TABLE 2

COEFFICIENTS OF FLEXIBILITY OF VALUES FOR VARIOUS COMMODITIES

Year	Pork	Beef	Mutton and Lamb	Lard	Sheep Slaughter	Hogs Slaughter	Refined Copper (primary)	Zinc (primary)	Lead (primary)
1909.....									
1910.....	— 1.703	— .790		— 4.756	— 1.028	— .739	— 1.393	+ .072	— 3.986
1911.....	— 2.098	+ .970		+ 5.454	— 1.173	— .816	+ .341	+ .320	+ 1.601
1912.....	— 1.809	— 1.637		— 4.226	+14.124	— 1.301	+ 3.825	+ 1.392	+ .736
1913.....	+50.760	— .589		— .434	— 1.514	+32.020	— 4.239	+ 1.246	— .408
1914.....	+ 1.648	—12.451	+ .348	— .287	+11.623	+ .436	+ 1.296	— 3.007	— 1.300
1915.....	+ 1.965	+ .758	— .449	+ 7.357	— .804	— 1.124	+ .511	+10.075	— 1.650
1916.....	— 3.624	+ .383	— .357	+ 4.921	— 1.461	+ 7.089	+ 2.355	— .615	+27.967
1917.....	— 2.157	+ .743	— .506	— 2.857	— .895	— 1.754	+ 1.205	+ 3.790	+ 1.418
1918.....	— .530	+ .927	— 1.295	— .255	— .420	— .249	— 1.433	— 7.179	— 4.957
1919.....	— 1.567	— 2.030	— .345	— .486	— .891	— 1.298	+ .795	+ 1.211	+ 2.124
1920.....	— 2.547	— 2.617	+10.960	— 3.271	+ 1.745	+ 4.468	— .956	— 1.848	+ .864
1921.....	— 2.785	+ 2.834	— 1.789	+ 3.064	— 1.798	— 6.689	+ .478	+ .777	+ 2.226
1922.....	— 2.483	+ .181	— 1.360	+ .747	— 1.939	—16.360	+ .423	+ .432	—35.043
1923.....	— 5.693	— .486	+ .386	— 2.782	+ .323	— 1.913	+ .230	+ 1.891	+ 6.345
1924.....	—10.377	— 2.736	+ .502	— 8.259	+12.336	— 2.480	—17.818	+ 1.459	+ 7.993
1925.....	— 5.020	— 2.179	— 1.901	— 1.432	— 1.445	— 1.895	—17.250	+ 2.155	+ 1.401
1926.....	+ 1.587	+ 7.750	— 1.148	+22.387	— 3.387	— .026	+ .331	— .621	— 1.705
1927.....	—14.889	— 1.663	— .453	+ 6.868	+ .248	— 7.501	.301	+ 1.085	+ 1.471
1928.....	— 2.193	— 1.546	+ 1.195	— .710	+ 2.046	— .397			
N.....	(—) 15	(—) 11	(—) 10	(—) 12	(—) 12	(—) 15	(+) 12	(+) 13	(+) 11
Median.....	2.483	1.663	.827	2.107	1.309	1.3100	.495	1.246	1.601
Geom. Mean	2.864	1.714	.783	1.421	1.233	1.2767	.673	1.112	2.459

light upon business cycles as well as upon the laws of value, prices, and so forth.

While I do not wish to hold out false hopes, it is at least possible that these efforts when combined with those of other workers in the field may help to furnish business men and the public with tables showing the approximate flexibilities of value and elasticities of demand for most of the principal commodities. If and when this is done, business and social policy should be more intelligent, and economics may become less of an art and more of a science.

IV

We may perhaps admit this in a general way and still be somewhat uncertain as to the precise light which will be thrown upon the problems of industrial displacement. Whether an industry is prospering as compared with its fellow will depend upon a double relationship: (1) the relationship between the *rate of change* in the physical production of each commodity and the *rate of change* in the production of all commodities and services, and (2) the relationship between the relative flexibilities of value of each commodity and the average flexibility of value for all commodities. This average would seem on *a priori* grounds to be unity or 1.0, and one of the by-products of the investigation which I am carrying on is to determine as closely as possible what this average is. A fair generalized statement of what these results are likely to be is:

1. If the flexibility of value through time of the commodity is itself approximately unity, then it will continue to obtain approximately the same slice of the national income and there will be little relative displacement of labor. The industry will hold its own with little growth (aside from that furnished by the general expansion of industry) and with little decay.

2. If the flexibility of value through time is greater than unity then the following results may occur.

a. If the increase in the physical productivity of the commodity is greater than the increase in all commodities (or in the case of a decrease, if it is less) the fall in unit values will be greater than the relative increase in physical quantities, and the total fraction of the national income which the commodity forms will diminish. The annual income of the workers in the industry will fall, therefore, in relation to the general average of workers, and labor will flow out of the industry. Similarly the rate of return to capital will be lower than in industry as a whole and the capital investment will slowly diminish.

b. If the rate of change in the physical product is approximately the same as that for all commodities, then there will still be a fall in the unit values of the commodity because these added units of goods will appear at a lower point on the demand curve than is the case with the average for other commodities. The result will be a fall in the share of the national income possessed by this commodity and consequently a transfer of labor and of capital.

c. If the rate of increase is less than that for all commodities (or in the case of a decrease, if it is greater), then the unit values of the commodity will increase. If the flexibility is greater than unity in the case of relative decreases in quantity as well as in relative increases,[6] then this rise in unit values will more than offset the greater relative scantiness of the product. The result will be a larger share of the national income and a flow of labor and capital toward the industry in question, until the balance is re-established.

3. If, however, the flexibility of value through time is less than unity, then the following results may occur.

a. If the rate of increase in the physical quantity of a commodity is greater than the average, the fall in unit value will not be enough to compensate for this greater increase in quantity, with the result that the share which it forms of the national income will increase. The relative amount of capital invested in the industry will therefore increase as will the numbers employed. This—added to the increasing delight of the American people in open-air locomotion—has been a reason for the increase in the numbers employed in the automobile and rubber industries.

b. If the rate of change in the production of the commodity is approximately equal to that of all commodities, then there will be a tendency for the unit value of the commodity to rise, and therefore for more labor and capital to come into the industry.

c. If, on the other hand, the rate of increase in the quantity of the commodity is less than that of all commodities (or in the case of a decrease, if it is greater) then the rise in unit values will not be enough (assuming the flexibility is the same when there is a relative decrease as when there is a relative increase) to offset the relative decline in quantity, and as a result the commodity will form a smaller share of the national income. There will thus be a displacement of labor and an outward flow of capital.

While we shall know much more about these problems when we have charted our rates of growth and computed our flexibilities of value, this analysis should help us to make some predictions as to the future course of some industries. Wheat, cotton and coal all seem to have relatively high flexibilities of value, and great improvements in production are now taking place in all three. I think it is safe, therefore, to predict that their long-run prices will continue to fall relative to the general price level by amounts which will more than offset their increase in production. I am inclined to believe, therefore, that the displacement of labor which is now taking place on a considerable scale in these industries will continue and that, in consequence, we may expect a continuation of the migration from the farms to the cities. I am inclined to believe that the same will hold true in the case of corn, etc. On the other hand, we may expect a continued growth in the numbers employed in the services, the demand for which seems to be very elastic.

[6] This may not be so.

Discussion

Elizabeth F. Baker.[7] Professor Douglas, as usual, has given us two years' instead of two hours' worth of food for thinking. His statistical courage never fails to be heartening. We who struggle among details get a sense of seeing a deliverer sail along on a magic carpet to light on firm ground beyond us, where troubles such as ours do not exist.

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