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Chapter Author: Andrew I. Kohen, Herbert S. Parnes, John R. Shea

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CHAPTER 6

Income Instability Among Young and Middle-Aged Men

Andrew I. Kohen
Ohio State University

Herbert S. Parnes
Ohio State University

and

John R. Shea
Ohio State University

I. INTRODUCTION

Most of what is known about the size distribution of income is based upon measurements taken over the span of a single year. In several areas bearing on both theory and policy, single-year measures are inadequate. In the calculation of rates of return to human capital investments, for example, it is often critical to be able to differentiate age-earning profiles that start high and rise slowly from those that have a lower starting point but rise more steeply. Consider also a widely recognized problem in defining poverty status. Because of the generally temporary nature of their poverty, public policy responds somewhat differently to low-income graduate students than to the typical low-income family. Another example, recognized in law, is income averaging for tax purposes. To cite a final example, much of the literature on labor-force participation and consumer economics is built around notions of “transitory” and “permanent” components of income.

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Purpose

In this paper we attempt: (1) to quantify the influence on measured income inequality of lengthening the accounting period; (2) to describe the mechanism through which income instability among male heads of households is manifested (e.g., changes in sources of income, hours worked, and wage rates); and (3) to identify some of the demographic and economic characteristics of those household heads whose income is "unstable" over a two- or three-year period, in the sense of changing at above-average or below-average rates. To the extent that their relative position in the income distribution changes from one year to the next, these are the individuals who cause the length of the accounting period to influence the measure of income inequality. When reranking occurs, measures of income concentration based on annual data (e.g., annual averages) necessarily show a higher degree of inequality than those based upon a longer accounting period.¹

Nature of the Data

Data for the study are derived from the National Longitudinal Surveys.² Specifically, the information comes from personal interviews with two national probability samples of approximately five thousand individuals in two subsets of the civilian, noninstitutional population: young men who were 14 to 24 years of age when first interviewed in October 1966, and middle-aged men 45 to 59 years of age when contacted initially in mid-1966. In accordance with the sample design, blacks were overrepresented by a three-to-one ratio relative to whites. This was done to permit a reasonably confident analysis of the black experience. For this reason, most of our results are presented separately for whites and blacks,³ although we use weighted sample cases throughout the analysis.

¹ Frank A. Hanna, "The Accounting Period and the Distribution of Income," Part III in Frank A. Hanna, Joseph A. Pechman, and Sidney M. Lerner, *Analysis of Wisconsin Income*, Volume 9, Conference on Research in Income and Wealth (New York: NBER, 1948), p. 212.

² For a detailed description of the samples and the data, see Herbert S. Parnes et al., *The Pre-Retirement Years*, U.S. Department of Labor Manpower Research Monograph No. 15, Vol. 1 (1970) and *Career Thresholds*, U.S. Department of Labor Manpower Research Monograph No. 16, Vol. 1 (1970).

³ We have excluded non-Caucasians other than Negroes from the analysis, except in a few instances where the focus is on all individuals in a cohort, irrespective of race.

Information was collected at yearly intervals in the 1966 and 1967 surveys of older men, and in the 1966, 1967, and 1968 surveys of the younger men—a group often referred to as boys throughout the remainder of the paper. Before describing methods of analysis, a few words should be said about the income items and about measurement problems. Two units of observation are used in the analysis, depending on whether total family income or individual earnings is the focus of attention. When total family income is at issue, the unit is the family, specifically the respondent and any relatives (wife, children, and so forth) living with him.⁴ Earnings from wages and salaries, on the other hand, apply only to the respondent.

In the first interview with the older men in mid-1966, respondents were asked a series of questions concerning sources of both individual and family income for calendar 1965. Similar questions were asked a year later referring to calendar 1966. Granting some imprecision, we use the survey year (1966, 1967) to designate these two periods. Separate inquiries each year elicited information on the gross value of wages, salaries, tips, commissions, and so on, of the respondent, his wife (if married), and of other adult family members (if living in household). Additional questions were asked to obtain net self-employment income of respondent and of other family members, and farm income of the family. This was followed by queries concerning unemployment compensation of respondent and other family members, rental income, interest and dividends, and so forth, disability or illness income, Social Security, public assistance or welfare, the value of food stamps, government and private pensions, and, finally, income not elsewhere specified.

When interviewed in October and November of each year, the younger men were asked to report their income and earnings over the twelve months immediately preceding each survey. We have designated each twelve-month period by the year in which the interview took place: 1966, 1967, or 1968. The set of income questions asked of the younger men was much shorter than the set asked of the older men. There were eight items in all, four for the

⁴ An exception has been made within the younger cohort. Each young man must have been a head of household at the time of each interview. If married, spouse present, we have included the income of his wife in calculating total family income, but we have excluded possible income from other family members, because it cannot be separately estimated with any precision.

respondent and (if married) four for his wife. The questions, identical in form, asked about gross earnings (wages, salaries, tips, and commissions), net income from a business or farm, unemployment compensation, and all other income.⁵

As might be expected, nonresponse to various income items results in some bias. Nearly a third of the respondents in each cohort failed to provide complete answers to relevant income items in one or more of the years in question (see Appendix Tables A.1 and A.2). Much of the failure to provide full information on total family income occurred in the first year. Because repeated failure to answer income questions was not especially great, especially among the boys, we believe that much of the nonresponse in the first year occurred because respondents did not have some of the required information, and that they were better prepared in subsequent interviews. The reader can form his own judgment on the matter by examining Tables A.1 and A.2, which show nonresponse to the income items that add to total family income in 1966 and 1967 (men) and in 1966 and 1968 (boys), according to the response in the preceding (or subsequent) year. The pattern for the older group indicates somewhat higher-than-average nonresponse among those with relatively low (under \$6,000 per year) and relatively high incomes (\$12,000 or more for whites; \$9,000 or more for blacks).⁶ Nevertheless, nonresponse was only a few percentage points less common among those who reported middle-level incomes in one of the years. There is little, if any, systematic relationship between income level and nonresponse among the younger men. Thus, we are on relatively firm ground in generalizing from the income experience of the two-thirds of the respondents who reported fully on their income or wage and salary earnings in two or all three years.⁷

⁵ This last question was worded as follows: "Did you (or your wife) receive any other income, such as rental income, interest or dividends, income as a result of disability or illness, etc.?"

⁶ Vandome reported that response in the 1954 Reinterview Savings Survey was poor at both ends of the distribution. Peter Vandome, "Aspects of the Dynamics of Consumer Behavior: Income and Savings Over Two Years from the 1954 Reinterview Savings Survey," *Bulletin of the Oxford University Institute of Statistics* 20 (February 1958):71.

⁷ The nonresponse rate on respondent's earnings from wages and salaries was much lower than nonresponse to at least one item making up total family income.

Methods of Analysis

We have examined the stability of income and earnings at both macro and micro levels. Comparison of Gini coefficients⁸ for one-, two-, and three-year periods provides an indication at a macro level of the extent to which reranking—and, therefore, relative instability of position within the income distribution—has taken place from year to year. While most of our work has been in terms of each respondent's family income or personal earnings, for the older men we have also calculated Gini coefficients for family income per family member. In summing per capita family income over a two-year period, each year's per capita income has been calculated before adding the two figures together.

At the micro level we have gauged the way in which each respondent's family income (Y_i) or earnings (E_i) has moved relative to the total income or earnings of all respondents in each cohort. The measure, which we have dubbed a relative instability coefficient (or RIC) is equal to $100(\alpha_i - \bar{\alpha})$ where, in the case of total family income for the older men,

$$\alpha_i = \frac{Y_i^{67}}{\frac{1}{2}(Y_i^{66} + Y_i^{67})} \text{ and } \bar{\alpha} = \frac{1}{n} \sum_{i=1}^n \frac{Y_i^{67}}{\frac{1}{2}(Y_i^{66} + Y_i^{67})}.$$

⁸ Gini's coefficient of concentration, expressed in terms of a percentage, is equal to the area between the Lorenz curve and a 45° line divided by the area of the entire triangle below that line, where the 45° diagonal shows equal cumulative percentages of income recipients and of income on the x and y axes. Arithmetically, the Gini coefficient "corresponds to the arithmetic average (*mean difference*) of the $n(n-1)$ differences (taken in absolute value) which may be constituted between the n terms, divided by its maximum possible value (equal twice the arithmetic average of the n terms)." Corrado Gini, "On the Measure of Concentration with Special Reference to Income and Wealth," Proceedings of a Research Conference on Economics and Statistics held by the Cowles Commission, July-August 1936, *Colorado College Publication*, General Series No. 208; Study Series No. 21, p. 77. We have approximated the area below the Lorenz curve using the trapezoidal rule with 300 intervals.

$$\text{Area} = \sum_{i=2}^n \text{Area}_{i-1} + \left(\frac{x_i - x_{i-1}}{2} \right) (Y_i + Y_{i-1}),$$

where x_i is the percentage of the population at the i th interval, Y_i is the percentage of income at the i th interval, and $x_i - x_{i-1}$ is the length of the interval (a constant). The Gini coefficient is equal to 1 minus twice the area below the Lorenz curve.

Similarly for the younger men,

$$\alpha_i = \frac{Y_i^{67}}{Y_i^{66} + Y_i^{67}} + \frac{Y_i^{68}}{Y_i^{67} + Y_i^{68}} \text{ and } \bar{\alpha} = \frac{1}{n} \sum_{i=1}^n \left(\frac{Y_i^{67}}{Y_i^{66} + Y_i^{67}} + \frac{Y_i^{68}}{Y_i^{67} + Y_i^{68}} \right).$$

After examining the distribution of RIC, we decided to categorize each measure (family income and earnings separately) for each cohort as follows. *Highly unstable upward* is a value one or more standard deviations above the grand mean, which by definition is zero. *Moderately unstable upward* refers to a value of α_i between .25 and .99 S.D. above the grand mean. *Stable* means an α_i within $\pm .24$ S.D. from the grand mean. *Moderately unstable downward* and *highly unstable downward* are defined analogously to the two upwardly unstable categories, but on the other side of the mean.

In the next section of this paper, we describe the results of our analysis of Gini coefficients. We also present a number of summary measures, including values of the RICs. This is followed in Section III by an examination of some of the demographic and economic correlates of instability of earnings. Section IV analyzes the sources (or components) of instability in income and earnings. A brief conclusion comprises Section V.

II. INSTABILITY OF INCOME AND EARNINGS: AN OVERVIEW

When the distribution of total family income, in absolute terms, is placed into 15 or 16 class intervals, a great deal of movement is evident between class intervals from one year to another (Tables 1 and 2). Among the older men, 33 percent of the whites and 38 percent of the blacks were in the same class interval in 1967 as in 1966. About two-fifths moved up, while just over one-fifth moved down. Even less stability is evident among the boys over a *three-year* period (1966-68), in which case only one in ten white and about one in seven blacks stayed in the same income class. Over seven-tenths of the respondents reported higher family incomes in 1968 than in 1966. Of course, movement per se need not result in reranking and, therefore, in greater measured equality over the longer time period. For reranking to occur, incomes must change at different rates or by different amounts. Leaving aside for the time being whether the changes are "real" or due to measurement error, some reranking doubtless occurred. After all,

Income Class	Whites			Blacks				
	Total Number, 1966 (Thousands)	Percent in ^a			Total Number, 1966 (Thousands)	Percent in ^a		
		Lower Class, 1967	Same Class, 1967	Higher Class, 1967		Lower Class, 1967	Same Class, 1967	Higher Class, 1967
Total or average	12,842	23.6	32.8	43.5	1,225	21.7	37.9	40.4
Loss of income	47	0.0	25.7	74.3	5	0.0	0.0	100.0
\$0-\$1,999	496	0.8	58.6	40.6	159	1.0	70.2	28.8
2,000- 2,999	395	21.7	29.9	48.4	113	22.6	40.8	36.6
3,000- 3,999	431	16.3	35.4	48.3	126	25.3	36.5	38.2
4,000- 4,999	480	21.4	26.8	51.8	103	15.5	30.6	53.9
5,000- 5,999	655	17.2	29.2	53.6	91	15.6	38.2	46.2
6,000- 6,999	795	9.9	24.7	65.4	100	16.6	27.1	56.3
7,000- 7,999	1,021	23.8	27.4	48.8	85	34.4	28.3	37.3
8,000- 8,999	830	26.1	25.7	48.2	50	35.3	26.8	37.9
9,000- 9,999	817	21.6	31.0	48.4	31	41.3	9.1	49.6
10,000-10,999	716	24.9	23.0	52.1	20	45.0	18.6	36.4
11,000-11,999	657	27.5	23.7	48.8	19	52.3	26.1	21.6
12,000-12,999	608	35.5	18.2	46.3	24	40.0	22.3	37.7
13,000-14,999	639	34.6	32.3	33.1	17	48.1	15.6	36.0
15,000-19,999	788	34.1	47.2	18.7	20	35.6	55.6	8.8
20,000 or more	576	26.3	73.7	0.0	6	82.3	17.7	0.0
Not ascertained	2,891	—	—	—	256	—	—	—

^a Number for whom income was not ascertained in one or both years is excluded from base in calculating percentages.

TABLE 2 Percentage in Lower, Same, or Higher Total Family Income Class in 1968 as Compared With 1966: Young Men

Income Class	Whites				Blacks			
	Total Number, 1966 (Thousands)	Percent in ^a			Total Number, 1966 (Thousands)	Percent in ^a		
		Lower Class, 1968	Same Class, 1968	Higher Class, 1968		Lower Class, 1968	Same Class, 1968	Higher Class, 1968
Total or average	2,628	16.7	10.5	72.8	237	14.8	14.2	71.0
Less than \$1,000	22	0.0	9.8	90.2	4	0.0	0.0	100.0
\$1,000-\$1,999	39	0.0	0.0	100.0	14	0.0	9.5	90.5
2,000-2,999	85	0.0	20.2	79.8	34	0.0	30.2	69.8
3,000-3,999	163	8.8	9.5	81.7	29	4.7	28.6	66.7
4,000-4,999	208	5.4	7.4	87.2	33	13.6	3.6	82.8
5,000-5,999	279	3.4	9.2	88.4	6	0.0	0.0	100.0
6,000-6,999	252	11.9	8.2	79.9	14	0.0	0.0	100.0
7,000-7,999	212	19.9	10.6	69.5	6	50.2	0.0	49.8
8,000-8,999	206	17.1	22.1	61.8	4	32.3	67.7	0.0
9,000-9,999	137	25.6	6.5	67.9	8	0.0	0.0	100.0
10,000-10,999	117	37.4	4.4	58.2	17	91.6	0.0	8.4
11,000-11,999	59	53.0	6.3	41.7	0	—	—	—
12,000-12,999	61	38.2	21.6	40.2	0	—	—	—
13,000-14,999	8	0.0	0.0	100.0	0	—	—	—
15,000-19,999	30	100.0	0.0	0.0	0	—	—	—
20,000 or more	10	69.2	30.8	0.0	0	—	—	—
Not ascertained	740	—	—	—	68	—	—	—

as indicated in Tables 1 and 2, there was movement in both directions, with movement to a higher income class more likely among those with relatively low incomes in the first year and movement to a lower income class more likely for the high-income group.

Gini Coefficients

The Gini coefficients of concentration presented in Tables 3 and 4 confirm the fact that reranking did occur, for Gini coefficients are lower when income and earnings are cumulated over a period of two or three years than when yearly coefficients are averaged. For all races combined, among the older men the yearly average coefficient for total family income is .3386, while the cumulative coefficient is 3.4 percent lower at .3271. Within the younger group of men, total family income is less unequally distributed. The yearly average coefficient for the three-year period is .2404, while the cumulative coefficient is 10.4 percent lower at .2154. These results are consistent with previous findings that the reduction in measured income equality resulting from increasing the accounting period to two or three years is relatively modest.⁹

Some of the literature on income dynamics attributes change in degree of equality over time to variation in the composition of income (e.g., earnings versus property income), because some components are more equally distributed than others.¹⁰ Only in the case of older men were there sufficient numbers of self-employed respondents for separate analysis. Not only are their Gini coefficients much larger (yearly average, .4545; cumulative, .4298) than those for all class-of-worker categories combined, but the disparity between the yearly average and the cumulative figure is greater, suggesting that somewhat greater variation (with reranking) took place from one year to the next among the self-employed than among wage and salary workers.

⁹ On the basis of British data for the early 1950s, Vandome reported a reduction in the Gini coefficient of 2.5 percent for a two-year period and of 4 percent for a three-year period. "Income and Savings," pp. 87-88. See also James Morgan, "The Anatomy of Income Distribution," *The Review of Economics and Statistics* 44 (August 1962):272.

¹⁰ See, for example, Mary W. Smelker, "Shifts in the Concentration of Income," *Review of Economics and Statistics* 30 (August 1948):215-22.

TABLE 4 Gini Coefficients for Total Family Income and Salary Earnings Respondents: Young Men

Income Measure and Class of Worker	Numbers (Thousands)	Gini Coefficients													
		Yearly Average						Cumulative						Difference Between Cumulative and Average, as Percent of Average	
		1966- 67	1967- 68	1966- 68	1966- 67	1966- 68	1967- 68	1966- 67	1966- 68	1967- 68	1966- 67	1966- 68			
Whites, Blacks, and Others															
Total family income:															
Wage and salary workers, 1966-68	1,754	2,509	2,334	2,252	2,4215	2,2935	2,365	2,253	2,253	2,165	2,121	2,121	-7.0	-5.6	-10.3
Total or average ^b	1,892	2,589	2,350	2,272	2,4715	2,311	2,404	2,299	2,299	2,181	2,154	2,154	-7.0	-5.6	-10.4
Earnings of wage and salary workers	2,483	2,485	2,292	2,137	2,3885	2,2145	2,305	2,224	2,224	2,110	2,075	2,075	-6.9	-4.7	-10.0
Whites															
Total family income:															
Wage and salary workers, 1966-68	1,590	2,385	2,251	2,157	2,318	2,204	2,2643	2,147	2,147	2,079	2,020	2,020	-7.4	-5.7	-10.8
Total or average ^b	1,729	2,480	2,273	2,185	2,3765	2,229	2,3127	2,203	2,203	2,100	2,062	2,062	-7.3	-5.8	-10.8
Earnings of wage and salary workers	2,257	2,380	2,176	2,024	2,278	2,108	2,1933	2,115	2,115	1,998	1,964	1,964	-7.2	-5.2	-10.5
Blacks															
Total family income ^c	164	3,282	2,872	2,794	3,077	2,833	2,9827	2,903	2,903	2,646	2,706	2,706	-5.7	-6.6	-9.3
Earnings of wage and salary workers	223	2,973	2,998	2,736	2,9855	2,367	2,9023	2,789	2,789	2,710	2,634	2,634	-6.7	-5.5	-9.2

^a Excludes those with negative income or earnings in any year and those for whom total income or wage and salary earnings was not ascertained.

^b Total includes all other comparative class-of-worker categories not shown separately.

^c All blacks who had not changed class-of-worker status were wage and salary workers all three years.

Four other relationships evident in Tables 3 and 4 deserve emphasis. First, family income per family member, at least in families headed by middle-aged men, is less equally distributed than total family income. Second, consistent with what one might suppose on the basis of Tables 1 and 2, cumulation of income makes a greater difference in the coefficient of concentration for boys than it does for men, even if attention is focused on a period of only two years. Third, among young men, lengthening the accounting period from two to three years continues to reduce the level of inequality evident in yearly data or yearly averages. Finally, income in both age groups is more unequally distributed among blacks than among whites.

Relative Instability Coefficients (RIC)

As a backdrop against which to examine our measure of income change, it is well to note that average family income, as well as wage and salary earnings, increased at a faster pace for the young than for the middle-aged men (Table 5). Within both age groups, the relative increase was greater for blacks than for whites. Moreover, among the blacks, average family income was actually higher for the young than for the middle-aged group in 1967.

TABLE 5 Means and Percentage Changes in Total Family Income: Middle-Aged and Young Men^a

<i>Item</i>	<i>Men 45-59</i>		<i>Men 16-24</i>	
	<i>Whites</i>	<i>Blacks</i>	<i>Whites</i>	<i>Blacks</i>
Mean, 1966 (dollars)	9,756 (7,055)	5,394 (3,810)	6,718 (3,086)	4,655 (2,792)
Mean, 1967 (dollars)	10,147 (6,985)	5,775 (3,804)	7,784 (3,329)	5,804 (2,941)
Mean, 1968 (dollars)	—	—	8,908 (3,748)	6,495 (3,336)
Percentage change:				
1967/1966	+4.0	+7.1	+15.9	+24.7
1968/1966	—	—	+32.6	+39.5

NOTE: Figures in parentheses are standard deviations.

^aPersons reporting negative income in any year have been excluded.

Before examining the behavior of the relative instability coefficient it is desirable to reflect briefly on the nature of this measure of instability and its implications. Recall that the RIC measures each individual's change in income or earnings relative to the *average* change experienced by the entire cohort.¹¹ It may be useful to conceive of a given population as being distributed along an "income escalator," moving upward. The rate of upward movement is basically determined by changes in the level of factor productivity and in the price level. If all individuals remained motionless with respect to the escalator, everyone's income, by our measure, would be perfectly stable.

In addition to the upward movement of the escalator, however, changes take place in relative positions as some individuals climb the moving stairs while others move in the opposite direction. It is these shifts that our measure identifies as instability,¹² and the search for the correlates of instability amounts to an effort to ascertain whether such moves are essentially random among members of the population or whether they tend to be concentrated among those with particular demographic and employment characteristics. We hypothesize the latter; for it seems reasonable to suppose, to take but one example, that those subsets of the population most susceptible to unemployment will have unstable earnings if there are variations from year to year in their unemployment experience. This leads to a final observation, namely, that when one is considering only a two- or three-year period, it is difficult in many cases to predict the *direction* of instability, even for groups for whom there is good reason to hypothesize unstable earnings. For example, a person whose earnings are *upwardly* unstable between years x and $x + 1$ may, during that period, merely be recovering from an experience of *downward* instability between years $x - 1$ and x . Such an individual will show up as having unstable earnings over either of the two-year periods, but whether the direction is upward or

¹¹ The grand mean ratio, $\bar{\alpha}$, equals 1.035 for family income and 1.028 for earnings in the case of the middle-aged men. Among the boys, $\bar{\alpha}$ (for the period 1966-68) equals 1.076 for family income and 1.079 for earnings.

¹² The measure would, of course, also reflect increases in dispersion on the escalator even without alteration in relative positions to the extent that such spreading out actually occurred. However, there is no evidence of this phenomenon in the Gini coefficients for the individual years under consideration.

downward depends on when he happens to be observed. Of course, the level of income in the base period relative to such characteristics of the individual as his education or occupation may provide a basis for predicting direction of change.

Distribution of RIC: Wage and Salary Workers

The data in Table 6, which relate only to wage and salary workers, show that the relative instability of incomes among the young men is considerably greater than among the middle-aged group, which is, of course, consistent with the former's greater susceptibility to unemployment, their greater job mobility, and their greater likelihood of entering and withdrawing from the labor force as the result of variations in school status. There is also greater instability among blacks than among whites. Using individual earnings to illustrate both the intercolor and the intercohort differences, 56 percent of the older white men and 44 percent of the older black men are classified as stable, in contrast to only 30 percent of young whites and 25 percent of the young blacks. Substantially the same pattern prevails in the case of total family income.

In both age groups of whites, there is greater stability in earnings than in total family income. Among blacks, this relationship prevails for the men, but is reversed for the boys. In both color groups, the differences between stability of earnings and stability of income are more pronounced in the case of the older group than the younger, reflecting the fact that earnings is a smaller component of total family income for the older group.

There is a substantial relationship between the direction of income change and the level of income in the base year. Among the eight age-color-income measure cases, there is only one exception to the generalization that the direction of instability is monotonically related to the level of initial income. The sole exception is among the older black men, for whom the probability of downward income instability is actually somewhat higher for the lowest income group than for the intermediate group. Not only is there the indicated regularity in all other cases, but the relationship is very pronounced, especially among the boys. For example, among high-income whites, 7 percent had upwardly unstable earnings, whereas 66 percent were downwardly unstable. Of those with low base-year earnings, 58 percent were upwardly

TABLE 6 Stability of Annual Earnings and Family Income, by Color and Level of Base-Year Earnings and Income: Middle-Aged and Young Male Wage and Salary Workers^a

Age Group, Income Measure, and Level of Base-Year Income	Number of Persons (Thousands)	Percent Whose Income is:					
		Highly Unstable Upward	Moderately Unstable Upward	Stable	Moderately Unstable Downward	Highly Unstable Downward	
Whites							
Men 16-24							
Family income:							
Total, all levels	1,590	12	23	25	30	11	
High	505	2	13	19	49	18	
Medium	491	4	20	37	31	8	
Low	594	26	34	20	13	8	
Earnings:							
Total, all levels	2,257	12	18	30	31	10	
High	680	1	6	29	50	16	
Medium	871	2	23	36	32	7	
Low	706	34	24	23	11	7	
Men 45-59							
Family income:							
Total, all levels	6,345	6	24	44	21	6	
High	2,328	5	17	46	25	11	
Medium	2,474	4	28	45	20	3	
Low	1,544	16	26	40	14	3	
Earnings:							
Total, all levels	8,665	5	15	56	19	5	

	1	13	20	25	29	30	33	35	37	40	41	44	47	50	53	55
Medium	2,729	13	20	25	29	30	33	35	37	40	41	44	47	50	53	55
Low	3,235	13	20	25	29	30	33	35	37	40	41	44	47	50	53	55
Blacks																
Men 16-24																
Family income:																
Total, all levels	164	14	25	25	29	30	33	35	37	40	41	44	47	50	53	55
High	52	5	9	9	45	19	19	19	19	28	28	28	28	28	28	28
Medium	52	5	30	30	28	28	28	28	28	28	28	28	28	28	28	28
Low	58	32	34	34	13	21	21	21	21	21	21	21	21	21	21	21
Earnings:																
Total, all levels	223	14	22	22	25	30	30	35	37	40	41	44	47	50	53	55
High	56	0	6	6	46	35	35	35	35	35	35	35	35	35	35	35
Medium	85	5	32	32	17	37	37	37	37	37	37	37	37	37	37	37
Low	81	34	22	22	18	18	18	18	18	18	18	18	18	18	18	18
Men 45-59																
Family income:																
Total, all levels	672	12	23	23	36	19	19	19	19	28	28	28	28	28	28	28
High	262	2	19	19	40	28	28	28	28	28	28	28	28	28	28	28
Medium	244	13	27	27	41	14	14	14	14	14	14	14	14	14	14	14
Low	166	26	26	26	23	12	12	12	12	12	12	12	12	12	12	12
Earnings:																
Total, all levels	891	9	19	19	44	20	20	20	20	23	23	23	23	23	23	23
High	276	1	11	11	58	23	23	23	23	23	23	23	23	23	23	23
Medium	289	4	21	21	47	24	24	24	24	24	24	24	24	24	24	24
Low	326	22	25	25	29	14	14	14	14	14	14	14	14	14	14	14

^a Persons reporting negative income in any year have been excluded.

unstable and 19 percent were downwardly unstable. Because of the strong correlation between initial income level and direction of change, the analysis in the remainder of the paper stratifies respondents according to initial income level. The strata were established by estimating from group data the cutting points which divide the distribution into equal thirds for total family income and for respondent's earnings within each cohort and color group. The estimated cutting points are presented in Appendix Table A.5.

III. VARIATION IN INCOME STABILITY

Stability of Total Family Income, by Class of Worker: Middle-Aged Men

Consistent with our previous interpretation of the Gini coefficients, families headed by middle-aged males who are self-employed have income that is far less stable from year to year than those whose heads are wage and salary workers (Table 7). According to our measure, stability of total family income is only half as prevalent among men who were self-employed in both years as among those who worked for others (21 percent versus 44 percent). The greater instability among the self-employed is evident in all three base-year income groups; in the low and high categories it prevails in both directions, but in the middle-income group it exists only in the downward direction.

Variation in Stability of Earnings: Wage and Salary Workers

We have performed multiple classification analyses (MCA) of earnings instability of the middle-aged and youthful wage and salary workers, using two dependent variables in turn: (1) a dichotomous variable representing stability of earnings (1, if stable; 0, otherwise); and (2) the relative instability coefficient (RIC) expressed in continuous form. The former yields for each category of each predictor variable the proportion of respondents with stable earnings. The latter yields the average RIC for the category. In each case, the value is adjusted to reflect the net influence of the predictor variable under consideration, given the other predictors in the regression.¹³

¹³ For a detailed description of the technique, see Frank Andrews, James Morgan, and John Sonquist, *Multiple Classification Analysis* (Ann Arbor: University of Michigan Survey Research Center, May 1967).

TABLE 7 Stability of Total Family Income, by Class of Worker, Color, and Level of Base-Year Income: Middle-Aged Men

Class of Worker	Total			High Base Income			Medium Base Income			Low Base Income		
	Number (Thousands)	Percent Unstable		Number (Thousands)	Percent Unstable		Number (Thousands)	Percent Unstable		Number (Thousands)	Percent Unstable	
		Upward	Downward		Upward	Downward		Upward	Downward		Upward	Downward
Wage and salary workers, 1966-67	6,345	29	26	2,328	19	36	2,474	32	23	1,544	42	18
Self-employed, 1966-67	1,341	43	36	325	26	50	291	30	48	726	56	26
Total ^a	8,703	32	30	2,810	19	38	2,972	31	27	2,923	46	23
Whites												
Wage and salary workers, 1966-67	672	36	28	262	21	39	244	40	19	166	52	25
Self-employed, 1966-67	49	35	52	8	b	b	12	b	b	29	37	51
Total ^a	866	35	32	287	21	41	283	39	23	296	46	31
Blacks												

^a Totals include cases in which class-of-worker status was not ascertained, as well as cases in which class-of-worker status changed between 1966 and 1967.

^b Percentage not calculated where base represents fewer than 25 sample cases.

For the older cohort, the predictor variables that were entered into the MCA runs are age, marital status, education, health condition, size of community, occupation, industry, and degree of interfirm mobility. The more limited sample size of the younger cohort made it unfeasible to include all of the foregoing variables; only age, education, and mobility were entered. Because of the strong association between the direction of instability and the level of base-year earnings, we have stratified the samples and have run separate MCAs for each base-year income group, as well as for the total of all income groups. Tables 8 and 9 present the MCA results for all income groups combined, for the men and boys respectively, using the dichotomous dependent variable. Appendix Tables A.6 and A.7 present the results for each of the three income groups in terms of both the dichotomous and the continuous variables.

Before examining the relation between the predictor variables and measures of instability, it is well to note the regularity of the intercolor and the interincome group differences that are discernible in the tables. First, the greater stability of earnings of white men that has been observed in the aggregate prevails with only rare exceptions within all categories of the predictor variables. Second, within each category, black men tend to show a larger positive or smaller negative RIC than their white counterparts, probably reflecting their lower base incomes *within* each of the three income groups. Finally, the association between the *direction* of relative change in earnings and initial earnings level prevails in virtually all categories of both color groups.

Middle-Aged Men. Of the eight predictor variables included in the analysis, only city size failed to show a consistent relationship with either the extent or the direction of instability of earnings of the middle-aged men. Whereas the proportion with stable earnings does not vary systematically among the three five-year age categories, the *pattern* of instability does vary for white men, although not for blacks. In the case of the whites, the RIC is less favorable for older than for younger men. That is, with advancing age, the coefficient assumes a larger negative or a smaller positive value. Among both black and white men in the middle- and lower-income groups, limited education is likewise associated with less favorable RICs. In other words, the data confirm the expectation that the higher the education, the greater the probability that low earnings are the result of a transitory condition.

Men who were married and living with their wives at both survey dates had greater stability of earnings than those who were not married at either date (single, divorced, separated, widowed), which is consistent with what is known about the relationship between the labor-force participation and the marital status of men.¹⁴ Moreover, among men with low base earnings, those who are married manifest greater upward movement than those who are not.

The relation between our measure of health and income stability is particularly interesting. Respondents were asked whether their health or physical condition prevented work or limited the amount or kind of work they could do. Those who reported that such limitations had existed for at least a year were classified as having chronic health problems. While these men are no more likely to have unstable incomes than those with no chronic problems, it is noteworthy that in the high- and low-income groups they are much more likely than their healthy counterparts to have high (negative or positive) RIC values. The tendency for men with chronic health problems to be concentrated in the lower-income groups and the fact that similar proportions of healthy and unhealthy men have stable earnings, suggest that chronic health problems frequently result in continuously low annual earnings. On the other hand, the behavior of the RIC values in the high- and low-income groups suggests that some men with chronic health problems experience flare-ups that adversely affect income in a given year, but then bounce back when the acute stage of the disability terminates.

There are differences in both the extent and direction of earnings instability among major occupation groups, but the pattern is not easily described.¹⁵ Overall, in the case of white men,

¹⁴ See William G. Bowen and T. Aldrich Finegan, *The Economics of Labor Force Participation* (Princeton: Princeton University Press, 1969), pp. 40-49.

¹⁵ There are some anomalies in the MCA for black men that we are unable to explain. For example, on the basis of the unadjusted figures, the proportion of men with stable earnings is greatest for clerical workers (59 percent) and professionals (57 percent) and lowest for farm workers (19 percent), which is consistent with our expectations. In the adjusted proportions, however, the rank ordering of the stability of professionals and farm workers is reversed (36 versus 44 percent)! In the industry variable, agricultural workers—who are substantially the same group as the occupational category “farm workers”—have an adjusted stability proportion of 22 percent.

TABLE 8 Unadjusted and Adjusted Proportions^a of Wage and Salary Workers With Stable Earnings, by Selected Characteristics: Middle-Aged Men

Characteristic	Whites			Blacks		
	Number (Sample Cases) ^b	Unadjusted Percent Stable	Adjusted Percent Stable	Number (Sample Cases) ^b	Unadjusted Percent Stable	Adjusted Percent Stable
Total sample ^c	2,217	56	56	962	44	44
Age:						
45-49	871	54	54	360	45	41
50-54	779	56	57	348	46	48
55-59	567	58	58	254	39	41
Marital status:						
Married spouse present, 1966-67	2,033	57	57	782	46	45
Nonmarried, 1966-67	155	48	50	143	30	32
Highest year of school completed:						
0-4	77	47	54	277	39	41
5-8	664	54	56	359	38	39
9-11	499	55	56	169	49	48
12	555	60	58	101	56	52
13+	417	57	53	52	57	54
Health:						
Chronic health problem	399	55	55	155	37	40
No chronic health problem	1,814	56	56	802	45	44
Major occupation group, 1966-67:						
Different occupation group each year	163	39	50	85	20	32
Professional/technical	246	64	64	31	57	36

Clerical	135	69	65	52	59	42
Sales	103	56	58	5	d	
Craftsmen, foremen	604	56	56	117	50	48
Operatives	422	54	52	273	52	50
Nonfarm laborers	100	48	48	204	41	45
Service workers	116	62	59	127	41	36
Farm workers	44	51	53	56	19	44
Major industry division, 1966-67:						
Different industry division each year	112	27	37	69	18	31
Agriculture	49	52	56	64	20	22
Mining, forestry, fisheries	32	57	57	15	d	
Construction	203	49	50	101	35	36
Manufacturing	798	58	58	303	47	43
Transportation, utilities	253	57	56	116	44	44
Trade	259	54	54	87	54	55
Finance, insurance, real estate	79	55	54	19	d	
Service	232	60	58	114	47	48
Public administration	200	69	65	74	68	65
Interfirm mobility, 1966-67:						
Same employer both years	1,978	58	57	860	47	44
Voluntary change	136	36	50	54	17	40
Involuntary change	103	40	49	48	27	40

^a Adjusted for the effect of age, marital status, education, health, size of city, occupation, industry, and interfirm mobility. For method of adjustment see text, p. 168.

^b Although the absolute numbers of sample cases are shown, calculations are based on weighted observations.

^c Total includes cases in which characteristic was not ascertained. It also includes individuals whose marital status changed between the two survey dates. Persons with negative income in any year have been excluded from the data.

^d Percentage not calculated where base is smaller than 25 sample cases.

TABLE 9 Unadjusted and Adjusted Proportions^a of Wage and Salary Workers With Stable Earnings, by Selected Characteristics: Young Men

Characteristic	Whites			Blacks		
	Number (Sample Cases) ^b	Unadjusted Percent Stable	Adjusted Percent Stable	Number (Sample Cases) ^b	Unadjusted Percent Stable	Adjusted Percent Stable
Total sample ^c	584	29	29	124	25	25
Age:						
16-18	15	d	d	5	d	d
19-20	84	32	32	19	d	d
21-22	189	31	32	40	20	21
23-24	296	29	28	60	32	30
Highest year of school completed:						
0-8	57	28	29	25	17	16
9-11	115	28	29	42	21	22
12	261	34	33	45	24	29
13-15	77	20	20	10	d	d
16+	74	28	29	2	d	d
Interfirm mobility, 1966-68:						
Same employer all three dates	305	35	35	54	32	30
Two different employers	168	25	25	37	22	22
Three different employers	71	20	21	21	d	d

^a Adjusted for the effect of age, education, and mobility. For method of adjustment, see text, p. 168.

^b Although numbers refer to sample cases, calculations are based on weighted observations.

^c Total includes cases in which characteristic was not ascertained. Persons with negative income have been excluded.

^d Percentages not calculated where base is smaller than 25 sample cases.

the greatest stability is found among professional and clerical workers (64 and 65 percent) and the least among operatives and farm and nonfarm laborers (52, 53, and 48 percent, respectively), but the pattern varies among the several income groups. For example, among high-income whites, operatives have below-average stability and the downward instability as measured by RIC is large. Among low-income workers, however, operatives have slightly higher-than-average stability and are below average in degree of *upward* instability. Similarly, high-income managers have relatively great stability and exhibit only moderate downward instability as measured by RIC. On the other hand, managers in the low-income group have very low levels of stability and the degree of upward movement registered by their RIC is very high. In other words, both the probability of instability and the direction of change in relative income position depend upon the extent to which the base-year income is congruent with the individual's occupational class.

As expected, men employed in public administration enjoy substantially greater-than-average stability of earnings—greater than men in any other major industry division. The only other industry division that differs consistently from the average for both white and black men is construction, with a lower-than-average proportion of men with stable earnings. The other industrial difference worthy of mention is the prevalence of extreme fluctuations in trade among the white men. That is, in the high- and the low-income groups, respectively, the negative and positive RIC values are substantially higher for trade than for any other major industry division.

The data on occupation and industry indicate that earnings instability is especially pronounced among those individuals who changed from one major occupation group or from one major industry division to another between the two survey dates. Because industrial and occupational affiliation were measured as of the time of each survey, while the income data relate to the preceding calendar year, we cannot be certain of the direction of causation. It is clear, nonetheless, that income instability and job mobility are closely related. More direct evidence on the same point is provided by the measure of interfirm mobility. Men who changed employers between the two survey dates—whether voluntarily or involuntarily—were more

likely to have unstable earnings.¹⁶ It is interesting that in terms of RIC, involuntary job changes did not invariably produce less desirable results than voluntary changes. Specifically, among low-income whites, involuntary movers had an RIC of +9.0 as compared with +0.7 for voluntary movers.

Young Men. As has been mentioned, the smaller number of observations for the youth has compelled us to confine our attention to only three of the variables used in the case of the older cohort of men: age, education, and mobility.¹⁷ The relationships between these and income stability are analogous to those that prevail among the older men. With respect to age, the behavior of RIC becomes increasingly favorable as age increases. That is, it is the *youngest* men in this cohort who have the largest negative and the smallest positive values of RIC, just as this was true of the *oldest* group of middle-aged men.

Increasing educational attainment is likewise associated with more favorable *direction* of income change, even though there is no systematic relation with the *degree* of stability. Among those with high base-year earnings, the negative value of the RIC declines as educational attainment increases, although there is a slight reversal between the 12-year and the 13- to 15-year categories. Among those with low base-year earnings, RIC rises monotonically from -2.1 for those with less than nine years of education to +11.0 for those with sixteen or more years.

Young men who changed survey-week employer at least once were less likely to have stable earnings than those continuously employed in the same firm, although this relationship does not exist in the lowest income group. Moreover, the instability that prevailed among the mobile workers was, on the average, less favorable than that for those who were immobile. Within the high-income group, the job changers had greater negative RIC values; in the low-income group, they had smaller positive RIC values than their immobile counterparts.¹⁸

¹⁶ It may be noted that the difference is less pronounced in the adjusted than the unadjusted data, because part of the difference in the unadjusted figures reflects the effect of occupational and industrial changes that are included in the MCA analysis.

¹⁷ Specifically, there are too few sample cases of unhealthy and of nonmarried young men to permit an analysis of health and marital status, and only a few of the occupational and industrial categories within each of the income groups have as many as 25 observations.

¹⁸ The data for the young men do not permit us to distinguish between voluntary and involuntary job changes.

IV. SOURCES OF INCOME INSTABILITY: WAGE AND SALARY WORKERS

Several of the correlates of instability in earnings are suggestive of the mechanisms through which year-to-year change takes place. For example, we have speculated that differences in the stability of earnings by occupation, job mobility, and health status are probably attributable, in large measure, to differential changes from one year to the next in number of weeks worked. We now turn, therefore, to a direct examination of year-to-year variation in several components of total family income¹⁹ and in the proximate determinants of personal earnings of wage and salary workers.²⁰ Each of these topics is discussed in turn, on the basis of both a cross-tabular and an MCA analysis.

Total Family Income

In the relative sense in which we are using the term instability, there is no *necessary* relation between instability in one or more of the components of family income and instability in the total. First, while none of the components of a family's income may be unstable relative to the mean change in the population, its total income may nevertheless be unstable as the result of interfamily differences in the relative importance of the several components. Secondly, total family income may remain stable even in the face of instability of the components if these are unstable in offsetting directions. Finally, family income may remain stable by our definition when one or more of its components is unstable, if these components comprise a sufficiently small proportion of the total.

Cross-Tabular Analysis. Table 10 and Appendix Table A.8 show the relationship between instability in total family income and instability in each of its components for wage and salary earners in both age cohorts. A few words of explanation, together with an illustration, may help to clarify the meaning of the data.

¹⁹ For the older men, the components that are analyzed are earnings of respondent, earnings of wife, earnings of other family members, property income, and transfers. For the younger group, the data permit us to decompose aggregate income into only four categories: respondent's earnings, wife's earnings, unemployment compensation, and other income.

²⁰ Earnings are decomposed into hourly rate of pay and hours worked per year, with the latter further examined in terms of hours usually worked per week, weeks unemployed per year, and weeks out of the labor force.

TABLE 10 Mean Ratios of Change, 1966-67, in Selected Components of Total Family Income, by Age Group and Color: Middle-Aged and Young Male Wage and Salary Workers^a

Component of Family Income	Whites			Blacks		
	Total or Average	Unstable Upward	Unstable Downward	Total or Average	Unstable Upward	Unstable Downward
				Men 45-59 Years of Age		
Earnings of respondent	2.4	11.1	-6.1	3.7	16.4	1.4
Earnings of wife	3.1	14.6	-10.3	3.3	17.5	-0.6
Earnings of others	5.5	21.8	-14.5	9.3	19.4	10.9
Property income	-3.5	7.5	-19.6	-3.2	4.7	-4.9
Transfer income	1.1	1.2	3.0	-0.9	0.7	-1.7
Total number (thousands)	6,345	1,867	1,683	672	239	243
				Men 16-24 Years of Age		
Earnings of respondent	7.9	15.6	2.1	9.8	19.1	6.6
Earnings of wife	-13.8	-7.1	-20.2	-2.4	2.2	2.4
Unemployment compensation	-2.8	-0.7	-3.9	-8.2	-9.8	-3.8
Other income	-8.6	-0.7	-15.3	-3.2	0.1	-9.9
Total number (thousands)	1,590	551	657	164	64	47

^a Persons reporting negative income in any year are excluded.

The change ratios that are presented for each component of total family income differ from the RICs defined earlier. Whereas the RIC represented an average *deviation* from a mean measure of relative change, the change ratio is simply a measure of relative change in the component for the subset of the sample under consideration.²¹

The change ratios for the total sample are shown in the first column of Tables 10 and A.8 for each component of income. These can be used as benchmarks for comparing the relative stability of a component of income from one income-stability group to another or from one base-year income group to another.

To illustrate, among the older white men, the entry of 11.1 in the second column of Table 10 for earnings of respondents in the upwardly unstable total-family-income group means that 1967 earnings of the average respondent in this category were 11.1 percent higher than the mean of his 1966 and 1967 earnings. Thus, the rate of earnings increase for this group was considerably above the overall mean rate of increase in earnings for all men employed as wage and salary workers (11.1 versus 2.4). For the same age-color group, men with downwardly unstable family income exhibited downwardly unstable earnings (-6.1 versus 2.4), and those with relatively stable family income experienced relative stability of earnings (1.8 versus 2.4).

Thus, there is a strong positive correlation between instability of total family income and instability of respondent's earnings. This is hardly surprising in view of the fact that among wage and salary workers, earnings of the household head constitute upwards of 70 percent of family income.²²

²¹ Specifically, for each component, the change ratio (CR) in the case of total family income for the older men is computed as follows:

$$CR = \frac{1}{n} \sum_{i=1}^n \left[\frac{Y_i^{67}}{\frac{1}{2}(Y_i^{66} + Y_i^{67})} \cdot 100 \right] - 100.$$

The corresponding formula for the boys is

$$CR = \frac{1}{n} \sum_{i=1}^n \left[\left(\frac{Y_i^{67}}{Y_i^{66} + Y_i^{67}} + \frac{Y_i^{68}}{Y_i^{67} + Y_i^{68}} \right) \cdot 100 \right] - 100.$$

The change ratio is computed for each income-stability category and for every base-year income level. Data for the three base-year income levels are shown in Appendix Table A.8.

²² Appendix Table A.9 shows the basic relationship between change in respondent's earnings and in total family income in somewhat greater detail. Five categories of relative instability in family income are cross-classified by five categories of change in respondent's earnings.

While the earnings of wives and of other family members (principally children) are not a large fraction of total family income, these sources are less stable from year to year than respondent's earnings. As a result, there is a strong positive association between the degree and direction of change in family income and change in the earnings of other family members. In other words, those middle-aged men with upwardly unstable total family income generally reported larger increases (or smaller reductions) in the earnings of other family members (including wives) than those with downwardly unstable family income.

Among the boys, all sources of income other than respondent's earnings declined over the three-year period. With respect to earnings of wives, this pattern may reflect in many cases a conscious family decision concerning which marriage partner will work, which one will attend school, and when to begin raising a family. In the case of older men, however, it is difficult to say on the basis of these data whether changes in the labor-force participation of wives and children are compensatory for those of respondents. Consider, for example, the downwardly unstable income group. In some instances, a drop in respondent's earnings—which, it will be recalled, constitutes the bulk of family income—may overwhelm an increase in the earnings of wives and children. Nevertheless, it is worth emphasizing that, on the average, all sources of income, except transfers, tended to rise more than average (or, fall less than average) for those with upwardly unstable income, whereas the reverse was generally the case for the downwardly unstable group.

Tabulations not shown here indicate that among the middle-aged men, positive association between instability of family income and instability of wife's earnings is produced in at least three ways. Relative to families with downwardly unstable income, families with upwardly unstable income were more likely to contain a wife who entered the labor force over the period and less likely to contain a wife who departed from the labor force. Regardless of level of base-year income, a substantial increase took place among the upwardly unstable group in the proportion with wives making a monetary contribution to total family income; the other groups experienced either small net increases or actual declines.²³ Furthermore, the rate of increase in earnings among

²³ Low-income black men constitute an interesting exception to the monotonic relationship. In the families of such men, the rate of labor-force

those wives who were in the labor force during both periods was higher than average in families with upwardly unstable income.

On the average, the earnings of family members (other than wives) are a much smaller proportion of family income than are the wife's earnings; the respective grand means in 1966 were \$555 and \$1,268 for whites, and \$293 and \$996 for blacks. Yet, upward instability of income seems to be at least as dependent upon increases in the earnings of other family members as upon increases in the wife's earnings. For example, among older white men in the top income group who had upwardly unstable family income, the average monetary contribution in the second year of other members was \$1,859 (up from \$806) as compared to \$1,899 (up from \$1,559) from earnings of the wife. Similar patterns obtain in the other five color-base-income groups.

Among men employed as wage and salary workers, property income comprises a very small proportion of family income. For example, it is less than 5 percent of the total among older whites in the top third of the income distribution. Consequently, for most respondents, even very wide fluctuations in this component cannot generate relative instability in total family income. However, the data indicate that among older wage and salary workers, patterns of change in property income tend to reinforce patterns of instability set by the other components. The mean ratio of change in property income is consistently above the grand mean among those with upwardly unstable income and well below the mean for the downwardly unstable.

As might be expected, there is some evidence that transfer payments are a "stabilizing" component of total family income. Among the families with low base-year incomes, transfer payments show the largest positive change ratio for those whose family income was unstable downward. For the only group which can be categorized as "poor" by conventional standards—black men in the lowest third of the income distribution—transfer-payment income exhibits substantial absolute and relative increases for both the upwardly and downwardly unstable. This suggests that transfer payments, such as disability benefits, unemployment and work-

entry by wives was about the same for the two instability groups and was higher than among families with stable family income. The relationships shown in Table A.8 for low-income black men is maintained, only in part, by a slightly higher labor-force departure rate among wives in families with downwardly unstable income.

men's compensation, both cushion backslides on the metaphorical escalator and provide an upward boost in periods subsequent to the backslide. Without performing an extensive decomposition of existing variables, we cannot be certain about the reason for the increase in transfer income among white men in the top income group, but it may reflect this group's increased eligibility for pensions associated with military service and other programs.

Multiple Classification Analysis. In order to examine simultaneously the relative contribution of change in each component to change (or stability) in total family income, an MCA analysis was performed. The MCA was restricted to the older cohort for two reasons. First, the number of data cases in each income group of young blacks is very small. Second, the number of data cases with nonzero values for unemployment compensation in either year or for "other income" is minute. The RIC for total family income (in continuous form) was regressed on a set of 25 dummy variables. The latter consisted of five categories of change ratios for each component of family income. These categories ranged from "highly unstable upward" to "highly unstable downward." The results are presented in Table 11. *Eta* is a simple correlation ratio between a given explanatory variable and the dependent variable and is analogous to a Pearsonian *r*. According to Andrews, Morgan, and Sonquist, the *beta* coefficients, on the other hand, are "moderately good substitute[s] for a partial correlation coefficient . . . , [but] must be interpreted with caution, and are useful only for indicating the relative importance of the various predictors."²⁴

As would be expected from the definitional relationship between total family income and the sum of its components, the MCA produced R^2 s that are unusually large for microdata.²⁵

In each color-income group, instability of respondent's earnings stands out as the principal source of instability in family income. Moreover, the results indicate that the importance of the earnings of the head of the household in causing change in total family income is inversely related to the level of base-year income.

There is support for an observation made earlier on the basis of

²⁴ Andrews, Morgan, and Sonquist, *Multiple Classification Analysis*, pp. 117-18.

²⁵ They are, nevertheless, less than unity since, among other reasons, the method of measuring the dependent variable (continuous) is different from measurement of the explanatory variables (five categories each).

TABLE 11 MCA Results for Components of Total Family Income, by Color and Base-Year Income: Middle-Aged Male Wage and Salary Workers

Base-Year Income (N)	Component												R ²			
	Respondent's Earnings			Wife's Earnings			Other Earnings			Property Income				Transfer Income		
	η	β	η	β	η	β	η	β	η	β	η	β		η	β	
	Whites															
High (588)	.507	.489	.229	.212	.320	.295	.220	.172	.101	.076 ^a	.432	.410				
Medium (642)	.591	.610	.276	.271	.317	.322	.206	.151	.026	.105 ^a	.558	.542				
Low (404)	.631	.658	.266	.233	.261	.227	.218	.137 ^b	.061	.189	.561	.536				
	Blacks															
High (259)	.503	.508	.300	.261	.363	.335	.199	.172	.208	.125 ^a	.506	.462				
Medium (264)	.641	.641	.352	.233	.296	.308	.120	.124 ^a	.137	.120 ^a	.603	.568				
Low (198)	.793	.790	.219	.198	.256	.192	.094	.063 ^a	.130	.060 ^a	.709	.674				

NOTE: Significance was determined by an F-test suggested by Andrews, Morgan, and Sonquist, *Multiple Classification Analysis*, p. 100, equation (4-23). Unless otherwise indicated figures are significant at $\alpha \leq .01$.

^a Not significant at $\alpha \leq .05$.

^b Significant at $.01 \leq \alpha < .05$.

relationships shown in Table 10. Specifically, instability in the earnings of family members other than the wife contributes as much or more to instability in family income as instability of the wife's earnings. In the equations for the high- and middle-income families in both color groups, the *beta* coefficients are noticeably higher for "other earnings" than for "wife's earnings," whereas for the low-income families these two components have approximately equal coefficients.

As mentioned earlier, for wage and salary workers the small proportion of total family income attributable to property income makes it unlikely that this component can contribute substantially to relative instability in total income. The MCA results confirm this common-sense observation; the coefficients for property income are considerably below those for any of the earnings components and, in fact, are only statistically significant in three of the equations (i.e., for families with 1966 incomes above \$6,500). The bivariate relationship between the change ratio in transfer payments and the RIC for total family income turns out to be illusory, except in the case of low-income whites. The net coefficients are very small and are significant only for whites in the bottom third of the income distribution.

Respondent's Earnings

In order to investigate the sources of relative instability in respondent's earnings, we have adopted a procedure analogous to that used to study instability of total family income. Annual earnings have been decomposed into their definitional components, i.e., hourly rate of pay and annual hours worked, with the latter component further decomposed into usual hours worked per week, weeks of unemployment, and weeks out of the labor force.²⁶

Cross-Tabular Analysis. The data in Table 12 and Appendix Table A.10 depict the bivariate relationships between relative instability of earnings and its components in the same manner as was done for relative instability of total family income in Tables 10 and A.8.

²⁶ While definitional, hourly rate of pay and usual hours worked per week refer to current (or last) job. Thus, these figures may not be representative of the base-year period. Furthermore, the work experience measures for the older men refer to the 12-month period preceding each survey while earnings (and income) were reported on a calendar-year basis.

TABLE 12 Mean Ratios of Change, 1966-67, in Components of Respondent's Earnings, by Age Group and Color: Middle-Aged and Young Male Wage and Salary Workers^a

Component of Respondent's Earnings	Whites			Blacks				
	Total or Average	Unstable Upward	Stable	Unstable Downward	Total or Average	Unstable Upward	Stable	Unstable Downward
				Men 45-59 Years of Age				
Hourly rate of pay	2.7	5.9	2.7	0.1	4.7	8.2	3.4	3.2
Hours worked per year	-0.5	3.2	-0.5	-3.7	0.8	4.1	0.4	-2.1
Usual hours per week	-0.9	-0.5	-0.7	-1.7	-0.8	-0.6	-0.5	-1.5
Weeks unemployed	-0.9	-10.8	0.0	5.1	-4.3	-10.6	-5.2	3.7
Weeks not in labor force	-0.7	-6.8	-0.5	3.8	-2.1	-6.6	-1.8	1.8
Total number (thousands)	8,665	1,750	4,842	2,076	891	254	389	247
				Men 16-24 Years of age				
Hourly rate of pay	3.5	3.6	4.7	2.3	5.1	3.1	7.1	5.6
Hours worked per year	-1.1	4.4	-2.0	-4.3	-1.6	2.9	-2.9	-4.9
Usual hours per week	-2.1	-0.1	-2.5	-3.0	-1.5	0.4	-2.5	-2.6
Weeks unemployed	-4.6	-8.2	-3.9	-2.5	-12.0	-9.4	-6.3	-18.1
Weeks not in labor force	-10.9	-23.2	-6.3	-5.3	-5.0	-11.1	1.9	-3.8
Total number (thousands)	2,257	673	676	914	223	80	55	88

^a Persons reporting negative income in any year are excluded.

Among the older men who were employed as wage and salary workers, relative instability in both hourly earnings and annual hours of work exhibit positive associations with relative instability of annual earnings. However, the associations are regular and pronounced only among whites. For example, among black men with low incomes, there is no difference in the relative stability of rate of pay as between those with upwardly unstable earnings and those with downwardly unstable earnings. Likewise, among blacks in the upper two-thirds of the earnings distribution, the two groups with unstable earnings are virtually indistinguishable with respect to stability of total hours worked.

Among the younger men, only instability of annual hours of work appears to bear a discernible relationship to instability of annual earnings. Indeed, for whites and blacks alike, the mean ratio of change in the wage rate is at least as great among those with stable earnings as among those whose earnings changed faster or slower than the average. In fact, among the whites in the lowest base-year earnings category, there appears to be an inverse association between change in the wage rate and change in earnings. This may be a result of the fact that this group contains a disproportionate share of men who were students during part of the first year. These individuals would be expected to experience large increases in annual earnings after becoming full-time participants in the labor market, but without necessarily showing much increase in hourly rate of pay.

When we further examine the sources of instability in annual hours of work (usual hours per week, and so on), it is apparent that the impact of each component varies with color, age, and base-year earnings. Because virtually all of the men under study are full-time participants in the labor market, there is extremely little variation in weekly hours of work. Furthermore, since our measure is "usual" hours of work per week, we do not pick up the variation which sometimes results from overtime. Thus, it is not surprising that the relationship between relative stability of weekly hours and annual earnings is weak.

Relative instability of unemployment experience generally exhibits the expected association with relative instability of annual earnings. That is, over a period of improving economic conditions, weeks unemployed declined more than average among those men classified as having upwardly unstable earnings. Because of the concentration of unemployment among certain groups of workers, its change shows no relation to the stability of annual earnings

among older white men in the high base-year earnings category. Further, there is no apparent relationship within the group which has the greatest recorded susceptibility to unemployment, i.e., young black men.

Change in the amount of time spent out of the labor force generally is associated with earnings instability in the anticipated way. As expected, respondents with upwardly unstable earnings reduced their time out of the labor force at an above average rate and the opposite was true of those with downwardly unstable earnings. Of course, to the extent that some of the increased time in the labor force is spent unemployed rather than working, the effect is attenuated. The relationship between stability of weeks out of the labor force and stability of earnings seems to be most pronounced among those in the low-earnings categories. The large coefficient of change (-32.8) for young white men with low base-year and upwardly unstable earnings is support for the conjecture expressed earlier regarding wage rate and earnings stability for those who may have been students at some time during the base year.

Multiple Classification Analysis. In order to examine the "net" relationships of the several possible sources of relative instability of earnings, we have again employed multiple classification analysis. Once again, the dependent variable is expressed in continuous form, this time as the RIC for respondent's earnings. The regressors are categorical variables. However, only the change ratios of hourly rate of pay and usual hours worked per week were coded into five categories. The variables to measure stability of weeks unemployed and weeks out of the labor force were coded into only three categories each: unstable upward, stable, and unstable downward.²⁷ Results of the analysis for both cohorts appear in Table 13.

In general, our findings are consistent with the preceding discussion of the tables showing bivariate relationships.²⁸ First,

²⁷ We have departed somewhat from our earlier method of measuring stability in these two variables. The upwardly unstable were defined as those for whom the change ratio was above zero and the downwardly unstable were defined as those for whom the change ratio was below zero. This procedure was adopted because of the tremendously large concentration of cases in which the change ratio equaled zero.

²⁸ Because of small sample sizes among the young blacks, none of the F-tests show statistical significance. Consequently, the discussion below omits consideration of these results.

TABLE 13 MCA Results for Components of Respondent's Earnings, by Level of Base-Year Earnings, Age Group, and Color: Middle-Aged and Young Male Wage and Salary Workers

Cohort and Earnings Group (N)	Stability of												\bar{R}^2	F
	Wage Rate		Hours/Week		Weeks Unemployed		Weeks OLF		R^2	β	η	β		
	η	β	η	β	η	β	η	β						
Men 45-59 Years of Age														
Whites														
High (689)	.233	.208	.192	.156	.094	.024 ^a	.095	.125	.083	.063				4.07
Medium (698)	.251	.279	.167	.181	.099	.422	.053	.435	.120	.101				6.21
Low (848)	.162	.157	.088	.022 ^a	.163	.206	.078	.092	.055	.038				3.25
Blacks														
High (285)	.255	.281	.028	.064 ^a	.093	.206	.095	.181	.093	.043				1.84
Medium (298)	.165	.196 ^a	.075	.082 ^a	.087	.460	.098	.439	.066	.017 ^a				1.34

	.161	.162 ^a	.131	.156	.218	.170	.180	.168	.097	.060	2.63
	Men 16-24 Years of Age										
	Whites										
Low (384)	.233	.193 ^a	.276	.269	.314	.266	.113	.040 ^a	.201	.125	2.64
High (174)	.285	.327	.353	.367	.178	.136 ^a	.177	.118	.260	.197	4.78
Medium (206)	.249	.228	.446	.438	.246	.200	.243	.253	.357	.306	6.96
Low (204)											
	Blacks ^b										
Medium (47)	.208	.365 ^a	.388	.503 ^a	.237	.202 ^a	.151	.177 ^a	.297	^c	
Low (53)	.331	.263 ^a	.412	.407 ^a	.235	.251 ^a	.265	.283 ^a	.344	.078 ^a	1.30

NOTE: Significance was determined by an *F*-test suggested by Andrews, Morgan, and Sonquist, *Multiple Classification Analysis*, p. 100, equation (4-23). Unless otherwise indicated figures are significant at $\alpha \leq .05$.

^a Not significant at $\alpha \leq .05$.

^b No results are shown for blacks in the high-earnings group because there are only 24 sample cases representing the 52,000 men in this group.

^c Because of the small number of data cases and relatively large number of predictor categories, the *R*² adjusted for degrees of freedom is less than zero.

the instability of rate of pay, usual hours worked per week, weeks unemployed, and weeks out of the labor force explain a rather small proportion of the relative instability of annual earnings, especially among the older men.²⁹ Second, the instability in weeks unemployed and weeks out of the labor force exhibit the most consistently significant relationships to relative instability of annual earnings. Unemployment experience is nonsignificant only for the high-earnings group of older white men and for the medium-earnings group of young whites.

However, in contrast to the conjecture based on the data in Tables 12 and A.10, there is evidence that instability in weekly hours of work does bear a significant relationship to instability of annual earnings. This is a consistent result of the regressions for young white men and for three of the six equations for the older men. The rather unsystematic results concerning the association of instability in hourly wage rate and in annual earnings were presaged in the earlier discussion. Because of the substantial variation in the results across the 11 age-color-base-earnings groups, it does not seem prudent to draw any general conclusions about the relative importance of the several potential sources of relative instability in annual earnings. There is need for additional research on this question with improved measurement and somewhat different specifications (e.g., a multiplicative model).

V. CONCLUDING OBSERVATION

Collecting income data covering several years by means of repeated annual surveys rather than by a single retrospective interview has the advantage of reducing the problem of faulty recall by respondents and doubtless improves the validity of the data. On the other hand, when such data are used longitudinally to measure gross changes (i.e., instability) in income over time, as is the case in this paper, it is almost certain that spurious change is

²⁹ These regressions probably are less successful than those presented earlier because: (1) there is considerably less variation in the several components of earnings than in the components of total family income; (2) our measurement of the components of personal earnings is less precise than is the case for the components of family income; (3) the measures do not always relate to the time period for which earnings were reported; and (4) the components chosen are related multiplicatively to earnings, whereas they were additive in the case of total income.

registered as the result of reporting and clerical errors in one or more of the time periods. In cross-sectional analysis, such errors, if unsystematic, tend to average out; in longitudinal analysis they almost inevitably result in overstating the "true" amount of gross change in the variable under consideration.

If the year-to-year income instability that our data reveal were completely spurious, it would, of course, no longer follow that the length of the accounting period affects a "true" measure of income inequality. The modest reduction in the Gini coefficients that we have observed as the time period is lengthened would be merely reflecting noise in the data rather than a real-world phenomenon.

While we believe that our data almost certainly overstate the extent of income instability, there is no way of knowing by precisely how much. Nevertheless, we can be reasonably certain that a substantial amount of the change in relative position in the income distribution that we have measured is real, for the consistency of the relationships that we have found between income instability on the one hand and demographic and labor-market variables on the other hand admits of no other interpretation.

APPENDIX

TABLE A.1 Nonresponse Rates on Total Family Income, 1966 and 1967, by Income Class in 1966 and 1967: Middle-Aged Men

Income Class	Whites			Blacks		
	Number, 1966 (Thousands)	Nonresponse Rate, 1967 (Percent)	Number, 1967 (Thousands)	Nonresponse Rate, 1966 (Percent)	Number, 1966 (Thousands)	Nonresponse Rate, 1967 (Percent)
Total or average	12,842	15.6	12,842	22.5	1,225	12.0
Loss of income	47	6.4	34	11.7	5	60.0
\$0-\$1,999	496	8.2	580	20.3	159	5.7
2,000- 2,999	395	10.1	346	18.8	113	8.0
3,000- 3,999	431	11.8	486	21.6	126	11.9
4,000- 4,999	480	9.6	507	24.2	103	7.8
5,000- 5,999	655	9.6	649	20.6	91	8.8
6,000- 6,999	795	8.3	889	15.2	100	10.0
7,000- 7,999	1,021	7.8	931	14.7	85	8.2
8,000- 8,999	830	13.8	877	16.6	50	16.0
9,000- 9,999	817	12.2	920	17.7	31	9.6
10,000-10,999	716	11.2	751	16.0	20	15.0
11,000-11,999	657	11.7	707	16.1	19	21.0
12,000-12,999	608	14.5	593	19.0	24	20.8
13,000-14,999	639	12.5	971	20.4	17	11.8
15,000-19,999	788	14.9	951	25.7	20	10.0
20,000 or more	576	20.1	663	20.5	6	16.7
Not ascertained	2,891	28.9	1,997	41.7	256	20.8
					1,225	21.0
					4	25.0
					170	17.6
					109	16.5
					108	20.4
					105	20.0
					121	21.5
					108	13.0
					86	17.4
					79	15.1
					47	27.7
					43	27.9
					26	23.1
					19	10.5
					15	13.3
					32	21.8
					5	20.0
					147	35.3

TABLE A.2 Nonresponse Rates on Total Family Income, 1966 and 1968, by Income Class in 1966 and 1968: Young Men

Income Class	Whites			Blacks		
	Number, 1966 (Thousands)	Nonresponse Rate, 1968 (Percent)	Number, 1968 (Thousands)	Nonresponse Rate, 1966 (Percent)	Number, 1966 (Thousands)	Nonresponse Rate, 1966 (Percent)
Total or average	2,628	5.4	2,628	28.1	237	1.3
Less than \$1,000	.22	0.0	14	87.5	4	0.0
\$1,000-\$1,999	39	12.8	9	44.4	14	0.0
2,000- 2,999	85	0.0	63	31.7	34	2.9
3,000- 3,999	163	8.6	80	22.5	29	6.9
4,000- 4,999	208	1.9	105	34.3	33	0.0
5,000- 5,999	279	4.3	194	39.2	6	0.0
6,000- 6,999	252	4.8	298	33.9	14	0.0
7,000- 7,999	212	8.5	308	30.2	6	0.0
8,000- 8,999	206	4.4	312	23.1	4	0.0
9,000- 9,999	137	12.4	299	22.4	8	0.0
10,000-10,999	117	3.4	233	25.7	17	0.0
11,000-11,999	59	0.0	167	32.9	0	-
12,000-12,999	61	18.0	150	28.7	0	-
13,000-14,999	8	50.0	126	7.9	0	-
15,000-19,999	30	0.0	96	34.4	0	-
20,000 or more	10	0.0	32	28.1	0	-
Not ascertained	740	4.2	142	22.0	68	0.0

TABLE A.3 Percentage of Income and Earnings Received by Selected Fractions of Respondents: Middle-Aged Men^a

Year and Fraction of Recipients Arrayed by Level of Income or Earnings	Total Family Income			Self-employed, 1966-67	Earnings of Wage and Salary Workers
	Total or Average	Wage and Salary Workers, 1966-67	Total Family Income per Family Member		
Whites					
1966:					
Lowest 25 percent	9.1	12.1	7.9	5.9	10.7
Lowest 50 percent	27.8	31.6	24.3	19.9	30.6
Lowest 75 percent	53.9	57.3	49.7	42.8	56.7
Lowest 95 percent	83.9	86.1	82.6	76.1	85.8
1967:					
Lowest 25 percent	9.3	12.3	8.3	6.3	11.5
Lowest 50 percent	28.2	32.0	25.0	21.0	31.2
Lowest 75 percent	54.5	57.9	50.2	45.1	57.3
Lowest 95 percent	84.7	86.3	83.0	78.8	85.9
1966-67, cumulative:					
Lowest 25 percent	9.8	12.6	8.5	7.0	11.8

Lowest 50 percent	28.9	32.4	22.0	25.4	31.7
Lowest 75 percent	54.9	58.3	45.7	50.8	57.6
Lowest 95 percent	84.8	86.5	78.9	83.3	86.2
			Blacks		
1966:					
Lowest 25 percent	7.3	8.7	4.2	5.2	9.1
Lowest 50 percent	24.0	27.3	14.7	19.0	28.4
Lowest 75 percent	51.4	54.8	33.8	44.7	57.3
Lowest 95 percent	84.9	87.0	70.4	81.7	88.6
1967:					
Lowest 25 percent	7.2	9.2	3.4	5.6	9.8
Lowest 50 percent	24.9	28.5	15.6	20.4	29.6
Lowest 75 percent	52.7	55.7	40.9	46.8	57.9
Lowest 95 percent	86.1	87.2	82.0	83.3	88.6
1966-67, cumulative:					
Lowest 25 percent	7.7	9.4	5.2	5.8	9.9
Lowest 50 percent	25.2	28.6	17.0	20.4	29.6
Lowest 75 percent	52.9	56.0	38.3	46.5	58.2
Lowest 95 percent	86.2	87.6	79.0	83.3	88.9

^a See text, Table 3, for universe restrictions and number of observations.

TABLE A.4 Percentage of Income and Earnings Received by Selected Fractions of Respondents: Young Men^a

Year and Fraction of Recipients Arrayed by Level of Income or Earnings	Whites				Blacks	
	Total Family Income		Earnings of Wage and Salary Workers	Total Family Income	Earnings of Wage and Salary Workers	Total Family Income
	All Respondents	Wage and Salary Workers, 1966-68				
1966:						
Lowest 25 percent	12.2	12.5	11.4	9.6	9.5	
Lowest 50 percent	32.5	33.0	33.4	27.1	29.0	
Lowest 75 percent	60.1	60.8	61.5	52.3	56.5	
Lowest 95 percent	89.3	90.0	90.3	88.8	88.4	
1967:						
Lowest 25 percent	13.2	13.4	12.9	9.9	10.1	
Lowest 50 percent	34.3	34.4	34.9	28.8	28.6	
Lowest 75 percent	61.2	61.3	62.6	58.1	56.0	
Lowest 95 percent	89.7	89.7	90.8	89.8	88.3	
1968:						
Lowest 25 percent	13.6	13.7	13.6	11.0	10.8	
Lowest 50 percent	35.0	35.2	36.0	30.1	31.0	
Lowest 75 percent	61.8	62.0	63.6	57.8	58.2	
Lowest 95 percent	89.5	89.6	90.8	88.5	88.7	
1966-68, cumulative:						
Lowest 25 percent	14.4	14.6	14.1	11.6	11.6	
Lowest 50 percent	35.6	35.9	36.3	30.0	31.5	
Lowest 75 percent	62.5	62.7	63.7	57.9	58.5	
Lowest 95 percent	90.3	90.6	91.1	89.8	89.0	

TABLE A.5 Cutting Points for Equal Thirds (Rounded to Nearest \$100) of Total Family Income and Respondent's Earnings: Middle-Aged and Young Men
(dollars)

<i>Third</i>	<i>Men 45-59</i>		<i>Men 16-24</i>	
	<i>Total Family Income, 1966</i>	<i>Earnings of Wage and Salary Workers, 1966</i>	<i>Total Family Income, 1966</i>	<i>Earnings of Wage and Salary Workers, 1966</i>
			Whites	
1st third	7,000	6,100	5,400	4,600
2nd third	10,900	8,700	8,000	6,500
			Blacks	
1st third	3,300	3,400	3,100	2,800
2nd third	6,400	5,700	5,000	4,600

TABLE A.6 Adjusted Proportion^a of Respondents with Stable Earnings and Adjusted Relative Instability Coefficient,^a by Color, Level of Base-Year Earnings, and Selected Other Characteristics: Middle-Aged Men

Characteristic	High Base-Year Earnings			Medium Base-Year Earnings			Low Base-Year Earnings		
	Number (Sample Cases) ^b	Adjusted Percent Stable	Adjusted RIC	Number (Sample Cases) ^b	Adjusted Percent Stable	Adjusted RIC	Number (Sample Cases) ^b	Adjusted Percent Stable	Adjusted RIC
Total sample ^c	686	59	-4.8	691	64	-2.3	840	48	+5.4
Age:									
45-49	303	58	-4.2	283	62	-1.8	285	42	+6.8
50-54	228	61	-4.7	242	66	-2.2	309	48	+5.0
55-59	155	58	-6.0	166	64	-3.2	246	54	+4.0
Marital status:									
Married spouse present, 1966-67	657	59	-4.8	649	64	-2.2	727	48	+5.9
Nonmarried, 1966-67	25	54	-3.9	35	47	-4.4	95	48	+1.1
Highest year of school completed:									
0-4	4	d	d	12	d	d	61	47	-0.6
5-8	97	58	-5.4	206	64	-3.7	361	48	+3.6
9-11	128	57	-4.2	181	61	-2.5	190	50	+4.3
12	181	63	-5.7	210	63	-1.4	164	49	+8.0
13+	275	57	-4.2	80	66	-0.3	62	32	+18.4
Health:									
Chronic health problem	75	57	-8.5	116	64	-2.5	208	48	+8.6
No chronic health problem	610	59	-4.4	573	63	-2.2	631	48	+4.2
Major occupation group, 1966-67:									
Different occupation group each year	34	45	-7.5	38	67	-4.3	91	46	+5.7
Professional, technical	163	71	-3.4	49	52	-4.1	34	43	+2.5
Managers and officials	156	61	-5.8	69	68	-1.5	59	28	+13.2

Whites

Clerical	26	56	-1.6	68	73	-2.7	41	68	+1.6
Sales	44	48	-2.8	36	66	-2.1	23	d	d
Craftsmen, foremen	184	55	-4.8	242	64	-1.8	178	48	+6.0
Operatives	66	48	-7.4	156	58	-2.2	200	49	+3.1
Nonfarm laborers	3	d	d	16	d	d	81	39	+2.2
Service workers	10	d	d	15	d	d	91	56	+5.5
Farm workers	0	-	-	2	d	d	42	44	+13.3
Major industry division, 1966-67:									
Different industry division each year	21	d	d	25	49	-4.2	66	23	+8.9
Agriculture	0	-	-	3	d	d	46	49	+3.9
Mining, forestry, fisheries	7	d	d	10	d	d	15	d	d
Construction	55	51	-5.2	55	53	+0.2	93	48	+2.7
Manufacturing	281	60	-3.7	284	67	-1.0	233	46	+5.4
Transportation, utilities	88	59	-3.2	102	59	-2.4	63	51	+4.9
Trade	67	57	-8.2	69	65	-3.9	123	48	+11.3
Finance, insurance, real estate	36	62	-4.1	21	d	d	22	d	d
Service	56	56	-5.4	54	69	-7.1	122	56	+0.9
Public administration	75	69	-5.2	68	68	-2.7	57	58	+2.6
Interfirm mobility, 1966-67:									
Same employer both years	630	60	-4.7	634	64	-2.2	714	49	+5.7
Voluntary change	30	47	-4.6	27	76	-1.4	79	40	+0.7
Involuntary change	26	52	-7.7	30	48	-5.6	47	44	+9.0
					Blacks				
Total sample ^c	285	58	-4.1	296	47	-1.0	381	29	+5.9
Age:									
45-59	122	56	-3.9	120	44	-1.1	118	27	+6.0
50-54	99	60	-5.0	105	54	-2.0	144	30	+5.8
55-59	64	56	-3.0	71	41	-0.7	119	30	+5.9
Marital status:									
Married spouse present, 1966-67	244	57	-4.0	254	48	-1.4	284	32	+6.9

TABLE A.6 (Concluded)

Characteristic	High Base-Year Earnings			Medium Base-Year Earnings			Low Base-Year Earnings		
	Number (Sample Cases) ^b	Adjusted Percent Stable	Adjusted RIC	Number (Sample Cases) ^b	Adjusted Percent Stable	Adjusted RIC	Number (Sample Cases) ^b	Adjusted Percent Stable	Adjusted RIC
Nonmarried, 1966-67	33	54	-4.9	32	40	+1.3	78	18	+5.2
Highest year of school completed:									
0-4	33	56	-2.7	74	51	+0.7	170	28	+4.3
5-8	96	48	-7.0	122	43	-0.8	141	26	+7.8
9-11	72	64	-2.0	56	49	-2.2	41	25	+7.2
12	54	56	-3.3	29	55	-3.0	18	d	d
13+	29	71	-2.1	13	d	d	10	d	d
Health:									
Chronic health problem	36	52	-6.1	45	58	-1.1	74	21	+11.3
No chronic health problem	246	59	-3.8	249	44	-2.0	307	31	+4.6
Major occupation group, 1966-67:									
Different occupation group each year	12	d	d	17	d	d	56	26	+8.1
Professional, technical	16	d	d	6	d	d	9	d	d
Managers and officials	10	d	d	2	d	d	0	-	-
Clerical	29	59	-4.3	13	d	d	10	d	d
Sales	2	d	d	2	d	d	1	d	d
Craftsmen, foremen	56	60	-1.8	35	47	+3.0	26	24	+14.0

Operatives	95	61	-3.9	101	48	-1.8	77	38	+6.6
Nonfarm laborers	45	53	-6.7	62	56	-2.5	97	35	+3.6
Service workers	20	d	d	55	40	-1.4	52	23	+8.8
Farm workers	0	-	-	3	d	d	53	26	+0.0
Major industry division, 1966-67:									
Different industry division each year	8	d	d	13	d	d	48	24	+6.2
Agriculture	0	-	-	4	d	d	60	21	+2.6
Mining, forestry, fisheries	8	d	d	5	d	d	2	d	d
Construction	24	d	d	30	24	-7.7	47	14	+11.1
Manufacturing	115	58	-3.8	104	40	+3.4	84	27	+13.7
Transportation, utilities	40	50	-7.4	51	47	-2.3	25	30	+3.6
Trade	17	d	d	27	50	-7.6	43	58	+0.7
Finance, insurance, real estate	6	d	d	4	d	d	9	d	d
Service	18	d	d	39	77	+0.8	57	32	-0.7
Public administration	49	64	-1.9	19	d	d	6	d	d
Interfirm mobility, 1966-67:									
Same employer both years	274	59	-3.6	273	46	-1.6	313	30	+6.8
Voluntary change	5	d	d	12	d	d	37	34	+6.5
Involuntary change	6	d	d	11	d	d	31	18	-3.3

a See footnote *a* Text Table 8.

b See footnote *b* Text Table 8.

c See footnote *c* Text Table 8.

d See footnote *d* Text Table 8.

TABLE A.7 Adjusted Proportion^a of Wage and Salary Workers With Stable Earnings and Adjusted Relative Instability Coefficient,^a by Level of Base-Year Earnings and Other Selected Characteristics: White Young Men^b

Characteristic	High Base-Year Earnings			Medium Base-Year Earnings			Low Base-Year Earnings		
	Number (Sample Cases) ^c	Adjusted Percent Stable	Adjusted RIC	Number (Sample Cases) ^c	Adjusted Percent Stable	Adjusted RIC	Number (Sample Cases) ^c	Adjusted Percent Stable	Adjusted RIC
	Total sampled ^d	174	28	-4.3	206	38	-1.8	204	22
Age:									
16-18	0	-	-	3	e	e	12	e	e
19-20	13	e	e	34	44	-2.2	37	18	+4.4
21-22	57	32	-4.6	53	40	-2.0	79	29	+6.1
23-24	104	23	-3.9	116	35	-1.2	76	20	+6.3
Highest year of school:									
0-8	6	e	e	21	e	e	30	27	-2.1
9-11	34	32	-6.7	39	38	-0.3	42	21	+3.0
12	75	25	-3.8	103	41	-1.1	83	29	+6.3
13-15	30	14	-4.1	21	e	e	26	12	+1.1
16+	29	49	-2.2	22	e	e	23	e	e
Interfirm mobility, 1966-68:									
Same employer all three dates	103	36	-2.9	122	45	-0.9	80	18	+8.8
Two different employers	49	16	-6.0	54	32	-0.5	65	23	+7.0
Three different employers	17	9	-6.9	23	e	e	31	25	+6.5

^a See footnote *a*, Text Table 9.

^b There are insufficient sample cases of blacks to permit analysis at this level of detail.

^c Although numbers refer to sample cases, calculations are based on weighted observations.

^d Total includes cases in which characteristic was not ascertained. Persons with negative income are excluded.

^e Percentage or RIC not calculated where base is smaller than 25 sample cases.

TABLE A.8 Mean Ratios of Change, 1966-67, in Selected Components of Total Family Income, By Level of Base-Year Income, Age Group, and Color: Middle-Aged and Young Male Wage and Salary Workers^a

Component of Family Income	High Base-Year Income			Medium Base-Year Income			Low Base-Year Income						
	Total	Unstable	Unstable	Total	Unstable	Unstable	Total	Unstable	Unstable				
	Sample Average	Upward	Downward	Average	Upward	Downward	Average	Upward	Downward				
White Men 45-59 Years of Age													
Earnings of respondent	2.4	0.5	9.1	1.4	-10.8	2.7	8.9	2.2	-5.0	4.9	15.0	1.8	-17.2
Earnings of wife	3.1	-1.1	9.4	2.2	-10.5	3.1	11.5	4.5	-11.1	10.6	23.1	4.5	-7.0
Earnings of others	5.5	3.4	23.9	10.9	-17.3	5.3	22.5	2.9	-13.4	8.9	19.6	5.6	-8.5
Property income	-3.5	-7.3	4.9	2.8	-26.6	-1.2	11.2	-3.0	-14.3	-1.5	4.9	-4.5	-9.8
Transfer income	1.1	4.8	7.3	5.0	3.3	-1.3	-1.3	-3.7	3.5	-0.9	0.2	-3.1	1.3
Total number (thousands)	6,345	2,328	437	1,056	830	2,474	782	1,116	576	1,544	648	619	277
Black Men 45-59 Years of Age													
Earnings of respondent	3.7	-0.6	7.2	2.2	-11.0	2.0	12.5	1.1	-15.2	8.8	11.4	0.1	-24.1
Earnings of wife	3.3	1.7	21.6	2.5	-10.9	4.8	19.1	-2.7	-12.5	3.8	11.1	-4.9	-3.1
Earnings of others	9.3	7.3	23.8	11.5	-5.8	15.2	24.1	14.2	-1.4	3.8	11.2	0.5	-10.6
Property income	-3.2	-6.5	13.1	-6.4	-17.3	-3.2	4.4	-7.9	-8.7	1.8	-0.2	7.5	1.0
Transfer income	-0.9	-2.4	-3.2	0.2	-4.5	-3.7	-2.2	-5.0	-4.1	5.7	6.4	1.6	7.7
Total number (thousands)	672	262	56	105	102	244	97	101	46	166	86	37	42
White Men 16-24 Years of Age													
Earnings of respondent	7.9	4.9	b	7.5	2.4	7.3	12.4	8.2	2.2	13.1	18.3	8.7	-0.3
Earnings of wife	-13.8	-13.0	b	0.1	-20.4	-16.6	-3.0	-15.8	-23.5	-11.1	-10.9	-5.5	-14.7
Unemployment compensation	-2.8	-4.0	b	-7.8	-3.8	-3.7	1.2	-3.7	-6.7	-0.9	-1.5	0.0	0.0
Other income	-8.6	-15.0	b	-14.5	-18.3	-5.1	3.4	-4.4	-11.0	-6.1	-2.4	-8.9	-14.0
Total number (thousands)	1,590	505	72	94	340	491	121	183	192	594	358	117	125

TABLE A.8 (Concluded)

Component of Family Income	High Base-Year Income				Medium Base-Year Income				Low Base-Year Income			
	Total		Unstable		Total or Unstable		Unstable		Total or Unstable		Unstable	
	Sample	Average	Upward	Stable	Average	Upward	Stable	Downward	Average	Upward	Stable	Downward
Earnings of respondent	9.8	b	b	b	b	b	b	b	18.7	23.5	b	b
Earnings of wife	-2.4	b	b	b	-8.5	b	b	b	6.8	10.8	b	b
Unemployment compensation	-8.2	b	b	b	-3.3	b	b	b	-9.7	-13.6	b	b
Other income	-3.2	b	b	b	-4.5	b	b	b	-0.5	0.0	b	b
Total number (thousands)	164	52	7	23	52	18	15	19	58	38	8	12

Black Men 16-24 Years of Age

a Persons reporting negative income in any year are excluded.

b Percentages not shown where base represents fewer than 25 sample cases.

TABLE A.9 Relative Stability of Total Family Income by Relative Stability of Respondent's Earnings, Age Group, and Color: Middle-Aged and Young Male Wage and Salary Workers^a
(percentage distribution)

Relative Stability of Respondent's Earnings	Men 14-24 Years of Age						Men 45-59 Years of Age					
	Total Family-Income:			Total Family Income:			Total Family-Income:			Total Family Income:		
	Highly Unstable Upward	Moderately Unstable Upward	Stable	Highly Unstable Downward	Moderately Unstable Downward	Stable	Highly Unstable Upward	Moderately Unstable Upward	Stable	Highly Unstable Downward	Moderately Unstable Downward	Stable
Highly unstable +	66	8	2	2	2	2	42	4	1	2	4	4
Unstable +	19	47	10	3	3	3	23	40	6	3	1	1
Stable	15	32	73	31	20	20	27	50	80	33	32	32
Unstable—	0	13	15	53	21	3	3	6	12	58	22	22
Highly unstable—	0	0	0	11	55	1	5	0	1	4	41	41
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	186	364	389	472	171	171	376	1,491	2,791	1,309	374	374
	Whites											
	Blacks											
Highly unstable +	67	0	0	3	0	0	48	11	1	2	0	0
Unstable +	29	80	4	3	0	0	37	48	8	4	2	2
Stable	4	20	68	28	44	5	5	33	77	29	23	23
Unstable—	0	0	26	56	25	8	8	8	14	56	25	25
Highly unstable—	0	0	2	10	31	2	2	0	1	9	50	50
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	24	40	47	37	16	16	82	157	243	127	62	62

^a Persons reporting negative income in any year are excluded.

TABLE A.10 Mean Ratios of Change, 1966-67, in Components of Respondent's Earnings, by Level of Base-Year Earnings, Age Group, and Color: Middle-Aged and Young Wage and Salary Workers^a

Component of Respondent's Earnings	High Base-Year Earnings			Medium Base-Year Earnings			Low Base-Year Earnings						
	Total Sample	Total or Unstable Average	Unstable Downward Stable	Total or Unstable Average	Unstable Downward Stable	Total or Unstable Average	Total or Unstable Average	Unstable Downward Stable	Unstable Downward				
				White Men 45-59 Years of Age									
Hourly rate of pay	2.7	2.4	6.6	3.1	1.9	2.3	6.9	2.3	-0.6	3.1	5.4	2.7	0.2
Hours worked per year	-0.5	-1.6	0.7	-0.4	-4.6	-1.3	1.0	-1.0	-3.6	1.0	4.9	-0.2	-2.3
Usual hours per week	-0.9	-1.1	0.5	-0.7	-2.6	-1.0	-0.4	-0.7	-2.2	-0.6	-0.9	-0.7	0.1
Weeks unemployed	-0.9	1.0	2.0	-0.3	3.3	1.2	-8.7	1.6	6.1	-4.4	-15.0	-1.5	6.6
Weeks not in labor force	-0.7	-1.4	-6.9	-1.8	1.2	1.3	-7.0	1.0	7.4	-1.9	-6.8	-0.7	-5.7
Total number (thousands)	8,665	2,703	283	1,584	836	2,729	379	1,727	623	3,235	1,087	1,531	617
				Black Men 45-59 Years of Age									
Hourly rate of pay	4.7	3.0	8.5	2.5	2.0	3.7	7.0	4.2	0.0	7.0	8.7	3.8	7.8
Hours worked per year	0.8	-0.9	-2.5	0.0	-2.0	1.4	2.1	0.4	2.6	1.6	6.4	1.0	-7.1
Usual hours per week	-0.8	-0.9	-1.4	-0.6	-1.3	-0.2	-1.1	-0.4	0.9	-1.2	-0.2	-0.8	-3.7
Weeks unemployed	4.3	-2.3	3.6	-6.6	4.0	-2.5	-5.5	-2.6	0.4	-7.6	-15.8	-6.6	6.8

Weeks not in labor force	-2.1	-0.6	1.6	-4.6	6.2	-6.3	-13.3	-2.1	-7.1	0.2	-5.1	3.3	6.2
Total number (thousands)	891	276	32	159	86	289	72	136	82	326	151	95	80
White Men 16-24 Years of Age													
Hourly rate of pay	3.5	2.1	b	2.8	1.2	3.4	2.4	6.0	1.6	5.0	3.7	4.6	8.0
Hours worked per year	-1.1	-3.1	b	-2.0	-3.9	-2.9	-1.7	-2.6	-4.2	3.1	8.1	-0.9	-5.9
Usual hours per week	-2.1	-2.7	b	-2.4	-3.2	-2.9	-2.9	-2.8	-3.1	-0.3	1.4	-2.1	2.4
Weeks unemployed	-4.6	-3.8	b	-4.6	-3.0	-2.1	-0.6	-1.6	-0.9	-9.8	-12.3	-7.6	-5.1
Weeks not in labor force	-10.9	-3.6	b	-3.4	-4.5	-7.3	-11.1	-3.7	-8.1	-22.5	-32.8	-14.8	-1.2
Total number (thousands)	2,257	680	45	195	447	871	221	317	336	706	407	164	131
Black Men 16-24 Years of Age													
Hourly rate of pay	5.1	b	b	b	b	10.6	7.1	b	5.7	2.5	0.5	b	b
Hours worked per year	-1.6	b	b	b	b	-1.1	2.8	b	1.3	-1.3	3.2	b	b
Usual hours per week	-1.5	b	b	b	b	-0.8	1.3	b	-0.4	-2.5	-0.2	b	b
Weeks unemployed	-12.0	b	b	b	b	-17.9	-26.1	b	-7.9	-5.0	1.2	b	b
Weeks not in labor force	-5.0	b	b	b	b	-11.9	-12.3	b	-11.0	-5.8	-11.0	b	b
Total number (thousands)	223	56	3	26	27	85	31	15	40	81	46	14	21

a Persons reporting negative income in any year are excluded.

b Percentages not shown where base represents fewer than 25 sample cases.

