A complete year-to-year cross-section analysis, relating the percentage change in price to several variables, was conducted. The simple correlation coefficients for several of the more important possible relationships are listed in table 9. In addition, the complete matrix of all possible simple correlation coefficients is provided in appendix B.

TABLE 9.—*Simple cross-section correlation coefficients between price changes and selected variables in 16 manufacturing industries, 1947–58* [1]

Year	Percentage change in wholesale price index on—					
	Gross hourly earnings	Productivity per production worker man-hour	Output	Average profits before taxes	Average profits after taxes	Concentration ratios
1947–48	0.093	0.024	0.375	0.339	0.560	0.329
1948–49	.214	.328	−.416	.439	.335	.287
1949–50	−.055	.170	.073	−.041	.113	−.019
1950–51	.101	−.415	−.199	.294	−.066	−.526
1951–52	.375	.035	−.065	.536	.624	.581
1952–53	.546	−.171	.176	.490	.432	.595
1953–54	.620	−.215	−.247	.715	.505	.387
1954–55	.551	−.201	.587	.448	.395	.196
1955–56	−.098	−.418	.283	.404	.442	.193
1956–57	.551	−.100	.397	.585	.711	.617
1957–58	.308	.329	.115	.629	.276	−.114

[1] The 5-percent level of significance is 0.4973. The 1-percent level is 0.6226.

Source: See apps. A and B.

A number of interesting points are indicated. Perhaps of greatest importance is the lack of any evident relationship between changes in prices and changes in output, at least up to 1954. After 1954, the correlation became weakly positive, except for the one year of sharp recovery, 1954–55, when a significant relationship appeared.

The remaining findings may be briefly summarized as follows:

1. Changes in prices were not strongly related to changes in productivity per production worker man-hour. It is of some interest, however, that several negative correlations appeared, indicating that lower price increases were often associated with greater increases in productivity.

2. Price changes were unrelated to changes in gross hourly earnings during the early part of the period up to 1951–52. After that point, however, the correlation became very much stronger.

3. Price adjustments were clearly related to profit levels throughout most of the postwar period; the relationship was strongest, however, after 1951.

4. The relationship of price changes to concentration ratios was quite irregular. Up to 1951, it was low or negative; in fact, the strong negative correlation in 1950–51 suggests that prices in nonconcentrated industries rose more than in concentrated. From 1951 to 1957, however, the coefficient was consistently positive, though the strength of the relationship varied considerably. And finally, the correlation became weakly negative in the 1957–58 recession.[10]

[10] The first three of these results, relating to output, productivity, and earnings, were also found by Conrad, op. cit. Using both simple and multiple regression analysis to test price changes against changes in wages, output, productivity, and employment, he concluded that "only the price-wage relationship and the price-employment change relationship approach economic significance"; his data show a much lower partial correlation coefficient for the latter relationship, however. His analysis included 61 three-digit industries.