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Volume Author/Editor: Klein, Philip A.

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Chapter Author: Philip A. Klein

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II

AGGREGATE ADJUSTMENTS TO UNEMPLOYMENT

WHEN UNEMPLOYMENT OCCURS, the affected household finds it must adjust to it in a variety of ways. Whether the unemployment was expected or unexpected, as well as the circumstances under which its onset was announced, may affect the way in which the household copes with its problems. Thus a psychological adjustment is required. Unemployment is a social problem as well. Whether it befalls many of one's colleagues, as might be the case during periods of recession, or whether one stands alone in one's group will play a role in the character of adjustment which the affected household will make to the situation.

This study will restrict itself to a consideration of the financial adjustments households make in response to unemployment. Financial adjustments can be defined as those economic adjustments involving debt, assets, and expenditures. Unemployment means, usually, that household income is reduced; in consequence thereof, the customary financial pattern of the household must be reorganized to cope with the unemployment-reduced income. Broadly speaking, therefore, the household's financial adjustment to unemployment involves the manipulation of its asset position, its debt position, and its expenditures to conform to its reduced income.

Expenditures on a variety of goods and services can be reduced. This will affect the customary pattern of living the most in the short run—that is to say, the members of the family will feel the immediate effect on their daily life most intensively. But this adjustment will preserve the family's net worth position. Adjustments affecting the net worth position include incurring new debt, failure

to repay existing debt on schedule,¹ and the liquidation of assets, all of which permit the household to reduce current expenditures by less than the loss of weekly income. Deterioration of the household's net worth position is likely to have less destabilizing consequences for the economy as a whole, in the short run, than expenditure reductions have. This is certainly the case for reduction in liquid-asset holdings. It is less clearly applicable to debt adjustments, where the stabilizing influence of expenditure maintenance is offset by the destabilizing consequences of accumulating unpaid bills, delinquencies, and repossessions on both lender confidence and the climate for business investment. In the long run, the prospect of continued impairment of net worth could outweigh the short-run advantages of the maintenance of consumption expenditures.

Ideally, it would be desirable to estimate the total amount of change in liquid assets, debt, and expenditures brought about specifically by the onset of unemployment. Clearly, these magnitudes will change whether or not the household experiences unemployment, and so the unemployment-induced change is not the observed change itself but the difference between the observed change and the "normal" or "customary" change.² The survey obtained data on a number of specific changes in expenditures which can reasonably be associated with the onset of unemployment. It seems clear, however, that these changes cannot begin to account for the aggregate change in expenditures brought on by unemployment—probably because those interviewed could not possibly remember in detail their expenditure pattern prior to and during the period of unemployment. Hence, the reliability of the available information varies greatly. Direct information on expenditure change appears

¹ Delinquency on existing debt does not of itself impair net worth except to the extent to which interest is allowed to accrue. It does, however, represent a difference between actual and scheduled net worth and thus represents an adjustment to unemployment. The effects of repossession of a durable good on actual net worth are probably zero, since the reduction of assets (the good which has been repossessed) is roughly balanced by the reduction in liabilities that occurs when the debt is extinguished. repossession can be thought of as equivalent to the forced sale of an asset, therefore, in order to repay debt with negligible effects on the household's net worth.

² Cf. Appendix A for a more detailed consideration of this problem.

to be much less reliable than that on changes in debts or assets, for example.

Because changes in debt and liquid assets are more likely to be recorded and to occur in lump-sum amounts after the onset of unemployment, the total change in expenditures has been estimated as a residual. The procedure involves the following steps.

Empirical Estimates

First, the change in net income induced by unemployment was estimated as the algebraic difference between weekly household earnings (take-home pay) at the survey date and weekly earnings prior to unemployment, multiplied by the number of weeks of unemployment; the total amount of unemployment compensation received was then added to the difference in earnings. Mostly the net change was negative, but there were a few cases in which this calculation showed a net increase in household income. Some of these cases are real, since the loss of income from unemployment can be more than offset by unemployment compensation plus increased labor force participation by other family members, but the bulk of them are presumably spurious.³

Second, information on debt and asset change was used in order to estimate the unemployment-induced change in net worth. Change in net worth is estimated as the sum of (1) the net change in outstanding (unpaid) bills between the survey date (S_t) and a date one year earlier (S_{t-1}), (2) the net change in personal loans outstanding between S_t and S_{t-1} , (3) the amount of durable goods instalment obligations due between S_t and S_{t-1} that were not paid either because of delinquency or repossession, (4) the net change in checking

³ There are two basic reasons why the income-change calculation might contain serious errors: (1) household income prior to unemployment might not be adequately measured by the available data, which consist of weekly household income at the beginning of the survey year; (2) the earnings adjustment of the household might not be adequately reflected by the measure used, which is total earnings of all household members at the end of the survey year, i.e., during the week in which the survey was taken. Closely related to the first factor is the implicit assumption that nonlabor income either does not change as a result of unemployment or that any changes which occur are not systematically related to the factors analyzed in this study.

and savings accounts between S_t and S_{t-1} , and (5) the net change in holdings of other assets (life insurance cash value, savings bonds, automobiles) between S_t and S_{t-1} .

Third, the difference between the change in net income and the unemployment-induced change in net worth was taken to be an estimate of the change in consumption expenditures induced by unemployment.

It should be noted that the net worth adjustments listed above do not represent the *actual* change in net worth between S_t and S_{t-1} , but constitute a reasonable estimate of the difference between the scheduled, or "normal," change in net worth and the actual change. All of these adjustments can plausibly be associated with the onset of unemployment, and changes in net worth position that are not a response to unemployment have not been counted as adjustments.⁴ For example, individuals who had debt at the beginning of the survey year would be making payments before unemployment, and these decreases in outstanding debt would clearly not be related to unemployment. Similarly, the acquisition of a new durable, such as an automobile, would increase debt outstanding, but would hardly constitute an increase in debt brought on by unemployment. It seemed safe to assume that if major durables were acquired, the acquisition probably occurred during that portion of the survey year which preceded the onset of unemployment, and therefore all new debt secured by durable goods was excluded from the debt-change figure.

On the other hand, if the household borrowed money from any source, it was assumed that all of the increase could be attributed to the onset of unemployment. Since only a few households in the

⁴The data suggest that outstanding debt for all families in the sample actually increased by some \$20,000 between S_t and S_{t-1} , while our figures show that debt adjustments resulting from unemployment totaled roughly +\$157,000. The difference is due mainly to the fact that the actual debt change among sample families included substantial repayments of preunemployment debt on durable goods instalment obligations, and these do not constitute adjustments to unemployment. Durable goods debt is therefore not included. (Because our sample was unemployed, repayments on prior debt would probably have been greater than new durables debt acquired, and so its inclusion would reduce the debt increase.) Another reason for the difference is the inclusion in the debt adjustment total of \$43,000 of debt obligation not paid because of either delinquency or repossessions. See note 1.

sample had outstanding money loans at the beginning of the survey year, most such borrowing appears to be associated with unemployment. If bills were permitted to pile up (on food, clothing, rent, and so on), this was also assumed to be an increase in debt related to the onset of unemployment, taking the form of delinquencies on soft goods and services. The failure to meet payments on durables being purchased on credit represents, not an increase in debt, but a manipulation of existing debt (i.e., a failure to reduce actual debt as scheduled). This manipulation was assumed to represent an adjustment to unemployment in the form of durable goods delinquency. Another form of debt manipulation, involving repossessions, actually reduced outstanding debt. If the household permits repossession of durable goods purchased on credit, this conserves whatever sums would have been utilized to make payments on the item being purchased. In consequence of the repossession, these sums can be utilized to maintain expenditures. In all these cases there is, as a result of unemployment, either an increase in debt, a failure to reduce debt as scheduled, or an abandoning of prior debt, and all such adjustments involve the manipulation of debt to free the constrained resources of the household to help maintain expenditure levels.

Table 1 summarizes the major types of net worth adjustments and the residual estimate of consumption expenditure adjustment.⁵ Among the various net worth adjustments considered, it is clear that the reduction of checking and savings accounts is of greatest significance. This adjustment accounts for close to a fifth of the entire loss in income. The presence of assets of this magnitude on which to fall back in the face of unemployment is, as we shall see, one of the major determinants of the entire pattern of adjustment which emerges from the present study.

⁵ The most serious bias in the estimate of net worth adjustment is a probable underestimate of the liquid-asset adjustment. In the postwar period households generally have been increasing their holdings of liquid assets. The actual reduction may therefore tend to understate the unemployment-induced change. The magnitude of the error cannot be sufficient, however, to change any of the basic relations shown by the data. Inasmuch as the error probably lies in the direction of understating the change in liquid assets, the conclusions of the analysis are even more striking.

TABLE I
UNEMPLOYMENT-INDUCED CHANGES IN INCOME, NET WORTH, AND
CONSUMPTION EXPENDITURE OF UNEMPLOYED HOUSEHOLDS

	Aggregate Dollar Amount	Percentage of Total	Average Dollar Amount
Gross reduction in household earnings	2,057,000	--	1,120
Offset through unemployment compensation	648,000	--	353
Net reduction in household income	1,409,000	100	768
Offset through net worth adjustments	479,000	34	261
Debt adjustments	157,000	11	86
Increase in personal loans	83,000	6	45
Increase in unpaid bills	32,000	2	17
Delinquencies and repossessions on instalment obligations	43,000	3	23
Asset adjustments	322,000	23	175
Decrease in checking-savings accounts	261,000	18	142
Decrease in other assets ^b	61,000	4	33
Residual: estimated reduction in consumption expenditure	930,000	66	506

NOTE: Details may not add to totals owing to rounding.

^a Total number of households in sample is 1,836.

^b Includes liquidation of life insurance, savings bonds and other similar liquid or semiliquid assets, and the sale of automobiles. While it might be argued that the sale of any durable good would affect the magnitude of the reduction in consumption necessitated by the onset of unemployment, as well as the net worth position of the household, the sale of automobiles was the only such liquidation which was of sufficiently large magnitude and for which sufficiently reliable data were available to warrant its inclusion. In general, the omission of the sale of used appliances and other durable goods should not introduce a significant bias into the residual estimate of consumption.

Among the debt items, the ability to acquire loans from all sources (banks and other financial institutions, family and friends) is the most important, accounting for over half the debt adjustment undertaken and just under 6 per cent of the income lost. Delinquencies in the form of unpaid bills on goods and services and also on durables (including the "savings" realized through nonpayment of existing debt due to repossessions) accounted for the remainder of the contribution made by debt to easing the budgetary constraint imposed on these households by unemployment.

By virtue of the estimates of income change and changes in the rate of accumulation of debts and of assets, consumption expenditure change is estimated (residually) as roughly \$930,000, or about

two-thirds of the income change. This is the best estimate of the expenditure change occasioned by the loss in income associated with unemployment. However, it must be viewed as no more than a rough approximation because it is subject to the compound errors which are a consequence of the estimating procedure.⁶ It should also be noted that unemployment compensation is quantitatively more important than either asset liquidation or debt increase. In addition, resources obtained through unemployment compensation do not cause a deterioration in the household's net worth position as do liquid-asset reductions or debt adjustments.

Limitations of Estimates

While the estimate of expenditure change here is by no means precise, it appears to be a better estimate of total change than any which can be extracted from the original data on expenditures. Some of the more important components of the total expenditure change are reported in sufficient detail to be usable by themselves, and they are examined below. But the reported information on expenditure adjustments as a whole must be viewed as inadequate. It is impossible to account for anything like the estimated decrease in income by adding up all the debt, liquid-asset, and expenditure changes which have been included in the detailed questionnaire from which the basic data for this study were obtained. Although there are difficulties with the other variables, examination of the data demonstrates convincingly that the basic difficulty lies with the expenditure data.⁷ The interviewee had bankbooks, canceled

⁶ If the components of net worth adjustment are in error but the errors tend to cancel, there is no bias in the residual estimate of consumption. But if either the income change or net worth change estimates are in error, consumption change has an error equal in absolute size.

⁷ The unemployment-induced change in expenditure can be computed for a class of items in the survey which appears to comprise approximately 50 per cent of total expenditure. (Expenditure change for such items as clothing, medical expenditures, durable goods, recreation, etc., cannot be estimated with any reliability at all.) It was then assumed that total expenditures changed by the same percentage as the classes of expenditures for which unemployment-induced change could be estimated. Such a calculation was made for each household, and the resulting estimate of total unemployment-induced expenditure change was then compared with the residual estimate of change described above. The

checks, and numerous other evidence of debt and asset change to help his memory. While there is, of course, no way of knowing whether or to what degree the interviewees utilized such information, it is nevertheless important to note that this sort of evidence would not generally even be available for estimating many parts of expenditure change.⁸ On the other side, however, one might argue that survey respondents have generally shown a greater reluctance to provide information about assets and debts than about expenditures.

Analysis of Aggregate Adjustments

As Table 1 indicates, the reduction in consumption constitutes about two-thirds of the reduction in income. In effect this constitutes an empirical estimate of the marginal propensity to consume (MPC) for the sample as a whole. We shall have occasion to consider the effect of a variety of other variables on this estimated marginal propensity to consume. An estimated MPC of .66 appears to be quite low—for the economy as a whole during recent years, the MPC averages about .93. However, the latter figure is not based on conditions of widespread income decline. Comparison of per capita disposable income with per capita consumption for the United States (1962 prices) for the years 1929–62 shows eleven years in which income declined from the preceding year. The

change in total expenditures based on extrapolation of apparent change for specific items was so small, and the correlation between direct and residual estimates was so low (.0003), that we decided to ignore the direct estimate of expenditure change and accept the residual estimate, which, whatever its shortcomings, seems to be the better one.

⁸The survey procedures included a check on the accuracy of the data by examination of the discrepancies between total receipts and total outlays, termed a "balancing difference." Whenever this difference was greater than one-third of the reported change in income, the questionnaire was discarded. In the South Carolina survey this technique was employed with notable care. Each questionnaire had appended to it a balancing-difference worksheet on which total financial resources (income), as adjusted for changes in debt and assets, was balanced against the total reported expenditures for the year. The percentage variation between the total annual (adjusted) income and the total reported annual expenditures was calculated; if the difference was more than 33 per cent of the smaller figure, the data were rechecked. If the difference remained the interview was not used. Even so, differences as great as one-third could and did remain in the final sample.

MPC's vary widely from 1.1 (expenditures decline more than income) to a negative number (expenditures increase when income decreases). The median MPC for these eleven years is .64, quite close to the estimate in our sample.⁹ Further, the median figure, .64, is for 1931-32, and this is the only period in which income declined enough so that aggregate national savings went from a positive to a negative figure. The situation then was somewhat similar to that prevailing in the sample, in which all the individuals were unemployed and savings became negative. In 1931 and 1932 the country was in the depths of the depression, unemployment was widespread, adjustments to reduced income needed to be made most acutely, and assets declined most sharply. The figures suggest, therefore, that the relation between expenditure adjustment and income change in the sample is not unreasonable as an indication of the impact of unemployment.

While the aggregate dollar figures in Table 1 provide a convenient summary of the major adjustments undertaken by the entire sample, they should also be considered in terms of what they meant for the average household. The third column of the table shows the average change during the survey year in each of the major adjustment categories for the households included in the sample.¹⁰ It must be borne in mind that these are *net* figures—the “average” income loss includes, for example, households which increased income despite unemployment. With unemployment averaging a bit over eighteen weeks for the entire sample, weekly net income loss averages about \$41. Since unemployment compensation is included in the income figures, net earned income actually declined about \$19 more—the average weekly amount of unemployment compen-

⁹ Cf. *The Economic Report of the President*, January 1963, p. 191, for the data from which the MPC's were computed. The years in which income declined and the computed MPC's are: 1929-30, +.90; 1930-31, +.82; 1931-32, +.64; 1932-33, +1.00; 1937-38, +.38; 1944-45, -1.97; 1945-46, -4.11; 1946-47, +.04; 1948-49, -1.10; 1953-54, +.39; 1957-58, +1.08.

¹⁰ These simple averages are useful for initial consideration of individual adjustments to income reduced by unemployment. However, all individuals in the sample could not take advantage of all these major adjustment techniques, and so more meaningful averages will necessitate confining the cases to those who actually could avail themselves of each technique. The problem is considered in the next section, in which all these magnitudes are disaggregated where possible.

sation received by sample households during the period of their unemployment.¹¹ Thus weekly earned income declined by about \$60 on the average. The average weekly adjustments included about \$19 in unemployment compensation, \$27 in expenditure reductions, \$5 in debt increases, and \$9 in asset reductions. The expenditure reduction was, then, less than half the decline in earned income. Though these estimates may be more than usually prone to the errors inherent in interpreting averages, they do give a rough indication of the relative importance of the various major avenues of adjustment used by typical American households forced to cope with unemployment.

Impact of Duration of Unemployment

The pattern of aggregate adjustment will obviously be significantly different for some households than for others, and it might be supposed that unemployment of increasingly long duration would materially affect the relative importance of the major adjustive techniques. In Table 2 the sample has been classified according to duration of unemployment, and the aggregate debt, liquid-asset, and expenditure adjustments are shown.

A word of explanation is in order concerning the group in Table 2 unemployed over twenty-four weeks. Inasmuch as unemployment pension benefits during the period covered by the surveys rarely were paid for periods longer than twenty-six weeks, many of the 439 individuals included in this category must either have been unemployed more than once during the survey year (so that the total weeks of unemployment came to more than twenty-six) or have failed, for some reason, to apply immediately for benefits. In either event, the behavior pattern of many in this group can be expected to diverge from that of the rest of the people.

Further, adjustment categories where the aggregate had to be

¹¹ It is interesting to note that sample households received unemployment compensation for a period that averaged about twelve weeks, while unemployment itself averaged about eighteen weeks. This is the reason why the "average" weekly amount of unemployment compensation was only about \$19. The discrepancy no doubt reflects the "waiting period" between the application for and receipt of unemployment compensation payments, but the discrepancy is much larger than can be accounted for by this factor alone.

TABLE 2
UNEMPLOYMENT-INDUCED CHANGES IN INCOME, EXPENDITURE, DEBT,
AND LIQUID ASSETS, BY DURATION OF UNEMPLOYMENT

Duration of Unemployment (weeks)	Number in Sample (1)	Avg. Wks. of Unemployment (2)	AVERAGE DOLLAR REDUCTION IN:			AVERAGE DOLLAR OFFSET TO INCOME REDUCTION THROUGH:			Estimated Marginal Propensity to Dissave (12)			
			Income		Consumption Expenditures		Debt Adjustment			Liquid Asset Adjustment		Estimated Marginal Propensity to Consume (11)
			Total (3)	Wky. (4)	Total (5)	Wky. (6)	Total (7)	Wky. (8)		Total (9)	Wky. (10)	
0-9	292	7	324	46	106	15	77	11	142	20	.33	.67
10-14	397	12	480	40	260	22	102	8	118	10	.54	.46
15-19	387	17	697	41	401	24	78	5	219	13	.57	.43
20-24	321	22	888	40	648	29	100	5	140	6	.73	.27
Over 24	439	31	1,297	42	1,077	35	73	2	146	5	.83	.17
Total	1,836	19	768	40	528	28	86	5	154	8	.69	.31

NOTE: For the estimating procedures used to obtain the data in columns 3-10, see text. Column 11 is column 5 divided by column 3; column 12 is the sum of columns 7 and 9 divided by column 3. In columns 3, 5, 7, and 9 the numbers represent average change during the entire period of unemployment. Columns 4, 6, 8, and 10, marked "weekly," indicate the average weekly change during the period of unemployment.

extrapolated from a sample of cases in which dollar amounts were provided—liquidating life insurance and selling cars—are not included in the calculation. Hence the total asset reduction shown in Table 2 is lower than in Table 1, and the residual estimate of consumption change is correspondingly a smaller number (algebraically). This difference has no substantive influence on the pattern of adjustment.

As one would expect, the average income reduction increases steadily as unemployment is prolonged, as does the average dollar reduction in consumption expenditures. The residual change in expenditure not only increases in absolute terms but increases also as a percentage of the income reduction. Only about one-third of the income loss is met through expenditure reduction; on the average, in the initial stages of unemployment. By the time individuals are unemployed for as long as twenty-four weeks, about three-quarters of the household's total income loss is met by expenditure reductions.

As has been stated, the adjustments to unemployment which reduce net worth are less painful in the short run, but are probably more severe in their long-run consequences. By the same token, reduced consumption expenditures have greater immediate impact both on short-run living standards and economic stability. It is a commonplace of economic analysis that expenditure changes have derivative consequences which depend upon the size of the marginal propensity to consume. In the sample, then, the fact that the MPC rises steadily means that the consequences of unemployment become increasingly severe for the economy as the average duration of unemployment rises even if the level of unemployment remains the same.

Debt and Asset Adjustments

Tables 3 and 4 indicate total and average dollar adjustments for the major-debt and liquid-asset categories respectively, as well as the percentage of income change represented by each. From the last column in Table 3, it is clear that the average amount of debt

TABLE 3
UNEMPLOYMENT-INDUCED CHANGES IN INCOME, TOTAL DEBT,
AND DEBT COMPONENTS, BY DURATION OF UNEMPLOYMENT

Duration of Unemployment (weeks)	Number in Sample	Dollar Amount of Change in:					Total Debt
		Total Household Income	Money Loans	Unpaid Bills	Repossession and Delinquency on Durables		
AGGREGATE CHANGE							
0-9	292	-94,741	16,018	3,276	3,134	22,428	
10-14	397	-190,498	22,358	8,151	9,955	40,464	
15-19	387	-269,894	14,172	6,939	8,838	29,999	
20-24	321	-284,990	13,457	6,564	12,057	32,078	
Over 24	439	-569,213	16,633	6,742	8,836	32,211	
Total	1,836	-1,409,336	82,638	31,672	42,870	157,180	
AVERAGE CHANGE							
0-9	292	-324	55	11	11	77	
10-14	397	-480	56	21	25	102	
15-19	387	-697	37	18	23	78	
20-24	321	-888	42	20	38	100	
Over 24	439	-1,297	38	15	20	73	
Total	1,836	-768	45	17	23	86	
PERCENTAGE OF INCOME CHANGE							
0-9	292	100	17	3	3	24	
10-14	397	100	12	4	5	21	
15-19	387	100	5	3	3	11	
20-24	321	100	5	2	4	11	
Over 24	439	100	3	1	2	06	
Total	1,836	100	6	2	3	11	

NOTE: All estimates are net—that is, increases and decreases are added algebraically. Details may not add to totals owing to rounding.

adjustment (in dollars) does not vary systematically with the duration of unemployment. Resort to money loans lessens somewhat as duration increases: people borrow relatively early and then must either repay the initial loans or encounter increasing difficulty in obtaining additional loans. Thus the average amount of loans declines from over \$50 during short periods of unemployment to under \$40 for periods of longer unemployment. By the same token, however, the average dollar change in delinquencies rises irregularly. Among debt adjustments, therefore, the initially greater reliance on money loans is rapidly diminished so that it is not very

TABLE 4
UNEMPLOYMENT-INDUCED CHANGES IN INCOME, TOTAL LIQUID ASSETS,
AND LIQUID-ASSET COMPONENTS, BY DURATION OF UNEMPLOYMENT

Duration of Unemployment (weeks)	Number in Sample	Dollar Amount of Change in:			
		Household Income	Checking and Savings Accounts	Other Liquid Assets	Total Liquid Assets ^a
AGGREGATE CHANGE					
0-9	292	-94,741	-40,858	-521	-41,379
10-14	397	-190,498	-39,156	-7,818	-46,974
15-19	387	-269,894	-79,353	-5,512	-84,865
20-24	321	-284,990	-38,211	-6,703	-44,914
Over 24	439	-569,213	-63,622	-393	-64,015
Total	1,836	-1,409,336	-261,200	-20,974	-282,174
AVERAGE CHANGE					
0-9	292	-324	-140	-2	-142
10-14	397	-480	-99	-20	-118
15-19	387	-697	-205	-14	-219
20-24	321	-888	-119	-21	-140
Over 24	439	-1,297	-145	-1	-146
Total	1,836	-768	-142	-11	-154
PERCENTAGE OF INCOME CHANGE					
0-9	292	100	43	1	44
10-14	397	100	21	4	25
15-19	387	100	29	2	31
20-24	321	100	13	2	16
Over 24	439	100	11	0	11
Total	1,836	100	18	2	20

NOTE: Details may not add to totals owing to rounding.

^a Total liquid-asset change as measured here does not include liquidation of life insurance, as noted in the text.

much more important than the other categories after unemployment has continued for fifteen weeks.¹² Finally, the percentage of total income change offset by debt adjustments becomes steadily less important as unemployment lengthens, mainly because the income reductions become larger.

¹² It has been possible to construct more precise tests of these aggregate relations with data collected only in the Pittsburgh survey. The primary analytical advantage of the 319 cases in the Pittsburgh area (which constituted the pilot study for the Bureau of Employment Security) is that, in addition to data on changes in debts and liquid assets, information was also acquired on the *levels* of these variables at the beginning of the survey year. This is examined below.

Table 4 summarizes the relevant information relating the duration of unemployment to the utilization of liquid assets as an offset to income reduction. Again, there appears to be no particular pattern to the average dollar volume in the successive duration classes. This impression may be misleading, however. In the Pittsburgh sample, where data are available on the level of beginning-year liquid assets, it is clear that a larger proportion of assets are used up as duration lengthens. (See Table 11.) By the time people are unemployed for as long as twenty-four weeks, liquid assets are generally used up completely, suggesting that the data in Table 4 fail to show an increase in the average amount of asset reduction because preunemployment asset holdings are markedly smaller in the long-duration groups. It is possible, for example, that the duration of unemployment is correlated with the frequency of previous unemployment.

It is also possible that the data in Table 4 reflect the fact that unemployment was anticipated to a greater degree by those out of work for longer periods. If so, liquid-asset holdings may have been increased during the survey year prior to the start of unemployment. But the data measure the difference between assets at the beginning and end of the survey year, not between peak holdings prior to unemployment and end-of-year holdings.

The relation between duration of unemployment and adjustment to it is most clearly shown in Table 5, which summarizes the per-

TABLE 5
MAJOR ADJUSTMENTS TO INCOME REDUCED BY UNEMPLOYMENT

Duration of Unemployment (weeks)	Number in Sample	Percentage of Income Loss in Form of:			Total
		Expenditure Adjustment	Debt Adjustment	Liquid-Asset Adjustment	
0-9	292	33	24	44	100
10-14	397	54	21	25	100
15-19	387	57	11	31	100
20-24	321	73	11	16	100
Over 24	439	83	06	11	100
Total	1,836	69	11	20	100

NOTE: Details may not add to totals owing to rounding.

centage of income change in each unemployment duration class which is offset by changes in each of the three broad categories. The expenditure adjustment is the estimated marginal propensity to consume for each class. The debt and liquid-asset adjustments represent the two components of the marginal propensity to dissave. Two conclusions stand out clearly: (1) In the early part of a period of employment, the use of both liquid assets and debt generally holds down reductions in expenditure; but as the period of unemployment lengthens, an increasing fraction of the income loss is met by such a reduction.¹³ (2) Liquid-asset reductions constitute a more important means of maintaining current consumption than do debt increases.

Finally, it is worth noting that these findings are consistent with a number of hypotheses about the relation between current income and expenditures for current consumption. The evidence suggests that unemployed individuals attempt to maintain expenditures at levels commensurate with their customary level of income, utilizing both available assets and debt in order to maintain consumption levels. The hypotheses associated with Duesenberry, Friedman, and Mack are all consistent with this finding.¹⁴

¹³ In the Pittsburgh sample, income prior to unemployment and unemployment duration are statistically significant determinants of the change in consumption, as is the interaction of duration with the level of beginning-year loans.

¹⁴ See James S. Duesenberry, *Income, Saving, and the Theory of Consumer Behavior*, Cambridge, Mass., 1949; Milton Friedman, *A Theory of the Consumption Function*, Princeton University Press for NBER, 1957; and Ruth P. Mack, "The Direction of Change in Income and the Consumption Function," *Review of Economics and Statistics*, November 1948.