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IV

FACTORS AFFECTING THE ADJUSTMENTS TO UNEMPLOYMENT

Presence or Absence of Liquid Assets at Beginning of Survey Year

MANY INDIVIDUALS in the sample, it has been remarked, relied heavily upon liquid assets to cushion the impact of unemployment upon their expenditures. It will be of value to break the total sample down into those with and those without liquid assets at the beginning of the survey year. The results (Table 9) show clearly the influence of liquid-asset holdings on the character of the adjustments made by households coping with unemployment.

Average expenditure reductions are markedly larger for those without liquid assets at the start of the survey year, and expenditure reductions for this group invariably are a larger part of income reductions in each unemployment duration class. Indeed, a larger percentage of the income change reflects expenditure reduction by those who have been unemployed less than nine weeks and have no liquid assets than by those unemployed more than twenty-four weeks who possess liquid assets on which to fall back.

The pattern of change in the marginal propensity to consume is as it was in Table 2, except that the MPC is invariably greater in comparable duration classes with no liquid assets. It is worth noting that there is some relation between the presence or absence of liquid assets and the size of the income reduction. Apparently,

TABLE 9

UNEMPLOYMENT-INDUCED CHANGES IN INCOME, EXPENDITURE, DEBT, AND LIQUID ASSETS AMONG UNEMPLOYED PERSONS, BY DURATION OF UNEMPLOYMENT

Duration of Unemployment (Weeks)	Number in Sample (1)	Average Dollar Change: Household Take-Home Pay[a] (2)	Average Dollar Change: Consumption Expenditures[b] (3)	Average Dollar Offset to Income Reduction: Debt Increase[c] (4)	Average Dollar Offset to Income Reduction: Liquid-Asset Decrease[d] (5)	Estimated Marginal Propensity to Consume[e] (6)	Estimated Marginal Propensity to Dissave (7)
			NO BEGINNING-YEAR ASSETS				
0-9	124	-296	-235	66	-6	.79	.21
10-14	178	-442	-350	96	-4	.79	.21
15-19	177	-609	-548	61	0	.90	.10
20-24	146	-819	-734	114	-29	.90	.10
Over 24	214	-1,184	-1,126	70	-13	.95	.05
Total	839	-711	-640	81	-10	.90	.10
			SOME BEGINNING-YEAR ASSETS[f]				
0-9	168	-345	-10	85	250	.03	.97
10-14	219	-511	-186	106	218	.36	.64
15-19	210	-772	-276	91	404	.36	.64
20-24	175	-945	-576	88	281	.61	.39
Over 24	225	-1,404	-1,031	76	297	.73	.27
Total	997	-816	-435	90	291	.53	.47
			TOTAL SAMPLE				
0-9	292	-324	-106	77	142	.33	.67
10-14	397	-480	-260	102	118	.54	.46
15-19	387	-697	-401	78	219	.57	.43
20-24	321	-888	-648	100	140	.73	.27
Over 24	439	-1,297	-1,077	73	146	.83	.17
Total	1,836	-768	-528	86	154	.69	.31

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

[a] Inclusive of unemployment compensation payments received during unemployment.

[b] Estimated as a residual (column 2 minus column 4 minus column 5). See discussion in text.

[c] Net increase during the survey year in money borrowed and in unpaid bills, plus nonpayment of instalment obligations because of delinquency or repossession. See discussion in text.

[d] A decrease in liquid assets is positive offset; an increase is a negative offset.

[e] Column 3 divided by column 2.

[f] Information on liquid-asset holdings of most households was not obtained, only the change in such assets. For these households, it is assumed that a report of no change means the absence of asset holdings at the beginning of the survey year. For about one-fifth of the sample, liquid-asset holdings were obtained at both the beginning and the end of the survey year. (This was in Pittsburgh and will be analyzed below.) The small increases (negative signs) in liquid-asset adjustments shown in column 5 result from the fact that a few of the Pittsburgh households reporting no assets at the beginning of the survey year held some at the end of the year.

those without liquid assets have smaller income reductions, which no doubt reflects smaller income when employed.[1] There is also some suggestion that households with assets utilize debt to a greater extent than those without during the earlier part of unemployment. After fourteen weeks of unemployment the average debt increase declines, though this may in part be the result of diminished accessibility to further credit along with the necessity of repaying credit obtained during the early period of unemployment.

SIZE OF ASSETS

While there is no information that indicates the levels of beginning-year assets for the entire sample, there are data on these levels for the cases in the Pittsburgh survey.[2]

Table 10 shows these cases classified by beginning-year assets and, within asset groups, by duration-of-unemployment class. It is interesting to note that not only is the average income loss greater as unemployment lengthens, but the previous view that asset holdings are positively correlated with income is corroborated—the higher the asset level, the greater the average income loss within duration classes. Furthermore, the higher the asset level at the beginning of the year, the smaller the average change in consumption expenditure within duration classes. (Indeed, for short periods of unemployment and large assets, there is even a small average in-

[1] It is possible that households in the no-liquid-asset category are typically a group with a history of recurrent unemployment. A BLS survey of workers unemployed five weeks or more in 1961 revealed that 22 per cent of those surveyed had been unemployed during each of the previous four years. See Department of Labor, *Monthly Report on the Labor Force,* March 1963, Table 7.

[2] That the Pittsburgh sample does not diverge unduly from the rest of the sample can be seen by these comparisons:

	Pittsburgh	*All Cases*
Average decrease in income during survey year	$804	$768
Average increase in debt	52	86
Average decrease in liquid assets	131	154
Average decrease in consumption (residual)	621	528
Estimated marginal propensity to consume	.77	.69

TABLE 10

UNEMPLOYMENT-INDUCED CHANGES IN INCOME, EXPENDITURES, DEBT, AND LIQUID ASSETS AMONG 319 UNEMPLOYED PERSONS, BY DURATION OF UNEMPLOYMENT

Duration of Unemployment (weeks)	Number in Sample	Average Dollar Change		Average Dollar Offset[a] to Income Reduction		Estimated Marginal Propensity to Consume	Components of Estimated Marginal Propensity to Dissave	
		Household Take-Home Pay	Consumption Expenditures	Debt Increase	Liquid-Asset Decrease		Debt Change	Asset Change
				NO BEGINNING-YEAR ASSETS				
Under 19	98	-468	-421	49	-2	.90	.10	-.00
20 and over	76	-1,030	-1,047	71	-88	1.02	.07	-.08
Total	174	-713	-694	59	-40	.97	.08	.56
				BETWEEN $1 AND $500 BEGINNING-YEAR ASSETS				
Under 19	43	-503	-344	24	135	.68	.05	.27
20 and over	34	-1,117	-943	62	113	.84	.06	.10
Total	77	-774	-608	41	125	.79	.05	.16
				OVER $500 BEGINNING-YEAR ASSETS				
Under	34	-607	+54	42	619	-.08	.07	1.02
20 and over	34	-1,534	-952	52	530	.62	.03	.35
Total	68	-1,071	-449	47	574	.42	.04	.54

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

[a] Since debt increases or asset reductions constitute "offsets" to reduced incomes, they are designated by plus signs. Minus signs indicate debt reductions or asset increases.

crease in expenditures, perhaps partly the result of increased leisure time.) Debt adjustment seems to be independent of beginning-year liquid-asset holdings, although the magnitude of the adjustment is positively correlated with duration of unemployment. The result of the combined asset and debt adjustments on the residual expenditures shows up in striking fashion in the estimated marginal propensities to consume. Without exception the MPC's are lower the larger are beginning-year assets for all duration groups, and within asset groups the MPC's rise as unemployment lengthens just as was the case for the entire sample.

Influence of Prior Debt and Duration of Unemployment on the Role of Liquid Assets

Liquid assets can be related to the level not only of beginning-year assets (as in Table 10) but also beginning-year debt. Table 11 considers both of these factors in conjunction with duration of unemployment. Those who have debt outstanding at the beginning of the survey year use up a larger percentage of their assets (of whatever size) than those without debt during comparable periods. By the time unemployment had gone on for as long as twenty-five weeks, households with debt had virtually exhausted their asset holdings, and those in the same duration category who had no debt had consumed only about 40 per cent of their assets. Similar differences appear in other duration-of-employment classes.

This finding is not easy to interpret. It could be a reflection of the financial drain presented by outstanding obligations, thus suggesting that when unemployed individuals can no longer meet debt repayments through income, they are forced to decrease liquid assets. On the other hand, the pattern could simply reflect differences in family preferences for maintaining current consumption at the expense of net worth. Those with prior debt may have a stronger preference for consumption, hence be more willing to use liquid assets in order to maintain consumption during periods of unemployment.[3]

[3] As will be clear from the discussion of Table 12, both those with and without prior debt incurred or increased debt during the survey year, so that changes in debt do not affect the explanations considered here.

TABLE 11

RATIO OF LIQUID-ASSET CHANGE TO BEGINNING-YEAR ASSET LEVEL

Duration of Unemployment (weeks)	Number in Sample (1)	Liquid Assets at Beginning of Survey Year (dollars) (2)	Change in Liquid Assets During Survey Year (dollars) (3)	Reduction in Liquid Assets[a] (per cent) (4)
		SOME ASSETS, SOME DEBT		
0-14	22	13,020	-5,874	45.1
15-24	24	15,250	-13,023	85.4
25 and over	11	4,801	-4,719	98.3
Total	57	33,071	-23,616	71.4
		SOME ASSETS, NO DEBT		
0-14	31	20,050	-6,176	30.8
15-24	31	14,215	-4,130	29.0
25 and over	26	16,639	-6,576	39.5
Total	88	50,904	-16,882	33.2
		TOTAL SAMPLE		
0-14	53	33,070	-12,050	36.4
15-24	55	29,465	-17,153	58.2
25 and over	37	21,440	-11,295	52.7
Total	145	83,975	-40,498	48.2

NOTE: Included in the sample are the 145 individuals in the Pittsburgh sample who had some liquid assets at the beginning of the survey year.

[a] Column 4 is column 3 divided by column 2.

The relations found between asset, debt, and expenditure change as unemployment continues seem strongly pervasive. The effect of both assets and duration of unemployment in combination is impressive—in Table 10 the marginal propensity to consume for those unemployed a short period but having liquid assets over $500 at the beginning of the survey year is actually negative, indicating an increase in consumption. At the other extreme is the MPC of over 100 per cent for those with no assets at the beginning of the year who were unemployed for a long period, implying that expenditures decreased more than income. In between, the combined effects of these two important conditions of adjustment to unemployment produce predictable results, given the variables analyzed.[4]

[4] The multiple correlation analysis for the Pittsburgh data, which is statistically more rigorous, shows precisely this result. See below.

Presence or Absence of Debt at Beginning of Survey Year

To what extent does beginning-year outstanding debt constitute a source of flexibility in adjusting family spending to lower income brought on by unemployment? Table 12 is comparable to Table 9, except that the sample is divided into those with and those without beginning-year debt. A priori, one might argue that the household already in debt has somewhat less flexibility in coping with unemployment because it is already committed to a schedule of debt repayment. (That this has an effect on the use of liquid assets has already been noted in Table 11.) However, preunemployment expenditures are already compressed below income in that case, and the household has additional options—allowing instalment debt to become delinquent and durable goods to be repossessed. Further, a typical household with debt may well be considered a better credit risk than one without, and some debt-free households may have a distinct aversion to the use of debt as a means of coping with unemployment.

It is clear from Table 12 that, while offsetting factors may be at work, households without debt at the beginning of the year rely less heavily upon debt increases as a way of adjusting to unemployment. Asset changes are about the same for the two groups. In the group with some beginning-year debt, there is an indication that heavy reliance on debt adjustments is associated with less reliance on asset adjustments, although the evidence is not clear-cut. The marginal propensity to consume rises with the duration of unemployment for both the some- and no-debt groups, and the differences appear to be random rather than systematic. Thus, no easy generalization can be made about the effect of debt on expenditure adjustments; in some duration classes the MPC is higher for the group without prior debt and in others it is lower.

SIZE OF PRIOR DEBT

Classification according to size of beginning-year debt (Table 13, Pittsburgh sample only), however, suggests that expenditure

TABLE 12

UNEMPLOYMENT-INDUCED CHANGES IN INCOME, EXPENDITURES, DEBT, AND LIQUID ASSETS, UNEMPLOYED PERSONS WITH AND WITHOUT DEBT, BY DURATION OF UNEMPLOYMENT

Duration of Unemployment (weeks)	Number in Sample	Average Dollar Change		Average Dollar Offset to Income Reduction		Estimated Marginal Propensity to Consume	Components of Estimated Marginal Propensity to Dissave	
		Household Take-Home Pay	Consumption Expenditures	Debt Increase	Liquid-Asset Decrease		Debt Change	Asset Change
				NO BEGINNING-YEAR DEBT				
0-9	158	-304	-86	56	161	.28	.18	.53
10-14	218	-451	-266	64	122	.59	.14	.27
15-19	219	-662	-377	70	215	.57	.11	.32
20-24	179	-836	-681	66	90	.82	.08	.11
Over 24	257	-1,225	-1,004	69	152	.82	.06	.12
Total	1,031	-733	-518	66	150	.71	.09	.20
				BEGINNING-YEAR DEBT				
0-9	134	-349	-129	101	119	.37	.29	.34
10-14	179	-515	-252	149	114	.49	.29	.22
15-19	168	-743	-431	87	225	.58	.12	.30
20-24	142	-953	-607	143	203	.64	.15	.21
Over 24	182	-1,398	-1,182	80	137	.85	.06	.10
Total	805	-812	-542	111	159	.67	.14	.20

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

TABLE 13

UNEMPLOYMENT-INDUCED CHANGES IN INCOME, EXPENDITURE, DEBT, AND LIQUID ASSETS, BY LEVEL OF BEGINNING-YEAR DEBT AND DURATION OF UNEMPLOYMENT, PITTSBURGH SAMPLE OF UNEMPLOYED PERSONS

Duration of Unemployment (weeks)	Number in Sample	Average Dollar Change		Average Dollar Offset to Income Reduction		Estimated Marginal Propensity to Consume	Components of Estimated Marginal Propensity to Dissave	
		Household Take-Home Pay	Consumption Expenditures	Debt Increase	Liquid-Asset Decrease		Debt Change	Asset Change
				NO BEGINNING-YEAR DEBT				
Under 19	104	-467	-316	53	98	.68	.11	.21
20 and over	87	-1,162	-1,069	46	47	.92	.04	.04
Total	191	-784	-659	50	75	.84	.06	.10
				BETWEEN $1 AND $500 BEGINNING-YEAR DEBT				
Under 19	42	-490	-333	21	137	.68	.04	.28
20 and over	33	-1,103	-838	47	217	.76	.04	.20
Total	75	-760	-555	32	172	.73	.04	.23
				OVER $500 BEGINNING-YEAR DEBT				
Under 19	29	-653	-254	31	369	.39	.05	.56
20 and over	24	-1,290	-971	155	163	.75	.12	.13
Total	53	-941	-579	87	276	.62	.09	.29
Total	319	-804	-621	52	131	.77	.06	.16

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

adjustments (as measured by the marginal propensity to consume) are related to beginning-year debt level, although the relation is somewhat less strong than that between expenditure adjustment and beginning-year assets. Interestingly enough, the main reason why this type of debt is related to MPC is that debt level and liquid-asset adjustments are strongly correlated—the higher is debt, the larger is the liquid-asset adjustment.

Classification of the sample by unemployment duration and level of beginning-year debt reveals contrasting behavior in the liquid-asset and debt components of the marginal propensity to dissave. The liquid-asset component is always smaller in the longer-duration category irrespective of the level of beginning-year debt. The debt component is smaller in that class in the no-beginning-year-debt category and larger in the $500-and-over category.

Most of these differences reflect the fact that among duration categories income changes tend to be proportionally larger than changes in either debt or asset adjustments; the pattern of the MPC's is thus dominated by the income changes. The only clear-cut relations involving the size of asset and debt adjustments within beginning-year debt and unemployment duration categories are that (1) asset adjustments tend to be larger as the level of beginning-year debt increases (presumably because the levels of beginning-year asset and debt holdings are positively correlated), and (2) the combination of long unemployment duration and large amounts of beginning-year debt is associated with a large debt adjustment. (This is presumably because the frequency of delinquency and repossession increases sharply with both duration and amount of outstanding debt. Alternatively, one might argue that individuals with large beginning-year debt are more prone to utilize debt even in the absence of unemployment, and so to rely on it heavily as unemployment pressures on the household budget increase.)

In the last-mentioned category, the large debt adjustment is associated with a relatively small asset adjustment. This association does not appear to represent voluntary offsetting, i.e., a deliberate decision to limit asset adjustments in favor of debt adjustment. From Table 11, it is clear that households with large amounts of debt, unemployed for a long period, hold a relatively small amount

TABLE 14

UNEMPLOYMENT-INDUCED CHANGES IN INCOME, EXPENDITURE, DEBT, AND LIQUID ASSETS OF UNEMPLOYED PERSONS, BY PRESENCE OR ABSENCE OF BEGINNING-YEAR DEBT AND ASSETS AND BY DURATION OF UNEMPLOYMENT

Duration of Unemployment (weeks)	Number in Sample	Average Dollar Change		Average Dollar Offset to Income Reduction		Estimated Marginal Propensity to Consume	Components of Estimated Marginal Propensity to Dissave	
		Household Take-Home Pay	Consumption Expenditures	Debt Increase	Liquid-Asset Decrease		Debt Change	Asset Change
				SOME ASSETS, SOME DEBT				
0-9	83	-355	-46	117	192	.13	.33	.54
10-14	101	-548	-180	165	204	.33	.30	.37
15-19	91	-826	-308	101	416	.37	.12	.50
20-24	78	-1,024	-522	131	371	.51	.13	.36
Over 24	95	-1,491	-1,127	100	264	.76	.07	.18
Total	448	-852	-442	123	287	.52	.14	.34
				SOME ASSETS, NO DEBT				
0-9	85	-336	+24	53	306	.07	.16	.91
10-14	118	-479	-192	56	230	.40	.12	.48
15-19	119	-730	-252	84	395	.34	.12	.54
20-24	97	-882	-619	54	208	.70	.06	.24
Over 24	130	-1,340	-961	59	320	.72	.04	.24
Total	549	-786	-429	+62	295	.54	.08	.38

(continued)

Duration of Unemployment (weeks)	Number in Sample	Average Dollar Change		Average Dollar Offset to Income Reduction		Estimated Marginal Propensity to Consume	*Components of* Estimated Marginal Propensity to Dissave	
		Household Take-Home Pay	Consumption Expenditures	Debt Increase	Liquid-Asset Decrease[a]		Debt Change	Asset Change
				NO ASSETS, SOME DEBT				
0-9	51	-339	-264	75	0.0	.78	.22	.00
10-14	78	-472	-345	128	-1.3	.73	.27	b
15-19	77	-645	-575	70	-.1	.89	.11	b
20-24	64	-867	-710	158	-.9	.81	.18	b
Over 24	87	-1,296	-1,241	57	-2.4	.96	.04	b
Total	357	-762	-667	96	-1.0	.88	.13	b
				NO ASSETS, NO DEBT				
0-9	73	-266	-214	60	-8.2	.80	.23	-.03
10-14	100	-419	-354	72	-7.0	.84	.17	-.02
15-19	100	-582	-527	55	0.0	.91	.09	.00
20-24	82	-782	-753	80	-5.7	.96	.10	-.01
Over 24	127	-1,107	1,048	79	-19.7	.95	.07	-.02
Total	482	-673	619	70	-16.5	.92	.10	-.02

[a] The small negative offsets come exclusively from the Pittsburgh sample, in which liquid assets were reported in a different and more inclusive measure.

[b] Less than .005.

of liquid assets; hence they do not have the option of reducing assets by as much as households unemployed for shorter periods of time.

Interaction of Factors Affecting Adjustment to Unemployment

All these relationships can be seen in Table 14, which classifies the entire sample by the presence or absence of beginning-year liquid assets and debt. The status of beginning-year assets is clearly the most important influence on the size of expenditure adjustments; debt position at that time has a less clear-cut effect on subsequent expenditure reductions. Further, those with both assets and debt tend to acquire more debt than other households, thus maintaining expenditures to a greater degree than any other group in the sample.

Multivariate regression analysis (of the Pittsburgh cases) gives further insight into the relationships just described. The variables follow:

Dependent Variables

ΔD	Dollar change in unemployment-induced debt, survey year
ΔA	Dollar change in assets, survey year
ΔC	Dollar change in consumption expenditures, survey year
$\Delta C/\Delta Y$	Marginal propensity to consume

Independent Variables

Y	Annual household income prior to unemployment, dollars
U	Duration of unemployment, weeks
P_1	Beginning-year debt-asset position: some assets, some debt = 1, all other households = 0
P_2	Beginning-year debt-asset position: some assets, no debt = 1, all other households = 0
P_3	Beginning-year debt-asset position: no assets, some debt =1, all other households = 0
P_4	Beginning-year debt-asset position: no assets, no debt = 1, all other households = 0

D_{t-1} Beginning-year outstanding debt on durable goods, dollars
L_{t-1} Beginning-year money loans outstanding, dollars
A_{t-1} Beginning-year liquid-asset holdings, dollars
E Expectation of unemployment: 1 = expected unemployment, 0 = did not expect unemployment

INTERACTIONS

L^2_{t-1} Beginning-year money loans, squared
UD_{t-1} Duration of unemployment times beginning-year durables debt
UL_{t-1} Duration of unemployment times beginning-year money loans
UA_{t-1} Duration of unemployment times beginning-year liquid assets

Table 15 summarizes the results. Coefficients are indicated for all variables that showed a reasonable degree of statistical significance at any point in the stepwise regression procedure, in which independent variables were introduced one at a time in the order listed. To avoid overdetermining the system, P_4 was omitted from the independent variables; the coefficients of P_1, P_2, P_3, are thus to be read as differences relative to P_4, the omitted classification.

Net of all independent variables included in the regression, equation 1 indicates that unemployment-induced change in debt (ΔD) is likely to be higher the higher the level of beginning-year durables debt (D_{t-1}) and the lower the level of beginning-year money loans (L_{t-1}). Apparently, the larger the amount of durables debt, the more likely are delinquencies and repossessions to take place, both of which serve to eliminate a drain on current resources. But the larger are beginning-year money loans outstanding, the less likely is the respondent to increase debt, presumably because expansion of loans is more difficult and some repayment must be made. Equation 2 indicates that the relation between beginning-year money loans and the increase in unemployment-induced debt is nonlinear. For those with relatively small amounts of debt the net effect is negative; it is positive for those with large amounts or unemployed for long periods of time.

Equation 3 indicates that the reduction in liquid assets (ΔA) is likely to be larger if one has such assets at the beginning of the survey year—hardly an astonishing result. But the data also suggest that the reduction in liquid assets is likely to be greater for asset holders who also have beginning-year debt (P_1) than for those who

TABLE 15

SUMMARY OF REGRESSION DATA, PITTSBURGH SAMPLE OF 319 UNEMPLOYED PERSONS

(regression coefficients for independent variables and standard errors)

Equation Number	Dependent Variables	Y	U	P_1	P_2	D_{t-1}	L_{t-1}	A_{t-1}	L^2_{t-1}	UL_{t-1}	UA_{t-1}	Constant Term	Multiple R^2
1	ΔD					.140	-.163						
						(.039)	(.074)					66.6	.082
2	ΔD					.079	-.633		.0032	.0115			
						(.066)	(.187)		(.0020)	(.0065)		93.4	.110
3	ΔA			-297	-113	-.157		-.286					
				(87)	(69)	(.089)		(.040)				10.4	.300
4	ΔA			-275	-87	-.099		-.101			-.0125		
				(88)	(69)	(.151)		(.072)			(.0040)	-94.8	.323
5	ΔC	-.133	-29.2			.158	-.250	.285					
		(.020)	(4.9)			(.137)	(.259)	(.062)				-551.6	.354
6	ΔC	-.134	-32.0			-385	-1.33	.190		.059			
		(.020)	(5.7)			(.232)	(.66)	(.110)		(.023)		-636.9	.371
7	$\Delta C/\Delta Y$		.545	-24	-21		.018	-.012					
			(.234)	(6.3)	(5.0)		(.012)	(.003)				77.8	.249
8	$\Delta C/\Delta Y$		.545	-26	-21		.057	.015	.00048				
			(.273)	(6.4)	(5.0)		(.031)	(.005)	(.00034)			77.8	.257

NOTE: The dependent variables have different algebraic signs. ΔD, debt adjustment, tends to be generally positive since the unemployed typically increase their indebtedness relative to the scheduled or normal change. ΔA, asset adjustments, and ΔC, consumption adjustments, are typically negative since the unemployed ordinarily reduce both assets and consumption. The marginal propensity to consume, $\Delta C/\Delta Y$, is generally positive because both consumption and income tend to decline during unemployment.

do not (P_2), and that the asset reduction is apt to be larger the larger are both the amounts of beginning-year durables debt (D_{t-1}) and beginning-year assets (A_{t-1}). This again suggests a complementary relation between the use of debt and assets to maintain expenditures: households that increase debt the most are also apt to decrease assets the most, other things being equal. Equation 4 suggests further that the relation between duration of unemployment and asset reduction is nonlinear, being relatively large for combinations of long periods of unemployment and large amounts of beginning-year assets. Net of this interaction effect, duration by itself appears to have no influence on the amount of asset reduction.

Equation 5 indicates that consumption expenditures are likely to show a greater decrease the larger the beginning-year level of family income (Y), the longer the duration of unemployment (U), the larger the level of beginning-year money loans (L_{t-1}), and the smaller the level of beginning-year liquid assets (A_{t-1}). Equation 6 shows much the same results except that the influence of beginning-year money loans on consumption-expenditure change is apparently nonlinear, along the lines described above in Equation 2.

Finally, the marginal propensity to consume ($\Delta C/\Delta Y$) is greater (and the marginal propensity to dissave is smaller) the longer the duration of unemployment; the MPC is smaller for those who have beginning-year assets (P_2) and somewhat smaller still for those with beginning-year debts as well (P_1), and it is smaller the larger the amount of beginning-year liquid assets. The level of beginning-year money loans also has some influence, again nonlinear along the lines discussed earlier.

Impact of Beginning-Year Assets on the Pattern of Specific Adjustment

We have thus far considered the impact of the presence or absence of liquid assets and debt on the aggregate adjustments to unemployment. In addition, data on specific adjustments can be examined. It turns out that the rank order for the eighteen adjustments summarized in Table 6 is much the same whether or not the unemployed individuals utilized liquid-asset holdings. The rank cor-

relation coefficient, eliminating the major technique used by those with assets (decreasing them), is +0.89. That is to say, the order of use, measured by frequency, differed only slightly between the two groups.[5] No comparable information is available for the sample classified with and without debt; those without debt at the beginning of the year would necessarily have shown marked differences because, for example, they had no debt to become delinquent.

Impact of Recessions on the Pattern of Adjustment to Unemployment

The data utilized in this study do not lend themselves readily to a study of the impact of the business cycle *per se* on the adjustive techniques utilized by the affected households. The Pennsylvania survey was the only one covering a twelve-month period of recession, and that pilot survey is not always comparable to the other five. We have seen, however, that the results of a study of the Pittsburgh data confirm the general pattern of the results achieved for the entire sample. Unemployment will tend to be longer in periods of recession, and by indirection, therefore, our findings concerning the increasingly pervasive character of the adjustments required as unemployment continues suggest something of the impact of recessions on the character of financial adjustment to unemployment.

Had postwar recessions been characterized by price declines, the dollar volume of the adjustment required for given periods of unemployment might have been smaller during recession periods than during expansion periods. This, of course, has not been the case. Recessions may, therefore, affect the magnitude of the adjustments required because the average duration of unemployment may be longer. While it is possible to argue that widespread unemploy-

[5] In the same way, seven adjustments for which both frequency and dollar-volume information are available were analyzed with a view to seeing whether the presence or absence of liquid-asset holdings affected the results materially. The rank correlation coefficient for those seven adjustments, measured in terms of relative frequency of use, was quite low (.39); but the total dollar volume represented by each technique gave a rank correlation of .93, and when the two were combined to yield average dollar adjustments the two groups were quite close in ordering also (.75).

ment may reduce the pressure on a community so affected to maintain current expenditures during unemployment save for the minimal necessary outlays, we have no data with which to test this hypothesis.

While Pennsylvania was the only state survey conducted during twelve months of recession, there were three (Florida, South Carolina, and New York) conducted during a year of expansion. The survey year in Missouri and Oregon contained four months of expansion and eight of recession. Inasmuch as the average length of unemployment in our sample was slightly over eighteen weeks, this means that in the latter two states the majority of the cases were interviewed during recession. In taking account of the pattern of relative importance, it is possible to consider whether the pattern in Pennsylvania, Missouri, and Oregon showed a higher degree of consistency in contrast to the other three states, where the survey periods were periods of expansion. As the rank correlation coefficients of Table A-8 make clear, no such distinction is discernible. This is not surprising in view of the evidence, also visible in that table, that the duration of unemployment had no impact on the pattern of relative importance.

Finally, spending decisions during unemployment might be affected by expectations of early re-employment. The latter might be better when unemployment occurred during expansion than during recession. In each of the six areas surveyed by the Bureau of Employment Security, the unemployed were questioned about whether or not they thought their chance of re-employment within the next two weeks were "good." The percentage in each area who thought they had good chances of re-employment within the next two weeks was as follows: Pennsylvania, 47.3 per cent; Florida, 19.1 per cent; South Carolina, 30.0 per cent; New York, 20.1 per cent; Missouri, 18.1 per cent; Oregon, 23.4 per cent. From this evidence, it cannot be concluded that the unemployed persons in the areas surveyed during recession saw their possibilities for early re-employment in any less favorable light than did those unemployed during periods of expansion. However, the evidence is too fragmentary to be considered as more than suggestive. In general this study has attempted to analyze the financial adjustments by abstracting from the business

cycle. For this purpose, the inclusion of subsamples collected during periods of both expansion and recession was considered to be advantageous.

Conclusions

On the whole, the results suggest that adjustments to unemployment become increasingly destabilizing both to the households and to the economy as the period of unemployment lengthens. The destabilizing effects are least severe to the economy in the short run if the individual makes maximum use of liquid assets and debt —in effect, if he permits his net worth position to deteriorate rather than if he cuts expenditures. The long-run situation is different; the unemployed who allow their net worth position to deteriorate pay a price for maintaining expenditure patterns during the period of unemployment: they lose their assets and burden themselves with debt. When re-employed they must pay off debt and attempt to rebuild their assets, both of which presumably slow down the restoration of normal expenditure patterns.

In sum, unemployed individuals may elect to have the full or a large share of the real burden of unemployment—reduced consumption—fall on themselves and their family immediately, or they may elect to stretch the burden out over a longer period. The evidence suggests that the unemployed typically choose the latter course, and that this choice is one of the factors which may have tended to reduce the severity of cyclical fluctuations in the economy during the postwar period. Both of the preferred adjustments—utilizing debt and reducing liquid assets—help to maintain consumption. Hence their immediate consequences are similar to those of the so-called built-in stabilizers, such as unemployment compensation and reductions in personal income tax liability, that offset declines in money income.

Unemployment compensation payments are quantitatively one of the most important of the stabilizing elements,[6] and have the added advantage of permitting a partial maintenance of consump-

[6] For recent information on this topic, see the BLS 1961 *Survey of the Work History of the Unemployed*, August 1963.

tion without requiring a concomitant deterioration in net worth position. Furthermore, unemployment compensation tends to reinforce other methods of adjustment. For example, credit is likely to be more readily available if some regular source of income exists. And unemployment compensation, in turn, helps to preserve the household's liquid-asset position for a longer period.