TABLE 5.—*Simple correlation coefficients: Average annual changes, all 3-digit industries, 1949–56*

	Average annual change, wages and salaries	Average annual change, production workers' wages	Average wholesale price index
Mean value	104.70	104.82	123.11
Standard deviation	1.86	2.33	16.11
Wholesale price index	.3306	.2527	1.0000
Average change: Deflated output	.0420	.0142	.0003
Average change: Production workers	−.0548	−.0472	.1025
Average change: Output per unit, all labor	−.0935	−.1107	.0205
Average change: Output per unit, production worker	−.1258	−.1579	.0161
Average change: Wages and salaries	1.0000	.8170	.3306
Average change: Production workers' wages	.8170	1.0000	.2527
Average change, all employees	−.0757	−.0666	.1248

NOTE.—Industries included in sample: 205, 212, 213, 223, 226, 234, 241, 261, 271, 272, 275, 276, 277, 291, 301, 302, 303, 309, 311, 312, 313, 316, 321, 322, 323, 324, 327, 328, 331, 332, 334, 335, 336, 339, 341, 347, 352, 353, 355, 362, 363, 364, 365, 374, 375, 379, 381, 382, 383, 385, 386, 397, 211, 224, 235, 252, 254, 264, 265, 266, 267.

Source: Census of manufactures, computed at Littauer Statistical Laboratory. Wholesale price indexes, Bureau of Labor Statistics.

32. One is immediately struck by the remarkably low degrees of relationship displayed between changes in employee compensation and price indexes, on the one hand, and the labor and commodity demand variables, on the other. In an attempt to avoid cyclical effects, which would be expected to distort the short-run demand relationships if there were downward rigidities, changes in the same variables were averaged over the 1949–56 span and the long-run average changes were correlated over the same sample of industries. The same selection is shown in table 5. The same remarkably low degree of relationship is evident.

33. An explanation that must be considered, of course, is the possibility that significant relationships are hidden. Strong negative relationships with other independent variables may mask a relationship between the dependent and a presumably obvious independent influence. In such cases, significant correlations may appear when the relation with the other variables have been allowed. Two multiple regression equations for the whole array are reproduced below. They were designed to be rough tests of the demand-pull hypothesis.

34. The first multiple regression equation, shown in table 6, was an attempt to explain the average annual wage and salary increase in terms of (1) the average annual real output change; (2) the average annual change in real output per unit labor; (3) the average annual change in employment; and (4) the mean price index, over the period 1949–56 for the specific three-digit industries. As with the simple correlation coefficients, the results were remarkably insignificant. Wage changes at the relatively detailed (i.e., more homogenous three-digit) industry level are not explained by demand pressures (independent variables 1 and 3) or by productivity changes within the industry itself (independent variable 2).[14]

[14] It is perhaps overdue at this point in the study to point out that the use of the word "productivity" to mean simple variations in output/labor ratios, while customary, is incorrect. It would be better to restrict measures of productivity, so called, to changes in the unit requirements of capital, labor, and materials, combined. It would be still better to drop the common usage and restrict the use of "productivity change" to those changes which can be properly identified as shifts in the production function, as opposed to movements along the function. See, e.g., the attempt to derive measures of technological change, in the strict sense, by Robert M. Solow, "Technical Progress and the Aggregate Production Function," Review of Economics and Statistics, August 1957, pp. 312–320.