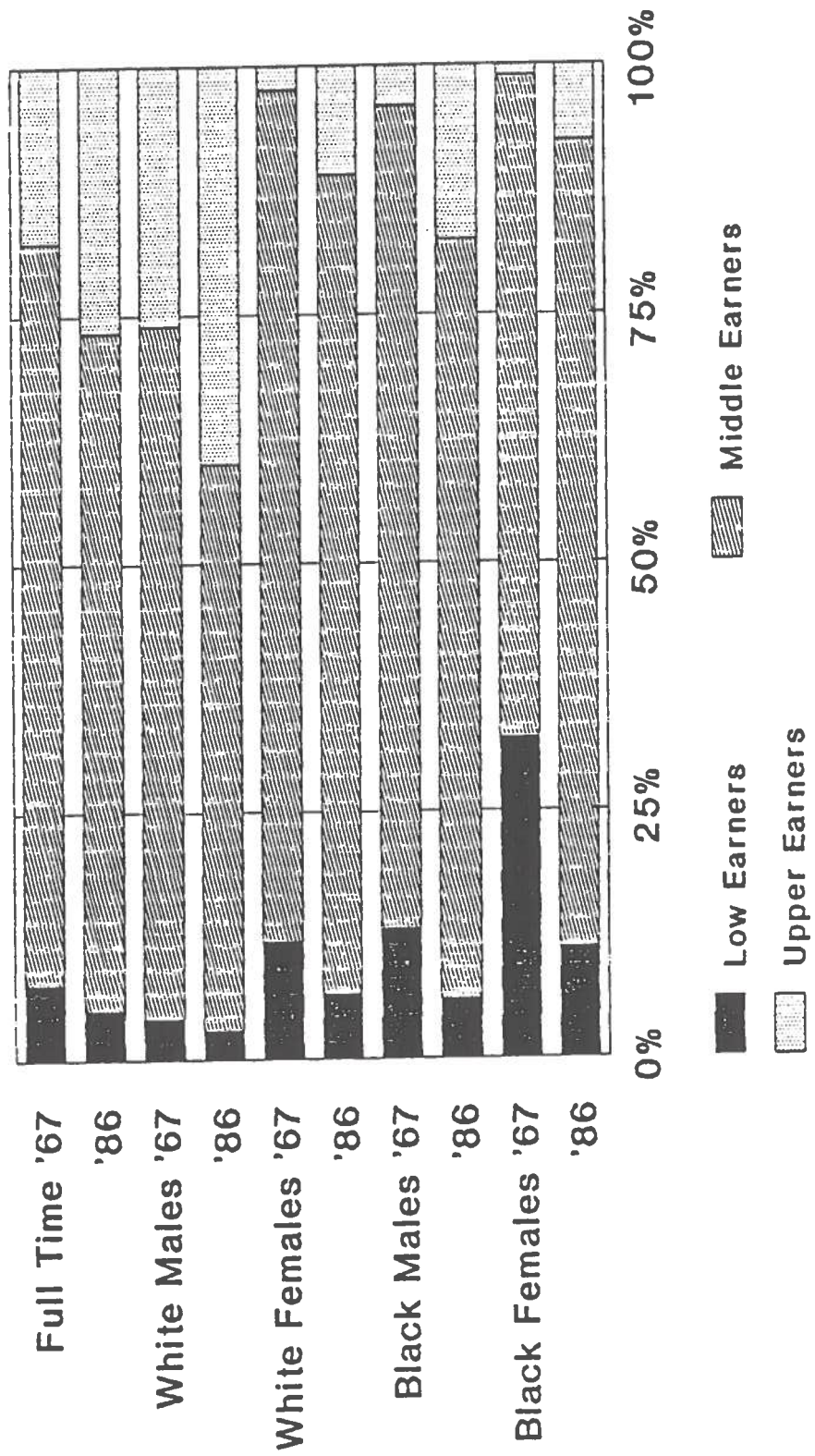
Consumer Basket Definition of the Middle



Note: Calculated from CPS microdata.

FIGURE 3

Distribution of Full-Time Earners by Standard Definition of the Middle 1967 and 1986

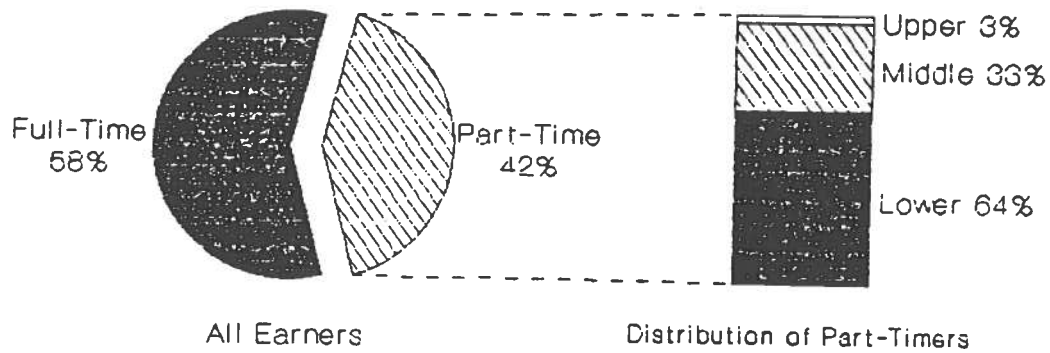


Calculated from CPS microdata.

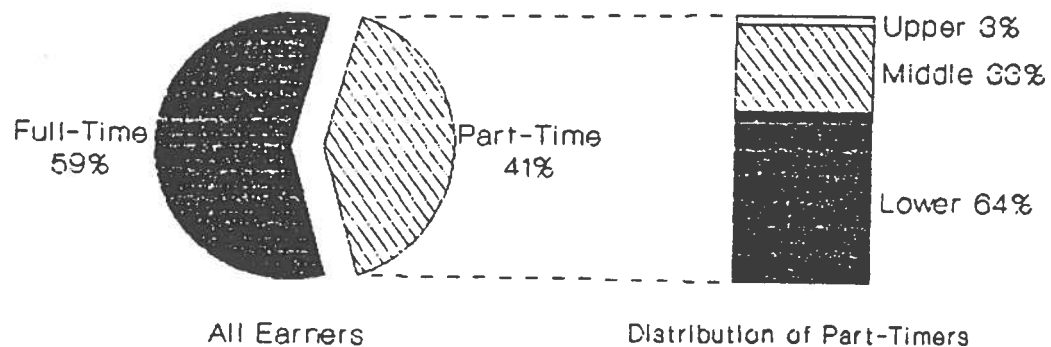
FIGURE 4

24

**Part-Time and Full-Time Earners
Percent in 1967**



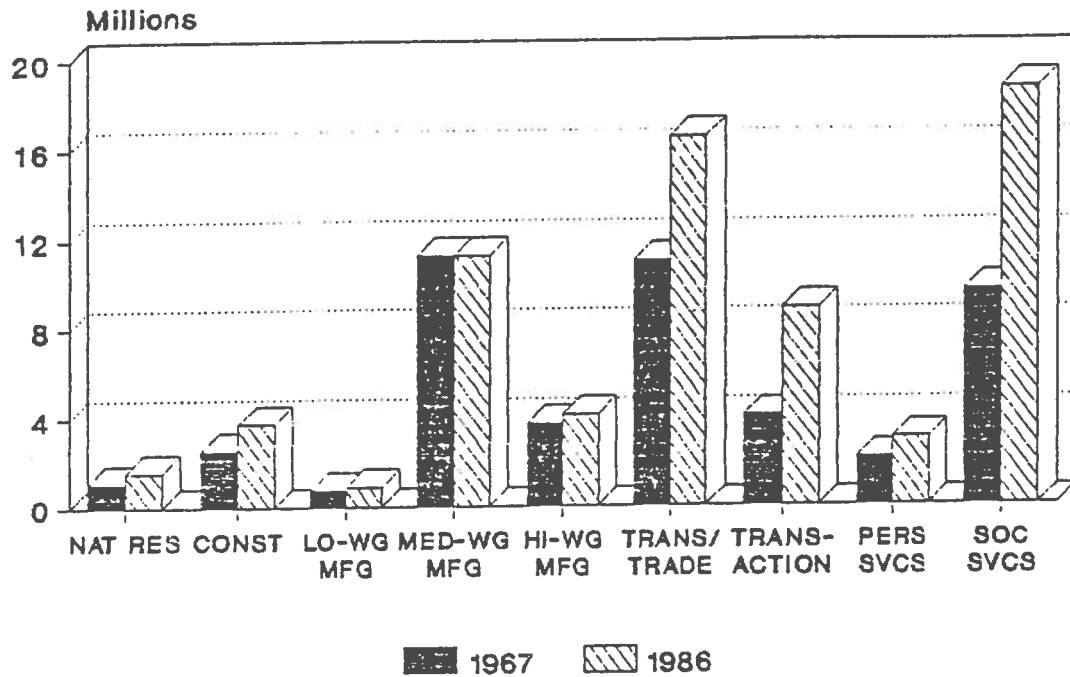
**Part-Time and Full-Time Earners
Percent in 1986**



Source: Author's calculations of CPS data. (10/88)

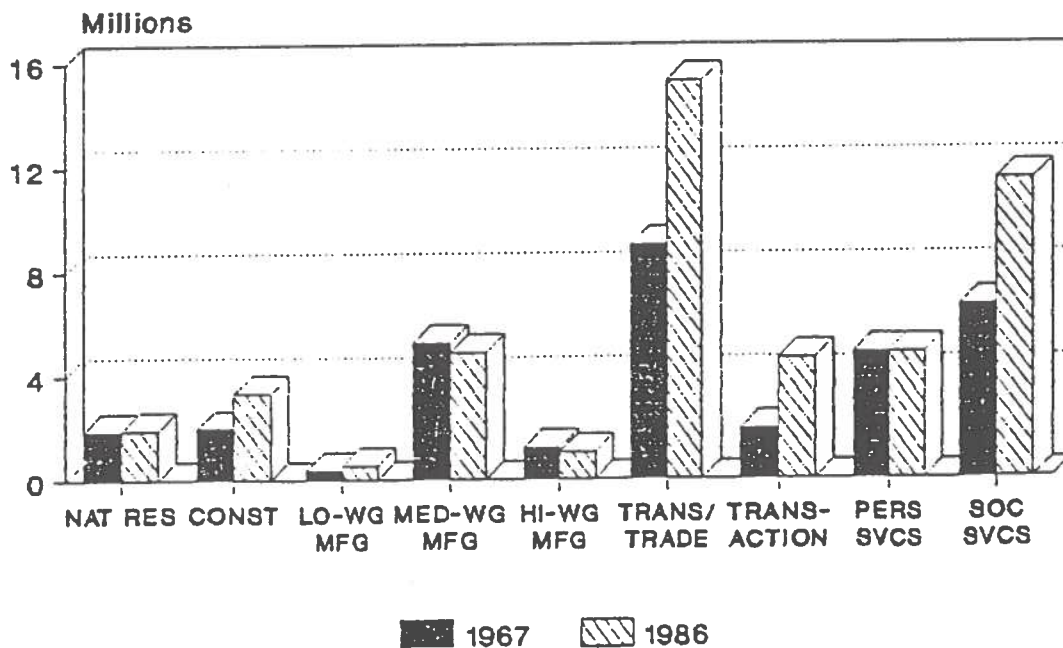
FIGURE 5

FULL-TIME EARNERS BY PRODUCTION SECTOR 1967 and 1986



N=68,690,029

PART-TIME EARNERS BY PRODUCTION SECTOR 1967 and 1986

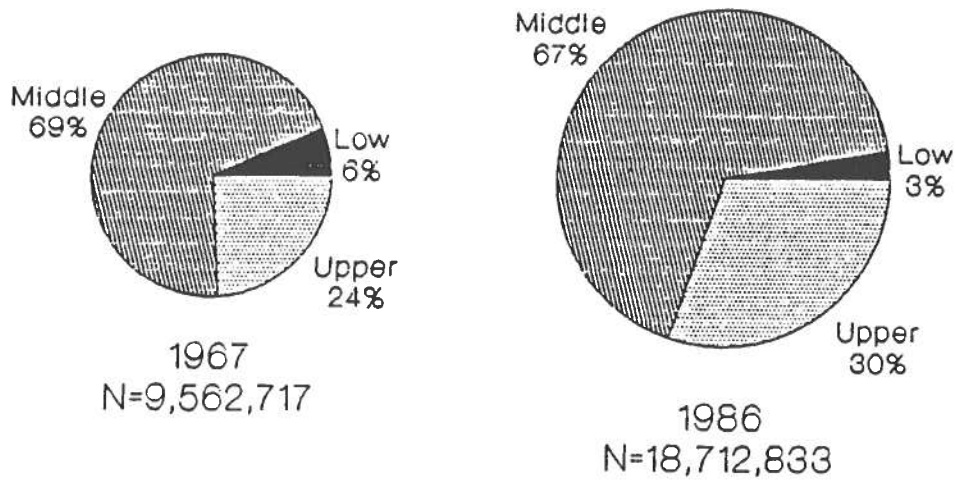


N=48,007,740

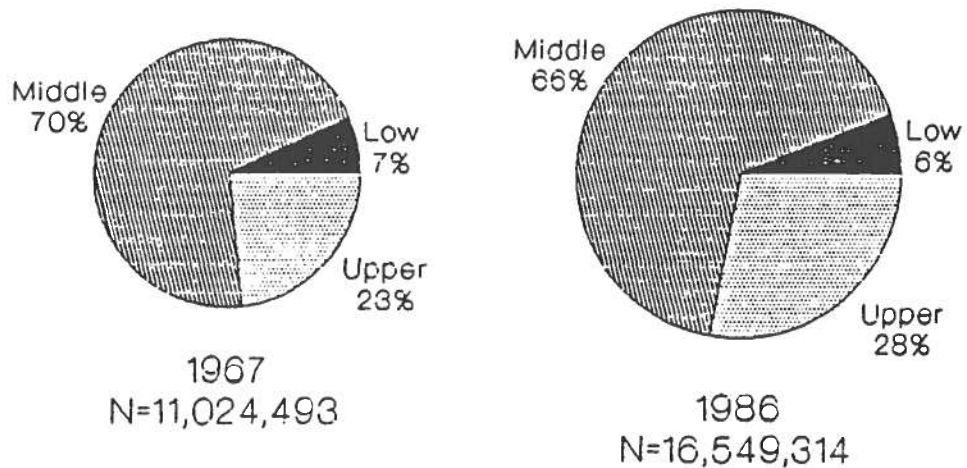
Source: Calculated from CPS microdata.

FIGURE 6

SOCIAL SERVICES, 1967 and 1986
Distribution of Full-Time Earners
Standard Definition of Middle

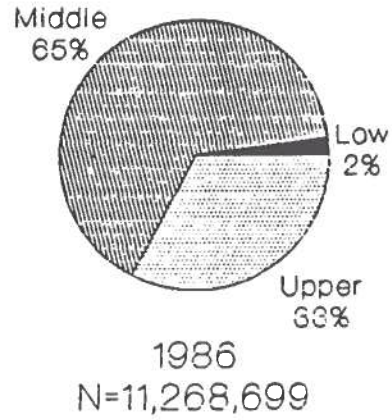
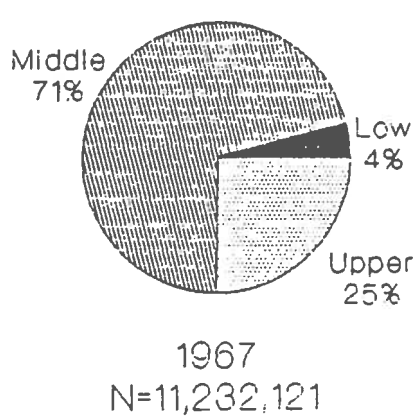


TRANSPORTATION AND TRADE, 1967 and 1986
Distribution of Full-Time Earners
Standard Definition of Middle

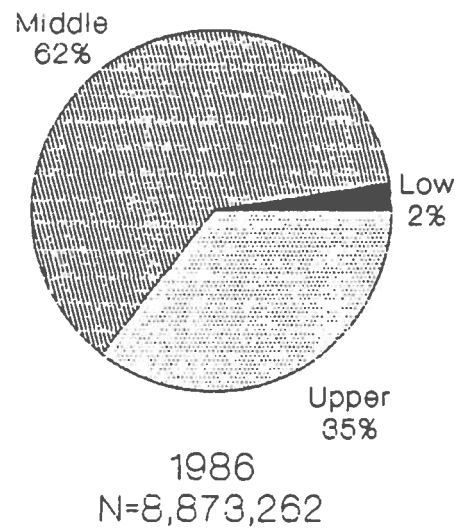
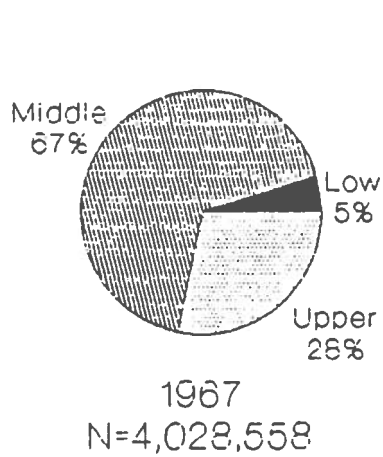


Source: CPS microdata files

MEDIUM-WAGE MANUFACTURING, 1967 AND 1986 **Distribution of Full-Time Earners** **Standard Definition of Middle**



TRANSACTIONAL ACTIVITIES, 1967 and 1986 **Distribution of Full-Time Earners** **Standard Definition of Middle**



Source: CPS microdata files

TABLE 1: Five-part Definition of the Earnings Distribution, 1967 and 1986
Consumer Basket Definition of the Middle

Category		1967	1986
Low-earners	less than	\$6,380	\$20,952
Low-middle earners	equal to or greater than	\$6,380	\$20,952
	but less than	\$7,663	\$25,165
Mid-middle earners	equal to or greater than	\$7,663	\$25,165
	but less than	\$9,393	\$30,847
Upper-middle earners	equal to or greater than	\$9,393	\$30,847
	but less than	\$11,571	\$37,999
Upper-earners	equal to or greater than	\$11,571	\$37,999

NOTE: 1967 earnings figures are based on 97% of the Bureau of Labor Statistics' definitions for lower, moderate, and higher standard of living budgets in 1967. 1986 earnings figures are obtained by inflating the corresponding 1967 earnings figures with the CPI-U.

SOURCES: Three Standards of Living, For an Urban Family of Four Persons, Spring 1967, Bulletin No. 1570-5, Bureau of Labor Statistics. Experimental Measure, CPI-U X1
REBASED: All Items, Rental Equivalence Approach using CPI Rent, U.S. City Average, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., mimeo, 5/1987.
Consumer Price Index, Department of Labor, Bureau of Labor Statistics.

TABLE 2

Three-part Definition of the Earnings Distribution
 Standard Definition of the Middle (50% to 200% of the all earner median)

	1967 =====	1986 =====
LOW EARNERS less than	\$2,046	\$6,864
MIDDLE EARNERS	\$2,046 to \$8,184	\$6,864 to \$27,454
UPPER EARNERS greater than	\$8,184	\$27,454

NOTE: All earner median is a smoothed median calculated from CPS microdata.

TABLE 3

FULL-TIME WORKERS' DISTRIBUTION OF EARNINGS, AND NET ADDITIONS TO EARNINGS GROUPS, 1967--1986
 1967-BASED CONSUMER BASKET DEFINITION OF THE MIDDLE WITH LOW-MIDDLE, MID-MIDDLE, AND
 UPPER-MIDDLE AGGREGATED TOGETHER

EARNER GROUP	Consumer Basket Definition				
		Lower	Middle	Upper	Total
=====					
All Full Time Earners	1967	25,157,075	16,972,740	4,009,968	46,139,783
	%	54.5%	36.8%	8.7%	100.0%
	1986	34,637,608	24,098,623	9,953,797	68,690,028
	%	50.4%	35.1%	14.5%	100.0%
	Change	9,480,533	7,125,883	5,943,829	22,550,245
	%	42.0%	31.6%	26.4%	100.0%
::					
--White Males	1967	10,690,601	14,424,467	3,827,344	28,942,412
	%	36.9%	49.8%	13.2%	100.0%
	1986	13,062,724	15,215,551	8,337,138	36,615,413
	%	35.7%	41.6%	22.8%	100.0%
	Change	2,372,123	791,084	4,509,794	7,673,001
	%	30.9%	10.3%	58.8%	100.0%
::					
--White Females	1967	10,552,350	1,673,495	110,304	12,336,149
	%	85.5%	13.6%	0.9%	100.0%
	1986	15,663,329	6,210,193	968,771	22,842,293
	%	68.6%	27.2%	4.2%	100.0%
	Change	5,110,979	4,536,698	858,467	10,506,144
	%	48.6%	43.2%	8.2%	100.0%
::					
--Black Males	1967	2,150,436	605,786	41,300	2,797,522
	%	76.9%	21.7%	1.5%	100.0%
	1986	2,238,677	1,198,626	265,891	3,703,194
	%	60.5%	32.4%	7.2%	100.0%
	Change	88,241	592,840	224,591	905,672
	%	9.7%	65.5%	24.8%	100.0%
::					
--Black Females	1967	1,546,125	115,035	4,302	1,665,462
	%	92.8%	6.9%	0.3%	100.0%
	1986	2,618,139	729,575	82,146	3,429,860
	%	76.3%	21.3%	2.4%	100.0%
	Change	1,072,014	614,540	77,844	1,764,398
	%	60.8%	34.8%	4.4%	100.0%
::					

Source: Calculated from CPS microdata.

Note: the sum of the black and white groups will not equal the total because the third race "other" is not being reported. It represented around 1% of the sample in 1967 and 3% in 1986.

TABLE 4

MEDIAN EARNINGS AND RATIO OF FULL AND PART-TIME EARNERS' MEDIAN
TO ALL EARNER MEDIAN, 1967 AND 1986

EARNINGS GROUP	SMOOTHED MEDIAN		ALL EARNER RATIO	
	1967	1986	1967	1986
ALL EARNERS	\$4,092	\$13,727	1.00	1.00
All Full-Time Earners	\$5,938	\$20,527	1.45	1.50
White males	\$7,194	\$25,720	1.76	1.87
Black males	\$4,486	\$18,122	1.10	1.32
White females	\$4,121	\$16,375	1.01	1.19
Black females	\$2,985	\$14,369	0.73	1.04
All Part-Time Earners	\$1,296	\$4,512	0.32	0.33
White males	\$1,907	\$5,490	0.47	0.40
Black males	\$1,376	\$4,204	0.34	0.31
White females	\$1,095	\$4,042	0.27	0.29
Black females	\$867	\$3,489	0.21	0.25

Source: Calculated from CPS microdata.

Note: Reported medians are "smoothed" medians.

TABLE 5

PENSION AND HEALTH BENEFITS OF EARNERS IN 1986 BY DISTRIBUTION OF EARNINGS
(Based on standard definition of the middle range Of 50% to 200% of median.)

FULL-TIME EARNERS

EARNINGS GROUP	% of all Full-time Earners	% of Group included in Employer Pension Plan	% of Group included in Employer Group Health Plan	% of Group for Which Employer paid for ALL Group Health	% of Group for Which Employer paid for PART Group Health
Lower	3.7%	16.8%	35.7%	13.5%	18.7%
Middle	64.6%	53.0%	77.0%	30.5%	43.1%
Upper	31.7%	76.2%	91.7%	39.9%	49.1%

N=68,690,029

PART-TIME EARNERS

EARNINGS GROUP	% of all Part-time Earners	% of Group included in Employer Pension Plan	% of Group Included in Employer Group Health Plan	% of Group for Which Employer paid for ALL Group Health	% of Group for Which Employer paid for PART Group Health
Lower	63.9%	7.3%	14.8%	5.6%	7.9%
Middle	32.7%	36.7%	58.7%	24.2%	31.0%
Upper	3.4%	67.9%	82.2%	40.4%	38.6%

N=48,007,740

SOURCE: Calculated from 1987 CPS microdata.

TABLE 6

FULL-TIME EARNERS' SHARES OF EMPLOYMENT
BY PRODUCTION SECTOR, 1967 AND 1986

Production Sector	1967 %	1986 %
=====	=====	=====
Natural Resources	2.35%	2.27%
Construction	5.50%	5.44%
Low Wage Manufacturing	1.58%	1.30%
Medium Wage Manufacturing	24.34%	16.41%
High Wage Manufacturing	8.09%	5.95%
Transportation & Trade	23.89%	24.09%
Transactional Activities	8.73%	12.92%
Personal Services	4.60%	4.37%
Social Services	20.92%	27.24%
=====	=====	=====
TOTAL	46,139,784	68,690,029
number	100.00%	100.00%

Source: Calculated from CPS microdata.

APPENDIX A

CHART 1

Ninety-Seven Percent of Lower, Moderate and Higher
Standards of Living as Defined by BLS for 1967:

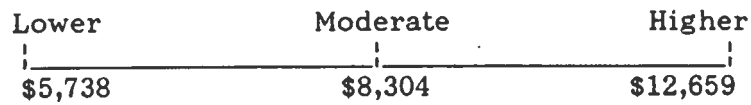


CHART 2

Midpoints Between the Moderate, the Lower and Upper Budgets
Which Become the Midpoints of the Low-Middle and Upper-Middle Ranges:

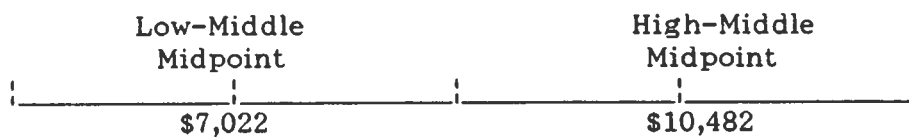


CHART 3

The Middle Earnings Ranges Based on 97% of the BLS-Defined
Lower, Moderate and Higher Standard of Living Budgets for 1967:

lower	low middle	mid middle	upper middle	upper
\$0	\$6,380	\$7,663	\$9,393	\$11,571

APPENDIX B-1

FULL-TIME WORKERS' DISTRIBUTION OF EARNINGS, AND NET ADDITIONS TO EARNINGS GROUPS,
1967--1986, STANDARD DEFINITION OF MIDDLE--50% TO 200% OF ALL EARNERS' MEDIAN

EARNER GROUP		EARNINGS GROUP			
		Standard Definition		Upper	Total
		Low	Middle		
=====		=====	=====	=====	=====
All Earners	1967	24,396,215	42,347,407	12,536,578	79,280,200
	%	30.8%	53.4%	15.8%	100.0%
	1986	33,247,720	60,041,750	23,400,300	116,697,770
	%	28.5%	51.5%	20.1%	100.0%
	Change	8,851,505	17,694,343	10,871,722	37,417,570
	%	23.7%	47.3%	29.1%	100.0%

All Full Time Earners	1967	3,050,186	31,497,833	11,591,765	46,139,784
	%	6.6%	68.3%	25.1%	100.0%
	1986	2,554,795	44,344,254	21,790,980	68,690,029
	%	3.7%	64.6%	31.7%	100.0%
	Change	(495,391)	12,846,421	10,199,215	22,550,245
	%	-2.2%	57.0%	45.2%	100.0%

--Males	1967	1,172,231	19,857,410	10,996,662	32,026,303
	%	3.7%	62.0%	34.3%	100.0%
	1986	1,063,939	22,334,815	18,062,231	41,460,985
	%	2.6%	53.9%	43.6%	100.0%
	Change	(108,292)	2,477,405	7,065,569	9,434,682
	%	-1.1%	26.3%	74.9%	100.0%

--Females	1967	1,877,955	11,640,423	595,103	14,113,481
	%	13.3%	82.5%	4.2%	100.0%
	1986	1,490,856	22,009,439	3,728,749	27,229,044
	%	5.5%	80.8%	13.7%	100.0%
	Change	(387,099)	10,369,016	3,133,646	13,115,563
	%	-3.0%	79.1%	23.9%	100.0%

--Blacks	1967	828,331	3,381,653	253,000	4,462,984
	%	18.6%	75.8%	5.7%	100.0%
	1986	423,949	5,540,176	1,168,929	7,133,054
	%	5.9%	77.7%	16.4%	100.0%
	Change	(404,382)	2,158,523	915,929	2,670,070
	%	-15.1%	80.8%	34.3%	100.0%

--Whites	1967	2,202,137	27,849,348	11,227,076	41,278,561
	%	5.3%	67.5%	27.2%	100.0%
	1986	2,039,101	37,474,011	19,944,594	59,457,706
	%	3.4%	63.0%	33.5%	100.0%
	Change	(163,036)	9,624,663	8,717,518	18,179,145
	%	-0.9%	52.9%	48.0%	100.0%

--White Males	1967	839,386	17,422,262	10,680,764	28,942,412
	%	2.9%	60.2%	36.9%	100.0%
	1986	865,014	19,007,443	16,742,955	36,615,412
	%	2.4%	51.9%	45.7%	100.0%
	Change	25,628	1,585,181	6,062,191	7,673,000
	%	0.3%	20.7%	79.0%	100.0%

--White Females	1967	1,362,751	10,427,086	546,312	12,336,149
	%	11.0%	84.5%	4.4%	100.0%
	1986	1,174,086	18,466,568	3,201,639	22,842,293
	%	5.1%	80.8%	14.0%	100.0%
	Change	(188,665)	8,039,482	2,655,327	10,506,144
	%	-1.8%	76.5%	25.3%	100.0%

--Black Males	1967	325,724	2,258,361	213,439	2,797,524
	%	11.6%	80.7%	7.6%	100.0%
	1986	171,135	2,703,119	828,939	3,703,193
	%	4.6%	73.0%	22.4%	100.0%
	Change	(154,589)	444,758	615,500	905,669
	%	-17.1%	49.1%	68.0%	100.0%

--Black Females	1967	502,607	1,123,293	39,561	1,665,461
	%	30.2%	67.4%	2.4%	100.0%
	1986	252,814	2,837,056	339,990	3,429,860
	%	7.4%	82.7%	9.9%	100.0%
	Change	(249,793)	1,713,763	300,429	1,764,399
	%	-14.2%	97.1%	17.0%	100.0%

Note: the sum of the black and white groups will not equal the total because the third race "other" is not being reported. It represents around 1% of the sample.

APPENDIX B-2

.-TIME WORKERS' DISTRIBUTION OF EARNINGS, AND NET ADDITIONS TO EARNINGS GROUPS, 1967 TO 1986
1967-BASED CONSUMER BASKET DEFINITION OF THE MIDDLE

EARNER GROUP		Consumer Lower	Basket Low Mid'l	Based Mid Mid'l	Definition Upper Mid'l	Upper	Total
Earnings							
Earnings	1967	56,017,519	7,719,078	6,789,087	4,502,732	4,251,784	79,280,200
	%	70.7%	9.7%	8.6%	5.7%	5.4%	100.0%
	1986	79,418,112	10,425,223	9,207,300	7,079,469	10,567,666	116,697,770
	%	68.1%	8.9%	7.9%	6.1%	9.1%	100.0%
	Change	23,400,593	2,706,145	2,418,213	2,576,737	6,315,882	37,417,570
	%	62.5%	7.2%	6.5%	6.9%	16.9%	100.0%
Full Time Earners	1967	25,157,075	6,733,295	6,095,316	4,144,129	4,009,968	46,139,783
	%	54.5%	14.6%	13.2%	9.0%	8.7%	100.0%
	1986	34,637,608	9,164,117	8,373,996	6,560,510	9,953,797	68,690,028
	%	50.4%	13.3%	12.2%	9.6%	14.5%	100.0%
	Change	9,480,533	2,430,822	2,278,680	2,416,381	5,943,829	22,550,245
	%	42.0%	10.8%	10.1%	10.7%	26.4%	100.0%
Sales	1967	12,962,560	5,664,925	5,573,477	3,929,979	3,895,362	32,026,303
	%	40.5%	17.7%	17.4%	12.3%	12.2%	100.0%
	1986	15,763,214	5,559,146	5,973,006	5,320,510	8,845,100	41,460,984
	%	38.0%	13.4%	14.4%	12.8%	21.3%	100.0%
	Change	2,800,654	(105,779)	399,529	1,390,539	4,949,738	9,434,681
	%	29.7%	-1.1%	4.2%	14.7%	52.5%	100.0%
Females	1967	12,194,515	1,068,370	521,840	214,150	114,606	14,113,481
	%	86.4%	7.6%	3.7%	1.5%	0.8%	100.0%
	1986	18,874,395	3,604,971	2,400,990	1,239,992	1,108,697	27,229,045
	%	69.3%	13.2%	8.8%	4.6%	4.1%	100.0%
	Change	6,679,880	2,536,601	1,879,150	1,025,842	994,091	13,115,564
	%	50.9%	19.3%	14.3%	7.8%	7.6%	100.0%
Blacks	1967	3,696,560	395,478	234,591	90,752	45,602	4,462,983
	%	82.8%	8.9%	5.3%	2.0%	1.0%	100.0%
	1986	4,856,816	865,166	650,595	412,440	348,037	7,133,054
	%	68.1%	12.1%	9.1%	5.8%	4.9%	100.0%
	Change	1,160,256	469,688	416,004	321,688	302,435	2,670,071
	%	43.5%	17.6%	15.6%	12.0%	11.3%	100.0%
Whites	1967	21,242,951	6,291,771	5,794,506	4,011,686	3,937,647	41,278,561
	%	51.5%	15.2%	14.0%	9.7%	9.5%	100.0%
	1986	28,726,052	8,034,123	7,430,033	5,961,588	9,305,909	59,457,705
	%	48.3%	13.5%	12.5%	10.0%	15.7%	100.0%
	Change	7,483,101	1,742,352	1,635,527	1,949,902	5,368,262	18,179,144
	%	41.2%	9.6%	9.0%	10.7%	29.5%	100.0%
White Males	1967	10,690,601	5,295,147	5,311,605	3,817,715	3,827,344	28,942,412
	%	36.9%	18.3%	18.4%	13.2%	13.2%	100.0%
	1986	13,062,724	4,919,250	5,397,026	4,899,275	8,337,138	36,615,413
	%	35.7%	13.4%	14.7%	13.4%	22.8%	100.0%
	Change	2,372,123	(375,897)	85,421	1,081,560	4,509,794	7,673,001
	%	30.9%	-4.9%	1.1%	14.1%	58.8%	100.0%
White Females	1967	10,552,350	996,623	482,901	193,971	110,304	12,336,149
	%	85.5%	8.1%	3.9%	1.6%	0.9%	100.0%
	1986	15,663,329	3,114,873	2,033,007	1,062,313	968,771	22,842,293
	%	68.6%	13.6%	8.9%	4.7%	4.2%	100.0%
	Change	5,110,979	2,118,250	1,550,106	868,342	858,467	10,506,144
	%	48.6%	20.2%	14.8%	8.3%	8.2%	100.0%
Black Males	1967	2,150,436	330,332	200,324	75,130	41,300	2,797,522
	%	76.9%	11.8%	7.2%	2.7%	1.5%	100.0%
	1986	2,238,677	501,076	410,914	286,636	265,891	3,703,194
	%	60.5%	13.5%	11.1%	7.7%	7.2%	100.0%
	Change	88,241	170,744	210,590	211,506	224,591	905,672
	%	9.7%	18.9%	23.3%	23.4%	24.8%	100.0%
Black Females	1967	1,546,125	65,146	34,267	15,622	4,302	1,665,462
	%	92.8%	3.9%	2.1%	0.9%	0.3%	100.0%
	1986	2,618,139	364,090	239,681	125,804	82,146	3,429,860
	%	76.3%	10.6%	7.0%	3.7%	2.4%	100.0%
	Change	1,072,014	298,944	205,414	110,182	77,844	1,764,398
	%	60.9%	16.9%	11.6%	6.2%	4.4%	100.0%

APPENDIX C

PART-TIME/YEAR WORKERS' DISTRIBUTION OF EARNINGS, AND NET ADDITIONS TO EARNINGS GROUPS,
1967-1986, STANDARD DEFINITION OF MIDDLE--50% TO 200% OF ALL EARNERS' MEDIAN

EARNER GROUP		EARNINGS GROUP Standard Definition			Total
		Low	Middle	Upper	
All Earners	1967	24,396,215	42,347,407	12,536,578	79,280,200
	%	30.8%	53.4%	15.8%	100.0%
	1986	33,247,720	60,041,750	23,408,300	116,697,770
	%	28.5%	51.5%	20.1%	100.0%
	Change	8,851,505	17,694,343	10,871,722	37,417,570
	%	23.7%	47.3%	29.1%	100.0%
All Part Time/Year Earners	1967	21,346,029	10,849,574	944,813	33,140,416
	%	64.4%	32.7%	2.9%	100.0%
	1986	30,692,925	15,697,496	1,617,320	48,007,741
	%	63.9%	32.7%	3.4%	100.0%
	Change	9,346,896	4,847,922	672,507	14,867,325
	%	62.9%	32.6%	4.5%	100.0%
--Males	1967	7,858,179	6,084,186	850,201	14,792,566
	%	53.1%	41.1%	5.7%	100.0%
	1986	11,742,454	7,627,644	1,244,327	20,614,425
	%	57.0%	37.0%	6.0%	100.0%
	Change	3,884,275	1,543,458	394,126	5,821,859
	%	66.7%	26.5%	6.8%	100.0%
--Females	1967	13,487,850	4,765,389	94,613	18,347,852
	%	73.5%	26.0%	0.5%	100.0%
	1986	18,950,471	8,069,852	372,993	27,393,316
	%	69.2%	29.5%	1.4%	100.0%
	Change	5,462,621	3,304,463	278,380	9,045,464
	%	60.4%	36.5%	3.1%	100.0%
--Blacks	1967	2,922,729	1,121,833	38,828	4,083,390
	%	71.6%	27.5%	1.0%	100.0%
	1986	3,712,385	1,598,000	113,476	5,423,861
	%	68.4%	29.5%	2.1%	100.0%
	Change	789,656	476,167	74,648	1,340,471
	%	58.9%	35.5%	5.6%	100.0%
--Whites	1967	18,206,931	9,603,503	901,573	28,712,007
	%	63.4%	33.4%	3.1%	100.0%
	1986	26,135,787	13,650,167	1,452,679	41,238,633
	%	63.4%	33.1%	3.5%	100.0%
	Change	7,928,856	4,046,664	551,106	12,526,626
	%	63.3%	32.3%	4.4%	100.0%
--White Males	1967	6,687,951	5,343,679	811,888	12,843,518
	%	52.1%	41.6%	6.3%	100.0%
	1986	9,836,270	6,598,421	1,153,737	17,588,428
	%	55.9%	37.5%	6.6%	100.0%
	Change	3,148,319	1,254,742	341,849	4,744,910
	%	66.4%	26.4%	7.2%	100.0%
--Black Males	1967	1,091,283	679,711	33,901	1,804,895
	%	60.5%	37.7%	1.9%	100.0%
	1986	1,555,843	777,856	58,388	2,392,087
	%	65.0%	32.5%	2.4%	100.0%
	Change	464,560	98,145	24,487	587,192
	%	79.1%	16.7%	4.2%	100.0%
--White Females	1967	11,518,980	4,259,824	89,685	15,868,489
	%	72.6%	26.8%	0.6%	100.0%
	1986	16,299,517	7,051,746	298,942	23,650,205
	%	68.9%	29.8%	1.3%	100.0%
	Change	4,780,537	2,791,922	209,257	7,781,716
	%	61.4%	35.9%	2.7%	100.0%
--Black Females	1967	1,831,446	442,122	4,928	2,278,496
	%	80.4%	19.4%	0.2%	100.0%
	1986	2,156,542	820,144	55,088	3,031,774
	%	71.1%	27.1%	1.8%	100.0%
	Change	325,096	378,022	50,160	753,278
	%	43.2%	50.2%	6.7%	100.0%

Note: the sum of the black and white groups will not equal the total because the third race "other" is not being reported. It represents around 1% of the sample in 1967 and 3% in 1986.

APPENDIX D

PENSION AND HEALTH BENEFITS OF EARNERS IN 1986 BY SEX AND RACE

FULL-TIME EARNERS

GROUP	Full-time number	Earners[1] percent	% of Group included in Pension Plan	% of Group included in Employer Group Health Plan	% of Group for Which Employer paid for ALL Group Health	% of Group for Which Employer paid for PART Group Health
White males	36615413	53.3%	60.9%	83.6%	35.0%	45.4%
Black males	3703193	5.4%	57.4%	77.9%	24.8%	48.4%
White females	22842294	33.3%	56.6%	75.8%	31.9%	40.8%
Black females	3429860	5.0%	59.5%	75.9%	24.6%	46.8%

=68,690,029

PART-TIME EARNERS

GROUP	Part-time number	Earners[1] percent	% of Group included in Pension Plan	% of Group included in Employer Group Health Plan	% of Group for Which Employer paid for ALL Group Health	% of Group for Which Employer paid for PART Group Health
White males	17588428	36.6%	20.1%	36.2%	16.3%	17.6%
Black males	2392087	5.0%	17.5%	32.8%	11.1%	18.8%
White females	23650205	49.3%	18.4%	27.8%	11.1%	14.8%
Black females	3031774	6.3%	19.0%	30.8%	8.6%	19.6%

=48,007,740

SOURCE: Calculated from 1987 CPS microdata.

NOTES: [1] Percentages will not add to 100% because the "other" race group (3.1% of total for full-time, and 2.8% of total for part-time) has been omitted.

THE 10 PRODUCTION SECTORS

Office of Technology Assessment Classification

Description

1. *Natural Resources* includes the production of raw materials and energy of all kinds, including the generation of electricity. These industries were singled out to measure the impact of different kinds of economic activity on depletable natural resources, many of which are imported, and at the same time to trace the impact of substitutes for strategic raw materials.
2. *Construction* is given its own category because of the unique nature and large size of construction activities, and in view of the critical role construction plays in renewing infrastructure and improving productivity throughout the economy. The highly cyclical nature of construction activities also sets this category aside from other business activities.
- 3-5. *Manufacturing* activities have been selected because of growing concern about the future role of these industries in the U.S. economy. Significant direct and indirect linkages exist between manufacturing and the other parts of the economy. Manufacturing has traditionally been the major source of U.S. productivity growth, increasing at twice the rate of the economy as a whole between 1960 and 1983. It is also likely that wage increases in other industries can be traced to productivity growth in manufacturing.
Activities within manufacturing have been subdivided into low, medium, and high wage sectors, based on the average level of annual compensation per full-time equivalent employee in 1984. This was done due to concern for the quality of jobs offered by growing and shrinking enterprises; more trade, for example, is attractive if the transactions result in the net substitution of high wage employment for low wage employment. The division by wage levels also provides groupings roughly commensurate with other areas of policy interest.
3. *Low Wage Manufacturing* is clustered in the traditional apparel, footwear, and furniture industries.
4. *Medium Wage Manufacturing* contains most enterprises recently tagged as "high technology," because these firms conduct significant amounts of research and employ relatively larger numbers of engineers and scientists. It includes industries such as electrical equipment, communications equipment, scientific instruments, and computers, and less technology-intensive industries such as food & kindred products.
5. *High Wage Manufacturing* is dominated by traditional "smokestack" industries, such as those that produce motor vehicles, iron and steel, construction machinery, and glass. However, the high wage category also includes such technologically sophisticated industries as chemical production and aircraft manufacturing.
6. *Transportation & Trade* are clustered because together they form much of the overhead associated with the physical movement of products. These activities are increasingly tied to manufacturing through sophisticated inventory control and dispatching networks. New technologies in transportation will be essential to system-wide improvements in efficiency—not so much from innovations in specific kinds of transportation or retailing equipment, but through advances in information flows that connect production with the marketplace more closely. While many of these technologies are difficult to trace, it appears that dramatic changes may occur in the near future.
7. *Transactional Activities* deliver financial and information services to businesses. In 1984, the sector generated more value-added than the whole of manufacturing. The activities are clustered because, taken together, they are the most rapidly growing sector in the U.S. economy in terms of output and employment, and are associated with activities in which productivity improvements due to new information technologies could be enormous.
8. *Personal Services* are selected because, with the exception of retailing, they contain most activities traditionally associated with the "service sector" of the economy: hotels, beauty parlors, and dry cleaning, for example. They also contain most activities associated with recreation and leisure—a sector that has grown rapidly in response to rising affluence among many consumers.
9. *Social Services* follow a unique logic because of the involvement of government. With the exception of government "overhead" functions—the sector includes the salaries of both the President of the United States and the authors of this document—most of the activities in this sector, such as public and private health care and education, are delivered directly to consumers. In effect, social services support a human infrastructure.
10. *National Defense* was separated from the "social services" of government because it is plainly affected by a unique set of factors.

Source: Box 4-B, Technology and the American Transition: Choices for the Future, Congress of the United States, Office of Technology Assessment, May 1988.

APPENDIX F1

DISTRIBUTION OF FULL-TIME EARNERS BY PRODUCTION SECTOR, 1967 and 1986
Standard Definition of the Middle (50% to 200% of all earner median)

PRODUCTION SECTOR		EARNINGS GROUP			TOTAL
		LOW	MIDDLE	UPPER	
=====		=====	=====	=====	=====
Natural Resources	1967	206,000	699,604	176,383	1,081,987
	%	19.04%	64.66%	16.30%	100.00%
	1986	137,181	955,759	466,242	1,559,182
	%	8.80%	61.30%	29.90%	100.00%
Construction	1967	136,444	1,564,320	838,461	2,539,225
	%	5.37%	61.61%	33.02%	100.00%
	1986	97,911	2,314,294	1,327,460	3,739,665
	%	2.62%	61.89%	35.50%	100.00%
Low Wage Mfg	1967	59,155	570,278	98,016	727,449
	%	8.13%	78.39%	13.47%	100.00%
	1986	37,278	695,741	159,184	892,203
	%	4.18%	77.98%	17.84%	100.00%
Medium Wage Mfg	1967	462,260	7,951,414	2,818,447	11,232,121
	%	4.12%	70.79%	25.09%	100.00%
	1986	237,735	7,353,556	3,677,408	11,268,699
	%	2.11%	65.26%	32.63%	100.00%
High Wage Mfg	1967	79,702	2,277,317	1,374,913	3,731,932
	%	2.14%	61.02%	36.84%	100.00%
	1986	37,543	1,703,392	2,348,934	4,089,869
	%	0.92%	41.65%	57.43%	100.00%
Transportation & Trade	1967	749,017	7,705,666	2,569,810	11,024,493
	%	6.79%	69.90%	23.31%	100.00%
	1986	975,883	10,967,600	4,605,831	16,549,314
	%	5.90%	66.27%	27.83%	100.00%
Transactional Activities	1967	190,248	2,698,627	1,139,683	4,028,558
	%	4.72%	66.99%	28.29%	100.00%
	1986	220,389	5,512,930	3,139,943	8,873,262
	%	2.48%	62.13%	35.39%	100.00%
Personal Services	1967	542,566	1,334,697	244,039	2,121,302
	%	25.58%	62.92%	11.50%	100.00%
	1986	309,819	2,262,543	432,641	3,005,003
	%	10.31%	75.29%	14.40%	100.00%
Social Services	1967	624,794	6,695,910	2,332,013	9,652,717
	%	6.47%	69.37%	24.16%	100.00%
	1986	501,057	12,578,438	5,633,338	18,712,833
	%	2.68%	67.22%	30.10%	100.00%

Source: Calculated from CPS microdata.

APPENDIX F2

DISTRIBUTION OF FULL-TIME EARNERS BY PRODUCTION SECTOR
1967 and 1986. Consumer Basket Definition of the Middle

PRODUCTION SECTOR		EARNINGS GROUP					TOTAL
		LOWER	LOW MID'L	MID MID'L	UPPER MID'	UPPER	
=====		=====	=====	=====	=====	=====	=====
Natural Resources	1967	738,455	106,433	124,013	62,742	50,343	1,081,986
	%	68.2%	9.8%	11.5%	5.8%	4.7%	100.00%
	1986	884,357	159,234	160,956	114,790	239,846	1,559,183
	%	56.7%	10.2%	10.3%	7.4%	15.4%	100.00%
Construction	1967	1,194,370	340,687	408,131	336,376	259,662	2,539,226
	%	47.0%	13.4%	16.1%	13.2%	10.2%	100.00%
	1986	1,785,651	504,675	452,800	431,249	565,289	3,739,664
	%	47.7%	13.5%	12.1%	11.5%	15.1%	100.00%
Low Wage Mfg	1967	509,789	82,672	76,817	36,981	21,191	727,450
	%	70.1%	11.4%	10.6%	5.1%	2.9%	100.00%
	1986	587,257	109,900	80,908	49,714	64,423	892,202
	%	65.8%	12.3%	9.1%	5.6%	7.2%	100.00%
Medium Wage Mfg	1967	6,002,753	1,746,195	1,554,154	1,005,895	923,124	11,232,121
	%	53.4%	15.5%	13.8%	9.0%	8.2%	100.00%
	1986	5,413,680	1,627,181	1,468,045	1,146,554	1,613,239	11,268,699
	%	48.0%	14.4%	13.0%	10.2%	14.3%	100.00%
High Wage Mfg	1967	1,350,584	709,671	705,413	508,307	457,957	3,731,932
	%	36.2%	19.0%	18.9%	13.6%	12.3%	100.00%
	1986	1,045,660	490,876	680,926	741,557	1,130,848	4,089,867
	%	25.6%	12.0%	16.6%	18.1%	27.6%	100.00%
Transportation & Trade	1967	6,031,480	1,744,962	1,498,039	938,013	812,000	11,024,494
	%	54.7%	15.8%	13.6%	8.5%	7.4%	100.00%
	1986	9,047,608	2,186,835	1,867,493	1,427,523	2,019,855	16,549,314
	%	54.7%	13.2%	11.3%	8.6%	12.2%	100.00%
Transactional Activities	1967	2,260,991	448,358	410,044	397,146	512,018	4,028,557
	%	56.1%	11.1%	10.2%	9.9%	12.7%	100.00%
	1986	4,300,840	1,075,841	927,268	846,757	1,722,555	8,873,261
	%	48.5%	12.1%	10.5%	9.5%	19.4%	100.00%
Personal Services	1967	1,640,583	175,529	124,597	79,209	101,384	2,121,302
	%	77.3%	8.3%	5.9%	3.7%	4.8%	100.00%
	1986	2,216,190	278,794	197,905	136,741	175,373	3,005,003
	%	73.8%	9.3%	6.6%	4.6%	5.8%	100.00%
Social Services	1967	5,428,071	1,378,788	1,194,108	779,460	872,288	9,652,715
	%	56.2%	14.3%	12.4%	8.1%	9.0%	100.00%
	1986	9,356,365	2,730,781	2,537,695	1,665,625	2,422,367	18,712,833
	%	50.0%	14.6%	13.6%	8.9%	12.9%	100.00%

Source: Calculated from CPS microdata.

TABLE 7

PERCENT CHANGE WITHIN FULL-TIME EARNERS' DISTRIBUTION BY PRODUCTION SECTOR
1967 to 1986, Standard Definition of the Middle (50% to 200% of all earner median)

PRODUCTION SECTOR		EARNINGS GROUP		
		LOW	MIDDLE	UPPER
=====		=====	=====	=====
Natural Resources	% change	-10.24%	-3.36%	13.60%
Construction	% change	-2.76%	0.28%	2.48%
Low Wage Manufacturing	% change	-3.95%	-0.41%	4.37%
Medium Wage Manufacturing	% change	-2.01%	-5.54%	7.54%
High Wage Manufacturing	% change	-1.22%	-19.37%	20.59%
Transportation & Trade	% change	-0.90%	-3.62%	4.52%
Transactional	% change	-2.24%	-4.86%	7.10%
Personal Services	% change	-15.27%	12.37%	2.89%
Social Services	% change	-3.80%	-2.15%	5.95%

Source: Calculated from CPS microdata.

TABLE 8

PERCENT CHANGE WITHIN FULL-TIME EARNERS' DISTRIBUTION BY PRODUCTION SECTOR
1967 and 1986, Consumer Basket Definition of the Middle

PRODUCTION SECTOR		EARNINGS GROUP				
		LOWER	LOW MID'L	MID MID'L	UP'R MID'L	UPPER
=====		=====	=====	=====	=====	=====
Natural Resources	% change	-11.53%	0.38%	-1.14%	1.56%	10.73%
Construction	% change	0.71%	0.08%	-3.97%	-1.72%	4.89%
Low Wage Manufacturing	% change	-4.26%	0.95%	-1.49%	0.49%	4.31%
Medium Wage Manufacturing	% change	-5.40%	-1.11%	-0.81%	1.22%	6.10%
High Wage Manufacturing	% change	-10.62%	-7.01%	-2.25%	4.51%	15.38%
Transportation & Trade	% change	-0.04%	-2.61%	-2.30%	0.12%	4.84%
Transactional Activities	% change	-7.65%	1.00%	0.27%	-0.32%	6.70%
Personal Services	% change	-3.59%	1.00%	0.71%	0.82%	1.06%
Social Services	% change	-6.23%	0.31%	1.19%	0.83%	3.91%

Source: Calculated from CPS microdata.

