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## 〈 CHAPTER 5 〉

### *PATTERNS OF OUTLAY AND REVENUE: BEHAVIOR OF COMMODITY GROUPS*

**I**N Chapter 4 we have followed the swellings and contractions of the broad stream of buyers' outlays for commodities, during business cycles, and have attempted to determine the relative importance of changes in the physical volume of goods exchanged and in average unit prices as factors in the cyclical movements of aggregate outlay. This aggregate is made up of payments for goods of many varieties—raw and processed, farm and industrial, consumption and capital goods—and there is reason to believe that there are material differences among these varieties in the cyclical movements of buyers' outlays and in the roles of price and quantity factors in these movements. In surveying the behavior of these commodity groups we deal first with the cyclical patterns of buyers' outlays, then with the parts played by unit prices and physical volume as determinants of outlay movements.

Reference cycle patterns of buyers' outlays for 16 important categories of goods are given in Table 22 and are plotted in Chart 8.<sup>1</sup> The swings of monetary payments for these various kinds of goods are much the same in their timing and direction. Outlays for all classes reach their peak at stage V, when business at large is most active. The chief differences in timing relate to the final period of contraction. For 5 (overlapping) classes of goods—American farm products, crop products, consumer goods, foods, and nondurable goods generally—buyers' outlays begin to expand after stage VIII. Outlays for raw materials, animal products, and goods intended for human consumption remain at a constant level between stages VIII and IX. For all other groups the low point comes at stage IX, and revival of outlays coincides with the beginning of expansion in the economy at large. We shall have more to say later on the question of timing.

<sup>1</sup> See Appendix Table 2 and Ch. 3, note 13, for explanation of these commodity groups.

PRICE-QUANTITY INTERACTIONS

TABLE 22

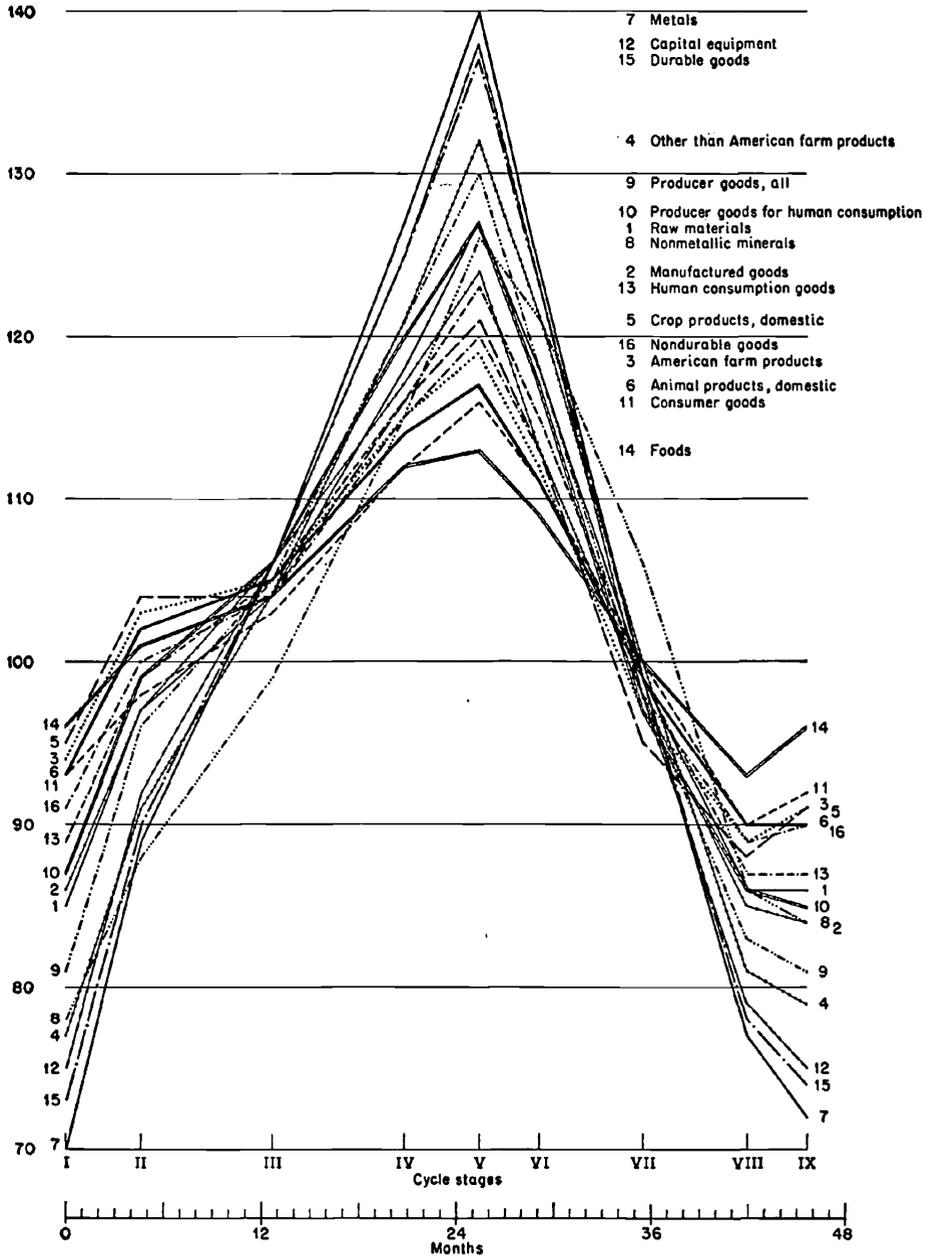
Average Movements of Buyers' Outlays for  
Groups of Commodities in Business Cycles

	REFERENCE CYCLE STAGES								
	I	II	III	IV	V	VI	VII	VIII	IX
All commodities	85	97	105	118	125	116	99	85	85
Raw materials	85	97	104	118	127	118	99	86	86
Manufactured goods	86	97	106	117	124	113	98	85	84
American farm products	94	103	105	115	119	112	97	89	91
Other than American farm products	77	91	104	121	132	121	100	81	79
Crop products, domestic	95	104	104	116	121	113	95	88	91
Animal products, domestic	93	102	105	114	117	111	99	90	90
Metals	70	89	106	127	140	124	99	77	72
Nonmetallic minerals	78	88	99	115	126	121	106	86	84
Producer goods, all	81	96	105	121	130	118	98	83	81
Producer goods for human consumption	87	99	106	120	127	117	97	86	85
Consumer goods	93	98	103	112	116	111	100	90	92
Capital equipment	75	92	106	125	138	123	98	79	75
Human consumption goods	89	99	105	116	123	115	99	87	87
Foods	96	101	104	112	113	109	100	93	96
Durable goods	73	90	106	125	137	123	99	78	74
Nondurable goods	91	100	104	115	120	113	98	89	90

More notable are the differences in amplitude (Table 23). The relative amplitudes of the cyclical swings in buyers' outlays for these types of goods reflect behavior characteristics that are now generally recognized. The outlays of buyers (and the revenues of sellers) are most variable for the products of heavy industry—metals, durable goods, capital equipment—which are traditionally susceptible to the forces of expansion and contraction. Near the bottom of the list are foods, consumer goods, farm products, and nondurable goods generally. The range of difference extends from an amplitude index of 34 for foods (representing cyclical variations of some 17 percent in expan-

CHART 8

Average Movements of Buyers' Outlays in Business Cycles  
Sixteen Major Commodity Groups



PRICE-QUANTITY INTERACTIONS

TABLE 23

Amplitudes of Cyclical Fluctuations in Buyers' Outlays for Groups of Commodities, with Corresponding Measurements for Prices and Quantities

	REFERENCE CYCLE		AMPLITUDE
	Value	Price	Quantity
Metals	138	43	97
Durable goods	127	39	91
Capital equipment	126	39	89
Other than American farm products	108	42	71
Producer goods, all	98	46	54
Nonmetallic minerals	90	37	54
Raw materials	83	49	36
Producer goods for human consumption	82	48	34
<i>All commodities</i>	80	40	40
Manufactured goods	78	33	45
Human consumption goods	70	42	27
Nondurable goods	59	42	18
Crop products, domestic	56	43	10
American farm products	53	40	12
Animal products, domestic	51	37	14
Consumer goods	47	30	17
Foods	34	33	0

Each group amplitude measure is the algebraic difference between the rise, in reference cycle relatives, between stages I and V and the decline between stages V and IX. It is based upon the stage averages given in Table 22 (for values) and in Appendix Table 3 (for prices, quantities, and values). Attention has been called to the fact that measures of 'reference cycle amplitude' for given series will understate the magnitude of actual cyclical fluctuations unless the lows and highs of the given series coincide with those of business at large. Among the present commodity groups there is some understatement for the 5 classes for which outlays reach their low points in reference cycle stage VIII. We should note, too, that the method of averaging necessarily dampens non-synchronous fluctuations of individual components.

sion and 17 in contraction) to 138 for metals (approximately 69 percent variation). The relatively high degree of conformity among outlay patterns for different kinds of goods in respect of timing is in sharp contrast to the variations in amplitude.

It is clear from Table 23 that group differences in the amplitudes of price changes are much smaller than the differences in the amplitudes of quantity movements. For the price series the range between the highest and lowest measure of cyclical amplitude is from 30 to 49. Among the corresponding quantity series the range of amplitude indexes is from 0 to 97. These extreme variations in quantity amplitudes are the main factor in

## OUTLAY PATTERNS: GROUPS

the widely varying value amplitudes. This showing confirms other evidence indicating that the ties among prices are closer than among quantities, that commodity prices respond more uniformly than do physical quantities to cyclical forces. This generalization holds when we deal with individual commodities in an undifferentiated aggregate; it is equally true when commodities are classified on the basis of their origin, use, durability, or standing in the productive-distributive process. Within these major groups, as between them, fluctuations in prices are more uniform than those in quantities, in the amplitude of their movements.

### *Intensity of Outlay Changes*

The rate of increase in buyers' outlays for commodities in general, we have seen, was at its maximum between stages I and II of reference cycles; the rate of decline was highest between stages VI and VII (Table 19). The record for commodity groups is given in Table 24. The groups are here listed in the order of the timing, within the reference cycle, of their maximum rates of increase in value. For one group, foods, the rate of increase in buyers' outlays is highest between stages VIII and IX, the terminal period of general business contraction. For 13 groups increase in outlays is at its maximum between stages I and II of reference cycles. Outlays for consumer goods are advancing most rapidly between stages III and IV.<sup>2</sup> One group, nonmetallic minerals, reaches its highest rate of advance in the final phase of general expansion, between reference cycle stages IV and V. The differences among the maximum rates correspond, in general, to the differences in amplitude, with the heavier, durable, producer goods classes having the highest maxima. The early advance in aggregate expenditures for foods and the attainment of maximum outlay increases for consumer goods and nonmetallic minerals midway or late in expansion are notable departures from the pattern of general group behavior.

<sup>2</sup> This does not necessarily mean that the outlays of final consumers are advancing most rapidly during this period. The quantity records and price quotations used here are for quantity movements and prices at distributive stages preceding retailing operations.

PRICE-QUANTITY INTERACTIONS

TABLE 24

Periods of Maximum Monthly Rates of Increase in Buyers' Outlays for Groups of Commodities, with Corresponding Measurements for Prices and Quantities

	INTERSTAGE	AV. MONTHLY RATE OF CHANGE		
	PERIOD	Value	Price	Quantity
Foods	VIII-IX	+1.3	+0.4	+0.8*
Metals	I-II	+3.6	+0.7	+3.5*
Capital equipment	I-II	+3.5	+0.7	+3.1*
Durable goods	I-II	+3.5	+0.7	+3.1*
Producer goods, all	I-II	+3.2	+1.2*	+2.1*
Other than American farm products	I-II	+3.0	+0.8	+2.5*
Producer goods for human consumption	I-II	+2.9	+1.5*	+1.4*
Raw materials	I-II	+2.7	+1.3*	+1.5*
<i>All commodities</i>	<i>I-II</i>	+2.5	+1.0*	+1.6*
Manufactured goods	I-II	+2.2	+0.6 <sup>a</sup>	+1.7*
Human consumption goods	I-II	+2.1	+1.0*	+1.1*
American farm products	I-II	+2.0	+1.1*	+0.7 <sup>b</sup>
Animal products, domestic	I-II	+2.0	+0.9*	+1.0*
Crop products, domestic	I-II	+2.0	+1.5*	+0.2
Nondurable goods	I-II	+2.0	+1.1*	+0.9*
Consumer goods	III-IV	+1.3	+0.4	+0.7
Nonmetallic minerals	IV-V	+2.8	+1.0*	+1.8*

In deriving rates of change for commodity groups, average monthly rates by interstage periods for all the commodities in each group have been averaged, the measures for individual commodities being equally weighted. This is consistent with the method of deriving the average monthly rates for individual commodities (see note to Table 21). The average rates for 'all commodities' given in Tables 24 and 25 and in the related footnotes have been similarly derived. It will be noted that these 'all commodity' rates differ slightly from those given in Tables 11 and 19, in the computation of which account was taken of the varying average durations of the different interstage periods (see note to Table 11).

\* Maximum rate of advance.

<sup>a</sup> Same maximum rate of advance occurs during interstage period IV-V.

<sup>b</sup> Same maximum rate of advance occurs during interstage period III-IV.

Average rates of change in unit price and in quantity for the periods in which outlays advance at maximum rates are also shown in Table 24. For 12 of the 16 commodity groups the rates of increase in volume exceed the rates of increase in price. That is, the sharpest accelerations in outlays are attributable chiefly to increases in the physical volume of purchases. Only for farm products, crop products, producer goods for human consumption, and nondurable goods (categories comprehending many of the same products) are the rates of price increase

## OUTLAY PATTERNS: GROUPS

higher than the rates of change in volume during the periods of maximum advance in buyers' outlays. These are, typically, goods the supply of which is not readily expansible under the pressure of increased demand.

In general, maximum rates of advance in prices and in quantities came, also, during the first period of general business expansion.<sup>8</sup> This was true, as regards prices, for 10 of the

<sup>8</sup> Periods of maximum rate of advance in price and quantity, for the various commodity groups here studied, are set forth below.

	INTERSTAGE PERIOD	AV. MONTHLY RISE IN PRICE
Crop products, domestic	I-II	+1.5
Producer goods for human consumption	I-II	+1.5
Raw materials	I-II	+1.3
Producer goods, all	I-II	+1.2
American farm products	I-II	+1.1
Nondurable goods	I-II	+1.1
<i>All commodities</i>	<i>I-II</i>	<i>+1.0</i>
Human consumption goods	I-II	+1.0
Animal products, domestic	I-II	+0.9
Foods	I-II	+0.7
Manufactured goods	I-II & IV-V	+0.6
Metals	IV-V	+1.1
Capital equipment	IV-V	+1.0
Durable goods	IV-V	+1.0
Nonmetallic minerals	IV-V	+1.0
Other than American farm products	IV-V	+1.0
Consumer goods	IV-V	+0.6
	INTERSTAGE PERIOD	AV. MONTHLY RISE IN QUANTITY
Consumer goods	VIII-IX	+0.9
Foods	VIII-IX	+0.8
Metals	I-II	+3.5
Capital equipment	I-II	+3.1
Durable goods	I-II	+3.1
Other than American farm products	I-II	+2.5
Producer goods, all	I-II	+2.1
Manufactured goods	I-II	+1.7
<i>All commodities</i>	<i>I-II</i>	<i>+1.6</i>
Raw materials	I-II	+1.5
Producer goods for human consumption	I-II	+1.4
Human consumption goods	I-II	+1.1
Animal products, domestic	I-II	+1.0
Nondurable goods	I-II	+0.9
American farm products	I-II & III-IV	+0.7
Crop products, domestic	III-IV	+0.8
Nonmetallic minerals	IV-V	+1.8

## PRICE-QUANTITY INTERACTIONS

16 classes of goods. The other 6 groups all experienced their maximum price accelerations in the final period of business expansion, between stages IV and V. The goods thus lagging in their price response include metals and nonmetallic minerals, durables, capital equipment, and nonfarm products—commodities for which output can be readily expanded as the tide of business recovery first begins to flow. For these goods the pressures of demand on supply, that generate sharp price advances, come late in the recovery phase. Also among the products showing maximum price advance in the final phase of business expansion are consumer goods, which are marked by steady but modest advances during the entire reference expansion, with only slight variation from stage to stage.

Twelve of the 16 categories achieved their maximum rate of advance in physical quantities during the first period of reference expansion. Two groups—consumer goods and foods—registered maximum rates of advance in the preceding period, between stages VIII and IX of the reference cycle. For consumer goods and foods, that is, the upward movement of quantities was at its maximum during the terminal period of contraction in general business.<sup>4</sup> The strategic importance of this apparent recovery in the consumer segment of the economy, coming while contraction prevails in the economy at large, is clear.

We may follow the record of contraction in buyers' outlays in Table 25, in which the periods and rates of maximum decline are set forth by commodity groups. One outstanding feature of the table is that the rates of maximum decline in buyers' outlays are higher, for all except 2 of the 16 commodity groups, than the corresponding rates of maximum advance in Table 24. For nearly all classes of commodities the decline in

<sup>4</sup> The evidence of general index numbers on this point is conflicting. An index of the production of foodstuffs, constructed by the National Bureau and covering five recent cycles, confirms the present sample in showing the maximum rate of advance in interstage period VIII-IX. Two index numbers of the production of consumer goods (those of Leong and of the Federal Reserve Bank of New York) show declines in output in this period, but at low rates. A similar index of the Harvard Economic Service, covering three business cycles between 1919 and 1927, has its next to the highest rate of advance in the terminal period of general business contraction.

OUTLAY PATTERNS: GROUPS

buyers' outlays during business contractions is sharper, more violent, more intense, than the rise during expansions. Only for animal products and foods is the reverse true, and for these the difference between the maximum rates of change in the two cyclical phases is slight.

The two phases differ, also, in the timing of the periods of maximum rates of change. Most commodity groups achieve their maximum advances in the first period of expansion (between stages I and II of reference cycles). Maximum declines come in the second period of general contraction (between stages VI and VII of reference cycles) for most groups. Manufactured goods, crop products, and farm products react promptly and sharply to recession, buyers' outlays

TABLE 25

Periods of Maximum Monthly Rates of Decrease in Buyers' Outlays for Groups of Commodities, with Corresponding Measurements for Prices and Quantities

	INTERSTAGE PERIOD	AV. MONTHLY RATE OF CHANGE		
		Value	Price	Quantity
Crop products, domestic	V-VI	-3.2	-1.3	-1.3*
Manufactured goods	V-VI	-2.7	-0.3	-2.2*
Nondurable goods	V-VI	-2.2	-0.7	-1.2*
	VI-VII	-2.2	-1.6*	-0.6
American farm products	V-VI	-2.1	-0.8	-1.0*
Foods	V-VI	-1.0	-0.3	-0.6*
	VI-VII	-1.0	-1.4*	+0.3
Metals	VI-VII	-4.6	-1.5*	-2.8
Capital equipment	VI-VII	-4.2	-1.5*	-2.5
Durable goods	VI-VII	-4.1	-1.4*	-2.5
Other than American farm products	VI-VII	-3.6	-1.3	-2.1
Producer goods, all	VI-VII	-3.4	-1.8*	-1.6
Raw materials	VI-VII	-3.3	-2.0*	-1.2*a
Consumer goods for human consumption	VI-VII	-3.1	-2.0*	-1.1
All commodities	VI-VII	-2.8	-1.5*	-1.2
Human consumption goods	VI-VII	-2.4	-1.6*	-0.8
Animal products, domestic	VI-VII	-1.8	-1.3*b	-0.6
Nonmetallic minerals	VII-VIII	-3.6	-1.3*	-2.3*
Consumer goods	VII-VIII	-1.5	-1.3*	-0.3

\* Maximum rate of decline.

a Same maximum rate of decline occurs during interstage period V-VI.

b Same maximum rate of decline occurs during interstage period VII-VIII.

## PRICE-QUANTITY INTERACTIONS

dropping most rapidly between stages V and VI; consumer goods and nonmetallic minerals respond more slowly, outlays dropping most sharply between stages VII and VIII. But for nearly all commodities outlays turn downward after stage V, and fall with accelerated intensity between stages VI and VII. The decline is unbroken in the next period between stages VII and VIII, but at a slower tempo. It is significant that for no group is the decline in buyers' outlays at its maximum between stages VIII and IX, the terminal period of general business contraction.

The records of intensity of outlay changes during expansion and contraction differ significantly in the relative roles of quantities and prices. The quantity factor is dominant for 'all commodities' and in 12 of the 16 individual groups in contributing to maximum outlay changes in expansion (see Table 24). In contraction, price contributes more than quantity in the period (VI-VII) of maximum decline in buyers' outlays for commodities at large. For about half of the groups listed, price is the major contributor to outlay drops in the period of maximum decline; for the other half, and notably among manufactured goods, quantity provides the chief stimulus to declines. Taking account of all the commodities and groups here studied, it is clear that price has been more important as a factor reducing monetary outlays and revenues in periods of business contraction than as a factor in augmenting outlays and revenues in expansion.

Separate study of the price and quantity factors, by groups, with respect to the timing of their maximum rates of decline, reveals certain notable resemblances and differences between the stages of maximum advance and of maximum decline.<sup>5</sup> For all except one group the maximum rate of decline in quantity is attained in the first period of business contraction, between stages V and VI.<sup>6</sup> (Nonmetallic minerals, which lagged in their physical volume response to the forces of expansion, lag also in contraction, reaching their maximum rate of fall between stages VII and VIII.) In this respect contraction resembles expansion. The first stage of each brings the sharpest changes in quantity.<sup>7</sup> The maximum rates of decline in quantities are,

## OUTLAY PATTERNS: GROUPS

in general, fairly close to the maximum rates of advance. Raw materials rise somewhat more sharply than they fall; manufactured goods, crop products, and nonmetallic minerals fall more sharply than they rise. But for most groups the differences are small, for quantities; the excess of rates of decline in buyers'

<sup>5</sup> Periods of maximum rate of decline in price and quantity, for the several commodity groups, are given below.

	INTERSTAGE PERIOD	AV. MONTHLY FALL IN PRICE
Crop products, domestic	VI-VII	-2.6
Producer goods for human consumption	VI-VII	-2.0
Raw materials	VI-VII	-2.0
American farm products	VI-VII	-1.8
Producer goods, all	VI-VII	-1.8
Human consumption goods	VI-VII	-1.6
Nondurable goods	VI-VII	-1.6
<i>All commodities</i>	<i>VI-VII</i>	<i>-1.5</i>
Capital equipment	VI-VII	-1.5
Metals	VI-VII	-1.5
Durable goods	VI-VII	-1.4
Foods	VI-VII	-1.4
Animal products, domestic	VI-VII & VII-VIII	-1.3
Other than American farm products	VII-VIII	-1.4
Consumer goods	VII-VIII	-1.3
Manufactured goods	VII-VIII	-1.3
Nonmetallic minerals	VII-VIII	-1.3

	INTERSTAGE PERIOD	AV. MONTHLY FALL IN QUANTITY
Metals	V-VI	-3.2
Capital equipment	V-VI	-3.0
Durable goods	V-VI & VII-VIII	-2.8
Other than American farm products	V-VI	-2.4
Manufactured goods	V-VI	-2.2
Producer goods, all	V-VI	-2.0
<i>All commodities</i>	<i>V-VI</i>	<i>-1.7</i>
Crop products, domestic	V-VI	-1.3
Producer goods for human consumption	V-VI	-1.3
Human consumption goods	V-VI	-1.2
Nondurable goods	V-VI	-1.2
Raw materials	V-VI & VI-VII	-1.2
Consumer goods	V-VI	-1.1
American farm products	V-VI	-1.0
Animal products, domestic	V-VI	-0.9
Foods	V-VI	-0.6
Nonmetallic minerals	VII-VIII	-2.3

<sup>6</sup> For raw materials and durable goods this rate is equaled in a later stage.

<sup>7</sup> As noted earlier, general indexes of industrial production, wider in coverage than our sample, are marked by rates of decline that increase from interstage period V-VI to period VI-VII.

## PRICE-QUANTITY INTERACTIONS

outlays over the corresponding rates of advance during business expansion is largely attributable to differences in the behavior of the price factor.

In respect of prices, two points stand out. Without a single exception the maximum rates of price decline exceed the maximum rates of price advance during expansion.<sup>8</sup> The forces of price contraction seem to encounter fewer resistances than do the forces making for price rises in periods of general business expansion. The restraints on price increases—increases in supplies, governmental regulation, established and accepted price levels, the fear of inviting competition—appear to be stronger than the restraints on price decline, once general contraction is under way. Declines can build up to a higher tempo of price change.

The other point is a counterpart of this. Most commodity groups (about three-quarters of the total) attain their maximum rates of price decline between stages VI and VII of reference cycles. The remaining quarter have maximum rates of decline between stages VII and VIII. All groups, that is, are marked by rates of price decline that accelerate as contraction proceeds. No group attains its maximum in the initial period of business recession. In the expansion phase, it will be recalled, maximum rates of advance came for most groups in the first period of recovery, between reference cycle stages I and II. (Nonfarm products and, notably, products of heavy industry, were exceptions, having fairly constant rates of price advance until the final period of expansion when maximum rates were attained.) With the exceptions noted, retardation in the rate of price change after the initial rise is characteristic of business expansion; acceleration of price decline, at least through the second period of contraction and for some groups through the third interstage period, is characteristic of business contraction.<sup>9</sup>

<sup>8</sup> The fact that the net trend of prices was declining during the period covered has a clear bearing on this finding. More evidence, from other periods, is needed to confirm this indication.

<sup>9</sup> General indexes of wholesale prices show the same acceleration of decline, from the first to the second period of business contraction, with retardation thereafter. On expansions, maximum rates of price increase come in the first and

## OUTLAY PATTERNS: GROUPS

### *Extent of Outlay Changes*

We have noted that 67 percent of the interstage movements of buyers' outlays were with the tide of cyclical change in the economy at large; 33 percent went counter to the general tide. With these figures in mind we examine the records of value changes for major commodity groups (Table 26).

Monetary payments for all classes of goods follow the tides of general business,<sup>10</sup> but there is considerable variation from group to group. The groups previously noted as having wide amplitudes of cyclical fluctuation—minerals, durable goods, capital equipment, nonfarm products—stand high in the present list. Roughly three-quarters of all interstage changes in buyers' outlays for these goods accord with the cyclical movements of general business; one-quarter reverse the cyclical tides. At the other extreme are farm products, nondurable goods, foods, and consumption goods generally. For these some 58 to 65 percent run with cyclical tides, 35 to 42 percent run counter to them. Products of domestic farm crops, the least disciplined of economic goods, the least subservient to strictly business influences, are at the bottom of the list, but even for these almost three-fifths of all value changes accord with the swings of busi-

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fourth periods of expansion for one index, in the first period for one index, and in the first and second periods for one index. For none is the initial rise in price exceeded, although it may be equaled in later periods.

Interstage rates of change for the Bureau of Labor Statistics all commodities index covering 11 reference cycles between 1891 and 1938 (the 'war cycles' 1914-19 and 1919-21 are excluded), for the combined Warren-Pearson index and the BLS index covering 18 reference cycles (excluding war cycles) between 1854 and 1938, and for the Bradstreet index covering 9 reference cycles (excluding war cycles) between 1894 and 1933, are given below.

INTERSTAGE PERIOD	AV. MONTHLY RATES OF CHANGE IN WHOLESALE PRICE INDEXES		
	BLS	Warren-Pearson and BLS	Bradstreet
I-II	+0.4	+0.4	+0.4
II-III	+0.2	+0.04	+0.4
III-IV	+0.3	+0.2	+0.2
IV-V	+0.4	+0.3	+0.2
V-VI	-0.1	-0.2	-0.4
VI-VII	-0.6	-0.8	-0.5
VII-VIII	-0.5	-0.4	-0.3
VIII-IX	-0.2	-0.4	+0.02

<sup>10</sup> In some degree the concordance of movement among groups is to be attributed to overlapping coverage.

PRICE-QUANTITY INTERACTIONS

TABLE 26

Interstage Movements of Buyers' Outlays  
for Groups of Commodities: Full Cycle

	NO. OF INTERSTAGE CHANGES	PERCENTAGE OF MOVEMENTS	
		With Cyclical Tide	Against Cyclical Tide
Metals	1,096	76	24
Durable goods	1,240	75	25
Capital equipment	1,384	74	26
Nonmetallic minerals	552	73	27
Other than American farm products	2,064	73	27
Producer goods, all	3,296	70	30
Manufactured goods	1,616	67	33
Producer goods for human consumption	2,096	67	33
<i>All commodities</i>	<i>4,160</i>	<i>67</i>	<i>33</i>
Raw materials	2,544	67	33
Human consumption goods	3,176	65	35
Animal products, domestic	1,360	63	37
Nondurable goods	2,856	63	37
American farm products	2,096	61	39
Consumer goods	1,232	61	39
Foods	1,720	60	40
Crop products, domestic	736	58	42

ness cycles. In their influence on monetary payments the forces of general business cycles are pervasive and compelling; after all allowance for the influence of overlapping categories, the degree of concordance with business tides among diverse classes of goods is impressive.<sup>11</sup>

The degree of conformity of outlay changes to the cyclical tide is higher during expansion (70 percent of all movements are with the tide) than during contraction (64 percent with the tide). This is true, also, for each commodity group studied. The manifestations of contraction are less pervasive than those of expansion,<sup>12</sup> a condition doubtless due in some degree to the upward push of secular forces in the American economy. Furthermore, the range of group differences, in percentage of outlay movements conforming to the cyclical tide, is greater in expansion than in contraction. The forces of business contraction appear to be more even in their incidence than those of expansion; i.e., expansion is marked by greater diversity of business fortunes.

## OUTLAY PATTERNS: GROUPS

### *Positive Movements of Outlay and Revenue by Stages of Business Cycles*

In Chapter 4 we discussed the behavior of aggregate monetary payments for commodities during the various stages of business cycles. We must go below the surface of aggregate payments if we are to have a just conception of the manner in which buyers' outlays (and sellers' revenues) respond to the forces of cyclical expansion and contraction. In what order and at what rate do outlays for different kinds of goods pick up after a general business depression? What is the timing and character of their declines, in contraction? What are the roles of price and quantity changes in the generation of expansions and contractions in outlays for different classes of goods?

<sup>11</sup> If we concentrate attention on average outlay patterns for individual commodities, subordinating aberrant movements occurring in particular business cycles, we may expect conformity to the general tides of business to be still higher. The following summary is based on a count of movements in these typical patterns.

	NO. OF INTERSTAGE CHANGES	PERCENTAGE OF MOVEMENTS	
		With Cyclical Tide	Against Cyclical Tide
Metals	120	95	5
Durable goods	152	92	8
Capital equipment	168	89	11
Other than American farm products	248	87	13
Producer goods, all	384	84	16
Nonmetallic minerals	80	82	18
Producer goods for human consumption	232	81	19
Raw materials	256	78	22
<i>All commodities</i>	512	77	23
Manufactured goods	256	76	24
Human consumption goods	392	73	27
Nondurable goods	352	70	30
Animal products, domestic	168	69	31
American farm products	264	67	33
Crop products, domestic	96	64	36
Foods	192	64	36
Consumer goods	176	63	37

When the details of individual cycles are thus ironed out the percentage of movement of outlays conforming to the cyclical tide is definitely higher, particularly in the heavy goods, nonfarm sectors. This is distinctly less true of the consumer goods, foods, and farm products sectors.

<sup>12</sup> This statement is based on observations taking account of *direction* of movement of buyers' outlays. In many cases there is retardation of advance during business contractions without absolute declines in monetary payments.

## PRICE-QUANTITY INTERACTIONS

The business tide never runs unbrokenly in one direction. When contraction is most extensive, between reference cycle stages VI and VIII, about one-sixth of all commodities in our sample show increases in monetary values, in their average patterns. We may start the review of outlays for various classes of commodities with interstage period VII-VIII. Relevant observations are recorded in Table 27, col. 1 and 2. At the bottom of these columns are the products of heavy industries—producer goods, durable goods, nonfarm products, and goods for capital equipment. Declines in buyers' outlays and in sellers' revenues occur for 90 to 100 percent of goods of these types between stages VII and VIII of reference cycles. For farm products (notably crop products), consumer goods, and nondurable goods generally declines are less prevalent. Buyers' outlays actually increase for 23 to 33 percent of such goods at this period of general contraction.

During the final period of business contraction (stages VIII-IX) 45 percent of all commodities in our sample show positive value changes. But in each of six categories—human consumption goods, consumer goods, nondurables, farm products, foods, and crop products—the percentage exceeds 50 (see Table 27, col. 3 and 4). Among crop products, indeed, the percentage showing outlay increases is 92. The products of heavy industries—the goods marked by few outlay increases in the preceding period—are still at the bottom of the list, but for all 16 classes of goods the percentages of gains are greater than in the preceding period. The rate of contraction is being definitely retarded throughout the business system, although the tide is still ebbing.

In these terminal stages of business depression farm products and consumer goods are most resistant to the force of contraction, and most resilient in contributing to a business upturn. For substantial percentages of these goods, buyers' outlays increase before the ebb of general business has ended. We find here suggestions of the pressure of two sets of forces that may play initiatory roles in business revivals. There is an indication that recovery may get an early fillip from propitious changes (in prices or quantities, or both) affecting the values of farm

## OUTLAY PATTERNS: GROUPS

products, particularly crop products, and swelling the purchasing power of farmers. From another direction—the increased buying of goods by consumers at large—may come other forces contributing to check the decline in monetary payments and to start an upturn at the strategic terminal point of the productive-distributive process.<sup>18</sup>

The nature of the flow of monetary payments for different types of commodity groups between reference cycle stages I and II is indicated in Table 27, col. 5 and 6. Now the general business tide has turned and is running strongly in the direction of recovery. An outstanding difference between this and the tabulation for the preceding period is found in the far greater homogeneity of the movement between stages I and II. Here the percentages of positive movements of values fall between 100 and 64 as compared with a range from 92 to 13 for interstage period VIII-IX. Quite remarkable, too, is the shift in the standing of particular groups. Durable goods and metals, which stand at the bottom of the list for period VIII-IX, with the lowest participation in outlay gains, now lead, with perfect scores. And consumer goods, crop products, and foods, which contributed substantially to recovery between stages VIII and IX are lowest in percentage of outlay increases between stages I and II. True, these goods are still gaining in value (except for crop products, more strongly than in the preceding period), but the procession is now led by other commodities. Rising demand for consumer goods and increasing revenues of farmers may play important roles in checking contraction and initiating recovery, but the ball is carried by other groups once expansion has definitely begun.

During the next three interstage periods (i.e., from stage II to the peak at stage V), the goods for which outlays increase most rapidly during the first period of expansion remain in the forefront (see Table 27, col. 7-12). Here are durable goods, metals, nonmetallic minerals, capital equipment, nonfarm products. Very large proportions of the commodities in these categories are marked by expanding buyers' outlays during the whole pe-

<sup>18</sup> This discussion does not, of course, cover the whole range of processes involved in business cycles. I do not suggest that the forces here named are ultimate causes.

PRICE-QUANTITY INTERACTIONS

TABLE 27

Changes in Buyers' Outlays during Interstage Periods  
in Business Cycles, by Commodity Groups

PERCENTAGE OF COMMODITIES IN GROUP SHOWING INCREASES IN OUTLAY

Interstage Period VII-VIII		Interstage Period VIII-IX	
(1)	(2)	(3)	(4)
Crop products, domestic	33	Crop products, domestic	92
Consumer goods	32	Foods	63
Foods	29	American farm products	61
American farm products	24	Consumer goods	59
Nondurable goods	23	Nondurable goods	56
Human consumption goods	20	Human consumption goods	51
Animal products, domestic	19*	Producer goods for human consumption	48
Manufactured goods	19	Manufactured goods	47
<i>All commodities</i>	17	<i>All commodities</i>	45
Raw materials	16*	Animal products, domestic	43
Producer goods for human consumption	14	Raw materials	43
Capital equipment	10	Producer goods, all	37
Non-American farm products	10*	Nonmetallic minerals	30
Nonmetallic minerals	10*	Non-American farm products	29
Producer goods, all	10*	Capital equipment	24
Durable goods	5*	Durable goods	21
Metals	0*	Metals	13
Interstage Period I-II		Interstage Period II-III	
(5)	(6)	(7)	(8)
Durable goods	100	Durable goods	95
Metals	100	Metals	93
Capital equipment	95	Nonmetallic minerals	90
Non-American farm products	94	Non-American farm products	87
Producer goods, all	94	Capital equipment	86
Nonmetallic minerals	90	Producer goods, all	69
Producer goods for human consumption	89	Raw materials	66
Raw materials	88	<i>All commodities</i>	64
<i>All commodities</i>	84	Manufactured goods	62
Animal products, domestic	81	Human consumption goods	58
Manufactured goods	81	Producer goods for human consumption	58
Human consumption goods	80	Consumer goods	55
Nondurable goods	77	Foods	50
American farm products	75	Nondurable goods	50
Crop products, domestic	67	Animal products, domestic	43
Foods	67	American farm products	42
Consumer goods	64	Crop products, domestic	41

OUTLAY PATTERNS: GROUPS

TABLE 27 (concl.)

PERCENTAGE OF COMMODITIES IN GROUP SHOWING INCREASES IN OUTLAY

Interstage Period III-IV		Interstage Period IV-V	
(9)	(10)	(11)	(12)
Durable goods	100	Capital equipment	90
Metals	100	Nonmetallic minerals	90
Nonmetallic minerals	100	Durable goods	89
Non-American farm products	97	Non-American farm products	88
Capital equipment	95	Producer goods for human consumption	88
Manufactured goods	94	Metals	87
Producer goods, all	92	Producer goods, all	86
All commodities	89	Raw materials	86
Producer goods for human consumption	89	All commodities	80
Foods	88	Human consumption goods	77
Human consumption goods	88	Nondurable goods	76
Consumer goods	86	Crop products, domestic	75
Raw materials	85	Manufactured goods	75
Crop products, domestic	84	American farm products	74
Nondurable goods	84	Animal products, domestic	74
American farm products	82	Foods	69
Animal products, domestic	80	Consumer goods	63
Interstage Period V-VI		Interstage Period VI-VII	
(13)	(14)	(15)	(16)
Foods	46	Nonmetallic minerals	80
Consumer goods	45	Consumer goods	85*
Animal products, domestic	43	Foods	83*
Nonmetallic minerals	40	Animal products, domestic	83*
American farm products	33	American farm products	87*
Nondurable goods	30	Manufactured goods	87*
Human consumption goods	26	Nondurable goods	87*
Manufactured goods	26	All commodities	85*
All commodities	23	Durable goods	86
Raw materials	21	Human consumption goods	86*
Crop products, domestic	16	Non-American farm products	86
Non-American farm products	12	Raw materials	86*
Producer goods, all	12	Capital equipment	84
Producer goods for human consumption	11	Crop products, domestic	83*
Capital equipment	5*	Producer goods, all	80*
Durable goods	5*	Metals	7
Metals	0*	Producer goods for human consumption	7*

\* Percentage of positive value changes at its minimum for the cycle.

## PRICE-QUANTITY INTERACTIONS

riod of reference expansion. Increased expenditures characterize markets for other goods as well, but the flow of outlays (and revenues) never becomes as uniformly positive for consumption goods, farm products, and nondurables as it does for their counterparts among capital equipment, nonfarm products, and durable goods.

The marked check to expansion after stage II that appears in the record for aggregate outlays is manifest in the detailed story. Among the 16 here listed only one group (nonmetallic minerals) fails to reflect retardation. It is most evident in the lower half of the list, among human consumption goods, nondurables, foods, and farm products. For farm products, indeed, declines in outlay actually exceed increases between stages II and III. (Only for this group, with its constituents, animal products and crop products, do outlay decreases exceed increases in any period of general expansion between stages I and V.) That this check to expansion after the first upsurge is greatest among nondurables and among goods destined for human consumption is a suggestive fact.<sup>14</sup> We have already remarked upon the early initiation of recovery among these goods. To this we now add evidence indicative of some satiation of demand, or of lessened prospects for profitable sale, after a relatively brief revival. Perhaps the most striking feature of this evidence is the fact that the degree of decline between interstage periods I-II and II-III is materially higher for goods in the consumption, nondurable categories than for products of heavy industry, although the latter are, in the full cycle, subject to fluctuations over a much wider range. There are signs here of a distinctive rhythm and timing in the buying of nondurable goods intended for human consumption, a tempo and type of fluctuation somewhat different from those found among heavier products. These clues to possible interrelations among cyclical processes call for further study.

<sup>14</sup> The percentage of consumer goods for which outlays are expanding shows a drop of only 9 points between interstage periods I-II and II-III, while the drop is 31 points for producer goods for human consumption. The latter group includes goods intended for human consumption but not yet finally processed. Actual consumption may be checked somewhat, but buying is most seriously restricted at the producer goods stage for consumption goods.

## OUTLAY PATTERNS: GROUPS

Pervasive recovery is resumed after stage III (see Table 27, col. 9 and 10). Consumption goods, nondurables, foods, and farm products swing back 30 to 40 points on the percentage scale—movements of a magnitude far exceeding those for the generally more sensitive heavy goods.<sup>15</sup> The short 'cycle' that occurs midway in general business expansion seems to affect, predominantly, nondurable goods flowing from farms into the consumption sector of the economy.

One other aspect of the check to expansion after stage II and the resumption after stage III is noteworthy. The percentage of manufactured goods showing increases in buyers' outlays drops sharply after stage II (only 62 percent show increases between stages II and III, as compared with 81 percent between stages I and II), but recovers rapidly to the highest value for the cycle (94) between stages III and IV. This period is the only one during expansion when the percentage of outlay increases is greater for manufactured goods than for raw materials. Between stages III and IV, apparently, recovery is substantial and pervasive. The range of group differences, in respect of degree of participation in outlay expansion, is less than at any other period of the cycle.

The scope of outlay expansion shrinks between stages IV and V (Table 27, col. 11 and 12). After stage V the cyclical current is abruptly reversed (Table 27, col. 13 and 14). For all commodities the percentage of positive changes in buyers' outlays falls sharply from 80 between stages IV and V to 23 between stages V and VI. In other words, for 57 percent of all commodities increases in the total expenditures of buyers change to decreases. This is a substantially greater shift than the reverse movement after stage IX, which affects only 39 percent of all commodities (the 57 and 39 are both net figures).

In the movement of buyers' outlays between stages V and VI the roles of different categories of goods shift again, fundamentally. For less than one-quarter of all commodities (23 percent) outlays are still rising from stage V to stage VI, but the groups that rank high in this respect are in general those that

<sup>15</sup> These percentages relate, of course, to proportions of commodities in given categories, not to degree of fluctuation.

## PRICE-QUANTITY INTERACTIONS

trailed during expansion. Outlays are relatively well maintained for consumer goods, farm products, nondurables, while outlays for metals, durable goods, capital equipment, producer goods, nonfarm products, drop sharply. As in the shift after stage I the two ends of the spectrum are almost completely reversed after stage V. (Nonmetallic minerals are in the upper half of the rankings in the periods just before and just after the peak, and products of farm crops remain in the lower half. The positions of the other 14 groups are reversed.)

Between stages VI and VII the proportion of commodities for which outlays increase falls to 16 percent. Declines prevail in all classes (see Table 27, col. 15 and 16). Group differences are distinctly smaller than in the preceding period; cross-currents are fewer. In general, the groups for which positive changes were relatively frequent between stages V and VI lead the list between stages VI and VII. Notably above the general average are nonmetallic minerals and consumer goods. Outlay changes for producer goods, metals, and capital equipment are predominantly negative.

As we return to interstage period VII-VIII (see Table 27, col. 1 and 2) we complete the cycle. For the over-all group the scope of contraction is slightly less than in the preceding period; 83 percent of the outlay changes are negative, 17 percent positive. But cross-currents are present. Contraction persists for durables, nonfarm products, capital equipment, metals, and nonmetallic minerals. In each of these groups buyers' outlays are declining for more goods than in the preceding period. For consumer goods, farm products, nondurables, and human consumption goods generally, recovery is beginning. Gains in buyers' outlays are still outweighed by losses, but there are more positive changes than between stages VI and VII. Some of the seeds of the general expansion that still lies well ahead are beginning to sprout here.

We have traced, stage by stage of business cycles, the swellings and contractions of the stream of monetary payments that flows from buyers of commodities to sellers. We have noted the relative stability of outlays for goods in the consumer, non-durable, and farm product sectors of the economy, and the

## OUTLAY PATTERNS: GROUPS

wider variations of outlays for producer goods and the products of heavy industries. With the greater stability of the former groups appears to go a definite leadership in the checking of contraction and in the initiation of recovery. Not only does the proportion of positive changes in outlays remain higher, for these groups, during contractions; such goods predominate among those for which outlays are increasing while contraction is still general in the economy. We may not say that these changes are ultimately causal in the complex processes of business cycles, but they are significant links in the network of sequences that lead from depression to recovery, and from prosperity to recession.

Behind all these changes in monetary outlays lie shifts in the number of physical units of goods traded, and changes in average unit price. What part does each of these factors play in the movements of outlays and revenues during business cycles? To this question we now turn, breaking into the cyclical process between stages VI and VIII of the general cycle.

### *Relative Roles of Price and Quantity Factors in Determining the Extent of Increases in Buyers' Outlays*

For a varying proportion of commodities, as we have seen, outlays expand even in the worst months of contraction and depression; for a certain proportion, outlays contract, even in the most prosperous times. Changes in unit prices and in quantities contribute to these expansions and contractions of monetary payments, in degrees that vary from group to group of commodities. The story, in detail, is somewhat complex, but certain clear patterns emerge. In defining these we give chief attention to the roles of price and quantity factors in the shifts that occur from period to period in the proportion of commodities for which buyers' outlays and sellers' revenues increase. This concentration on increments and decrements helps to illuminate dynamic aspects of the problem. The basic observations for this review are set forth in Appendix Table 4. The entries in the ensuing text tables (28 to 35) are the first differences of the measures there given.

## PRICE-QUANTITY INTERACTIONS

In exploring the relative changes of prices and quantities as contributors to cyclical expansions and contractions in the stream of monetary payments, we start with the first manifestations of recovery after stage VII. (The reference is, of course, to the range of phenomena here studied.) The proportion of positive changes in outlays for commodities at large is almost the same in interstage period VII-VIII as in period VI-VII, but significant differences are discernible in the detailed record, by groups. Table 28 shows for each of 16 commodity groups the change in the percentage of commodities gaining in value between periods VI-VII and VII-VIII, and indicates the part played by price and quantity components in each change. Eight groups, predominantly those from the consumer goods, farm products, nondurable goods sectors of the economy, show increases in the percentage of commodities marked by outlay advances between these two periods. We have already noted the

TABLE 28

Changes between Interstage Periods VI-VII and VII-VIII  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	VI-VII TO VII-VIII	
		Prices Dominant	Quantities Dominant
Crop products, domestic	+21	-2	+23
American farm products	+7	-1	+8
Consumer goods	+7	-8	+15
Producer goods for human consumption	+7	0	+7
Foods	+6	-3	+9
Nondurable goods	+6	-4	+10
Human consumption goods	+4	-4	+8
Manufactured goods	+2	-1	+3
<i>All commodities</i>	+7	-3	+4
Animal products, domestic	0	0	0
Producer goods, all	0	0	0
Raw materials	0	-5	+5
Capital equipment	-4	0	-4
Other than American farm products	-6	-5	-1
Metals	-7	0	-7
Durable goods	-11	0	-11
Nonmetallic minerals	-20	-10	-10

The base of each percentage is the number of commodities in the group in question.

OUTLAY PATTERNS: GROUPS

positive role of goods of this type in supporting the forces of recovery while contraction is still general. The outstanding fact now to be emphasized is that in every case the increase in the percentage of commodities showing outlay advances is attributable to the quantity factor. For all groups the influence of prices is negative, or neutral, as a factor making for the extension of buyers' outlays.

As we pass stage VIII of reference cycles we come into a period in which, although the general drift of outlay changes is still a declining one, a large number of commodities—45 per cent of the total—show increases in the amounts spent by buyers. (See Table 27. This represents an increase of 28 over the figure for interstage period VII-VIII.) In Table 29 we have a record of the percentages of commodities gaining in value, by groups, between interstage periods VII-VIII and VIII-IX. The impetus to expansion in buyers' outlays comes, predominantly, from those sectors in which signs of recovery were manifest in the preceding period, i.e., among foods, consumption goods,

TABLE 29

Changes between Interstage Periods VII-VIII and VIII-IX  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	VII-VIII TO VIII-IX	
		Prices Dominant	Quantities Dominant
Crop products, domestic	+59	+29	+30
American farm products	+37	+17	+20
Foods	+34	+13	+21
Producer goods for human consumption	+34	+12	+22
Nondurable goods	+33	+12	+21
Human consumption goods	+31	+11	+20
Manufactured goods	+28	+9	+19
<i>All commodities</i>	+28	+9	+19
Consumer goods	+27	+9	+18
Producer goods, all	+27	+8	+19
Raw materials	+27	+9	+18
Animal products, domestic	+24	+10	+14
Nonmetallic minerals	+20	+5	+15
Other than American farm products	+19	+2	+17
Durable goods	+16	+3	+13
Capital equipment	+14	+2	+12
Metals	+13	0	+13

PRICE-QUANTITY INTERACTIONS

farm products, and nondurable goods generally. In the reinforcing of recovery among these goods, and the general reversal of movement discernible in the outlay changes among other categories of goods, price and quantity factors supplement each other. It is noteworthy that there are no negative entries in Table 29. The current of contraction is still ebbing, but all changes are positive. Although prices supplement quantities in working to reverse the prevalent decline in monetary payments, the quantity factor is dominant in all the groups listed.

As we round the turn at stage IX we pass the low point of business cycles in the economy at large. Of our full list of commodities, 84 percent show positive value changes between stages I and II, an increase of 39 percent over interstage period VIII-IX. The changes occurring in the transition from the final period of contraction to the initial period of general recovery are set forth in Table 30. We have noted that, typically, products of the heavy industries move to the fore at this stage of recovery. Such industries, together with nonfarm products

TABLE 30  
Changes between Interstage Periods VIII-IX and I-II  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	VIII-IX TO I-II	
		Prices Dominant	Quantities Dominant
Metals	+87	+13	+74
Durable goods	+79	+13	+66
Capital equipment	+71	+17	+54
Other than American farm products	+65	+24	+41
Nonmetallic minerals	+60	+25	+35
Producer goods, all	+57	+30	+27
Raw materials	+45	+32	+13
Producer goods for human consumption	+41	+36	+5
<i>All commodities</i>	+39	+25	+14
Animal products, domestic	+38	+28	+10
Manufactured goods	+34	+19	+15
Human consumption goods	+29	+30	-1
Nondurable goods	+21	+31	-10
American farm products	+14	+25	-11
Consumer goods	+5	+23	-18
Foods	+4	+29	-25
Crop products, domestic	-25	+21	-46

## OUTLAY PATTERNS: GROUPS

and producer goods, are marked by shifts in the direction of positive value changes affecting more than 50 percent of their component commodities. The changes after stage IX are marked, too, by a revealing contrast in the roles of prices and quantities. The classes of goods in the lower half of Table 30—commodities chiefly drawn from the foods, consumer goods, nondurable goods, and farm products sectors of the economy—show increases in the percentages of commodities gaining in value predominantly because of price advances. Among the classes of commodities in the upper half of Table 30, quantity increases are the chief factor in the advances in the percentages of commodities gaining in value. The sole exceptions are raw materials, producer goods, and producer goods destined for human consumption. The third category, indeed, is marked by a notable increase in prices.

This evidence points to the presence, at a very early stage of recovery, of pressure on the supplies of certain classes of goods—notably farm products and goods intended for, or ready for, human consumption. These classes of goods, as we have observed, cannot readily be increased in volume on short notice. Prices, accordingly, reflect the pressure of new demand early in general business expansion. For the heavier goods, primarily nonfarm products, increases in demand have been more recently generated and, at the same time, supply is in general more expandable on short notice. Consequently, price pressures are less pronounced for such goods. Buyers' outlays increase, primarily, because more goods are changing hands.

We have noted the characteristic check to the scope of expansion that comes after stage II of reference cycles. The general economy is still expanding, but retarding influences manifest themselves in many sectors. This check is illuminatingly revealed by the changes recorded in Table 31. Not one group of commodities listed in Table 31 shows an increase in the percentage of goods gaining in value at this stage of reference cycles. Nonmetallic minerals hold constant; all other groups are marked by declines, affecting from 5 to 38 percent of the commodities in the several classes. For crop products alone does the quantity factor exert a positive influence in the changes

PRICE-QUANTITY INTERACTIONS

TABLE 31

Changes between Interstage Periods I-II and II-III  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	I-II TO II-III	
		Prices Dominant	Quantities Dominant
Nonmetallic minerals	0	+20	-20
Durable goods	-5	+3	-8
Metals	-7	+4	-11
Other than American farm products	-7	+1	-8
Capital equipment	-9	-2	-7
Consumer goods	-9	-9	0
Foods	-17	-13	-4
Manufactured goods	-19	-5	-14
<i>All commodities</i>	-20	-7	-13
Human consumption goods	-22	-12	-10
Raw materials	-22	-10	-12
Producer goods, all	-25	-8	-17
Crop products, domestic	-26	-42	+16
Nondurable goods	-27	-13	-14
Producer goods for human consumption	-31	-17	-14
American farm products	-33	-15	-18
Animal products, domestic	-38	0	-38

here recorded. For all except 5 of the 16 groups the quantity factor dominates the price factor in a negative direction. Prices are more important, negatively, than quantities among foods, consumer goods, consumption goods, and crop products. For certain minerals and durable goods prices make for advancing outlays at this stage. But, in general, the forces of retardation are apparent in a reduction of the percentage of commodities marked by rising prices as well as in a decline in the percentage for which physical volume is increasing.

After stage III there is another considerable increase in the percentage of commodities marked by expanding buyers' outlays. Between stages III and IV, indeed, comes the most compact and uniform expansion of buyers' outlays and revenues of sellers (see Table 27, col. 9 and 10). The parts played by prices and quantities in this upward surge are shown in Table 32. We have remarked above that it is the normally stable consumption segment of the economy that is, at this stage, characterized by the sharpest swing back toward recovery. These goods

OUTLAY PATTERNS: GROUPS

TABLE 32

Changes between Interstage Periods II-III and III-IV  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	II-III TO III-IV	
		Prices Dominant	Quantities Dominant
Crop products, domestic	+43	+38	+5
American farm products	+40	+8	+32
Foods	+38	+11	+27
Animal products, domestic	+37	-10	+47
Nondurable goods	+34	+7	+27
Manufactured goods	+32	+8	+24
Consumer goods	+31	+11	+20
Producer goods for human consumption	+31	+10	+21
Human consumption goods	+30	+9	+21
<i>All commodities</i>	+25	+10	+15
Producer goods, all	+23	+9	+14
Raw materials	+19	+13	+6
Nonmetallic minerals	+10	-5	+15
Other than American farm products	+10	+13	-3
Capital equipment	+9	+19	-10
Metals	+7	+23	-16
Durable goods	+5	+20	-15

participate in the general expansion between stages I and V somewhat less completely than do goods drawn from the heavy industry sector, but in the intensity of the resumption of advance after the check between stages II and III farm products, nondurables, and consumption goods generally lead the way. This resumption of expansion reflects increases in both prices and quantities. It is to be noted, however, that at this stage of expansion quantity increases are dominant in the consumption goods and nondurable sectors, while price increases are relatively more important among durable goods, metals, capital equipment, and nonfarm products generally. Indeed, for each of these last four categories the percentage of commodities gaining in value by reason of quantity changes actually decreases as we pass from period II-III to period III-IV. It appears that limitations to volume expansion, previously felt in the consumer, nondurable goods sector of the economy, are experienced after stage III among heavier goods.

The interplay of factors of supply and demand is traced fur-

PRICE-QUANTITY INTERACTIONS

ther in Table 33, dealing with the final period of general expansion. A positive tide is still running strongly; 80 percent of all commodities show increases in buyers' outlays between

TABLE 33

Changes between Interstage Periods III-IV and IV-V  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	III-IV TO IV-V	
		Prices	Quantities
Raw materials	+1	-8	+9
Producer goods for human consumption	-1	+2	-3
Capital equipment	-5	-17	+12
Animal products, domestic	-6	+8	-14
Producer goods, all	-6	-5	-1
American farm products	-8	+3	-11
Nondurable goods	-8	0	-8
Crop products, domestic	-9	-4	-5
<i>All commodities</i>	-9	-5	-4
Other than American farm products	-9	-14	+5
Nonmetallic minerals	-10	-25	+15
Durable goods	-11	-18	+7
Human consumption goods	-11	-2	-9
Metals	-13	-20	+7
Foods	-19	+4	-23
Manufactured goods	-19	-3	-16
Consumer goods	-23	-7	-16

stages IV and V (Table 27). This, however, is a decline of 9 from the percentage (89) for interstage period III-IV. In period IV-V all commodity groups except raw materials show drops in the percentages of commodities gaining in value. Responsibility for these declines is about evenly divided between prices and quantities. For capital equipment, nonfarm products, non-metallic minerals, durable goods, and metals, prices are the dominant factor in checking increases in outlays. It will be recalled that these are the classes of goods for which prices were the primary factor in the outlay increases shown in Table 32. With retardation after stage IV prices play less of a boosting role in the markets for these goods. On the other side we have farm products, nondurables, consumption goods generally, and manufactured goods. For these, quantities are the dominant

## OUTLAY PATTERNS: GROUPS

factor in reducing the scope of outlay increases. The shifting pendulum checks quantity advances in this sector after the rather extensive increases of period III-IV.

With the passing of the peak at stage V the sharpest decline of the whole cycle occurs in the proportion of commodities for which buyers' outlays are advancing. For 57 percent of commodities, gains in aggregate monetary value change to losses. The greatest drops, for which quantity is predominantly responsible, occur among metals, capital equipment, durables, and producer goods generally (Table 34). For three groups only—animal products, foods, and producer goods destined for human consumption—is price a more powerful depressant than quantity. The foods group alone is marked by pronounced price predominance.

TABLE 34

Changes between Interstage Periods IV-V and V-VI  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	IV-V TO V-VI	
		Prices Dominant	Quantities Dominant
Consumer goods	-18	0	-18
Foods	-23	-19	-4
Animal products, domestic	-31	-17	-14
American farm products	-41	-20	-21
Nondurable goods	-46	-21	-25
Manufactured goods	-49	-15	-34
Nonmetallic minerals	-50	0	-50
Human consumption goods	-51	-22	-29
<i>All commodities</i>	-57	-20	-37
Crop products, domestic	-59	-26	-33
Raw materials	-65	-24	-41
Producer goods, all	-74	-30	-44
Other than American farm products	-76	-20	-56
Producer goods for human consumption	-77	-39	-38
Durable goods	-84	-21	-63
Capital equipment	-85	-19	-66
Metals	-87	-20	-67

In the second period of general business contraction (between stages VI and VII) the proportion of commodities gaining in value shrinks still further (see Table 35); fewer commodities are affected, however. The categories in which outlay increases

PRICE-QUANTITY INTERACTIONS

are at a minimum are still chiefly the heavy durables and producer goods (see Table 27), but the shifts of position, from outlay gains to losses, are most numerous among the lighter consumer goods that lagged in the preceding stage of contrac-

TABLE 35

Changes between Interstage Periods V-VI and VI-VII  
in Percentages of Commodities for Which Buyers' Outlays Increase,  
by Commodity Groups

	CHANGE IN PERCENTAGE		
	Total	V-VI TO VI-VII	
		Prices Dominant	Quantities Dominant
Durable goods	+11	0	+11
Capital equipment	+9	0	+9
Metals	+7	0	+7
Other than American farm products	+4	-1	+5
Producer goods, all	-2	-4	+2
Crop products, domestic	-4	-14	+10
Producer goods for human consumption	-4	-4	0
Raw materials	-5	-7	+2
All commodities	-7	-9	+2
Manufactured goods	-9	-12	+3
Human consumption goods	-10	-10	0
Nonmetallic minerals	-10	-10	0
Nondurable goods	-13	-12	-1
American farm products	-16	-17	+1
Consumer goods	-20	-19	-1
Foods	-23	-22	-1
Animal products, domestic	-24	-19	-5

tion. Price declines are now dominant in the direction of contraction. In no case is the influence of price positive. For four groups increases in quantities changing hands are strong enough to bring actual increases in the proportion of goods marked by gains in outlays. At this stage of contraction price is the primary factor tending to change outlay gains to losses. This negative role of the price factor extends into the next period, while physical quantities continue to exert some positive pressures. But this has been dealt with on an earlier page (Table 28). The circle has been completed.