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ERRATA STATEMENT

Capital
and Rates of Return
in Manufacturing Industries

GEORGE J. STIGLER

Errata Statement for
Capital and Rates of Return in Manufacturing Industries

ALL data on rates of return in 1947 prices in *Capital and Rates of Return in Manufacturing* are incorrect because of an arithmetic error in the calculation of income in current prices (a step preparatory to calculating returns in 1947 prices). Depreciation was changed from book to current prices by use of the index published by the National Income Unit of the Department of Commerce. Unfortunately, the excess of depreciation in current prices over historical prices was *added* to, when it should have been *subtracted* from, income. I apologize for this blunder, which was only recently discovered.

The textual comparison of rates (p. 34) should now be amended to emphasize the considerably lower level of the deflated rates. There are two reasons, however, why the deflation leads to an exaggerated correction for price increases: (1) the price indexes do not measure quality improvements in adequate degree; (2) especially since 1954, with the liberalization of depreciation charges under the corporate income tax, there has been an upward bias in the Commerce ratios of depreciation in current prices to depreciation in historical prices, for this index continued to be based upon straight-line depreciation charges.

The changes consequent upon the correction of this error are numerous:

1. The rates of return in 1947 prices, presently contained in the Appendix Tables A-14 to A-59, pp. 139-202, and Table E-1, pp. 221-226, should be replaced by Table 1 of this statement.
2. The rates of return in current prices, presently contained in Table A-11, p. 130, should be replaced by Table 2 of this statement. The correlations between rates of return in 1947 prices and current prices are at least .999 in every year (p. 129).
3. The comparison of rates of return in 1947 prices and in book values Table 14, p. 52, should be replaced by Table 3 of this statement.

- 4. The measure of dispersion of rates of return presented on p. 62 should be replaced by the measures in Table 4 of this statement.
- 5. The regression equation for investment in 1947 prices in Table 22, p. 82, should be replaced by the following equation:

$$X_1 = -27.81 + .475X_2 + 7.15X_3 \quad R = .773$$

(.164)
(2.53)

- 6. The correlation coefficients in note 18, p. 83, should be replaced by the following:

	<i>Book Value</i>	<i>1947 Prices</i>
r_{12}	.921	.648
r_{13}	.697	.642
$r_{12.3}$	.873	.563
$r_{18.2}$	.444	.554

- 7. The rates of return before taxes, in book values and 1947 prices, are reported in Table 5 because these rates have been requested by several scholars. The after-tax figures in 1947 prices replace those in Table 10, p. 35, and Appendix Table B-1, p. 203.

None of the textual statements based upon deflated rates of return is affected appreciably by the corrections.

GEORGE J. STIGLER

July 6, 1964

TABLE 1

RATES OF RETURN IN 1947 PRICES, MANUFACTURING INDUSTRIES, 1938-58
(per cent)

Industry	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Beverages	6.85	8.52	7.20	7.82	7.35	7.95	7.26	7.09	11.52	8.19
Food and kindred products	3.06	5.55	5.10	5.84	6.02	5.72	5.31	5.02	9.15	6.75
Tobacco and products	9.72	10.13	10.81	9.57	6.40	5.50	4.78	4.42	5.50	5.92
Textile mill products	-0.86	3.87	4.10	7.91	6.80	5.61	5.32	5.13	12.59	11.88
Apparel and products made from fabrics	0.37	6.09	5.43	6.62	6.75	7.16	7.04	6.91	13.41	9.71
Basic lumber	-0.61	1.32	3.24	6.08	4.99	4.00	4.22	3.76	8.16	11.32
Furniture and finished lumber	0.53	3.64	4.52	7.11	5.38	4.69	5.16	4.69	8.61	8.15
Paper and allied products	2.23	4.66	6.48	6.94	5.26	4.94	4.91	4.43	9.37	12.14
Printing and publishing	2.72	4.52	4.64	4.67	4.23	6.40	7.04	6.88	11.02	8.57
Chemicals and allied products	5.14	8.62	8.59	8.13	6.51	6.00	5.62	4.97	9.06	8.75
Petroleum and coal products	0.79	2.49	2.90	3.70	3.52	4.26	3.74	2.65	3.96	5.49
Rubber and products	2.28	5.45	4.73	6.86	4.36	6.10	5.18	4.28	9.44	4.92
Leather and products	0.60	4.38	4.01	6.89	6.53	6.14	5.78	5.56	11.10	8.72
Stone, clay, and glass products	2.26	5.88	6.19	7.09	5.31	3.95	3.42	3.40	7.47	7.17
Metals and metal products	0.32	4.34	6.38	8.09	5.69	4.71	4.06	2.73	4.32	7.06
Machinery and equipment, except transportation and electrical	3.56	5.87	8.96	9.73	8.36	7.97	6.43	4.54	3.89	7.97
Electrical machinery and equipment	3.75	8.77	11.52	11.26	6.66	7.23	6.50	4.55	0.61	7.73
Transportation equipment, except vehicles	0.49	4.04	6.95	7.93	5.70	5.74	6.08	4.05	-2.78	-2.61
Motor vehicles and parts	0.58	7.73	9.02	8.94	5.55	6.20	4.81	2.11	-0.17	9.39
Residual manufacturing	3.08	6.84	6.74	7.90	6.43	6.91	6.31	5.15	5.58	6.07
Ordnance equipment	—	—	—	7.75	7.54	7.45	5.96	4.83	1.15	5.95
Total manufacturing	2.03	5.28	6.24	7.30	5.85	5.72	5.22	4.17	6.18	7.61

(continued)

TABLE 1 (concluded)

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957 ^a	1958
Beverages	7.77	7.17	6.48	6.15	4.06	3.62	3.85	3.07	4.14	3.28	3.36	3.63
Food and kindred products	6.75	4.58	4.42	4.93	2.92	2.79	3.47	3.37	4.23	3.81	3.32 ^a	3.52
Tobacco products	5.92	7.12	7.14	7.02	5.37	5.12	5.34	6.01	7.21	7.29	7.57	9.60
Textile mill products	11.88	10.30	3.80	7.03	3.56	1.38	1.49	0.32	2.08	2.23	1.48	1.52
Apparel and products made from fabrics	9.71	5.10	2.20	4.71	1.70	1.86	1.71	1.73	2.80	2.89	2.09	2.12
Basic lumber	10.92	8.88	3.80	9.43	5.85	3.92	3.29	3.90	6.18	3.28	1.26	2.75
Furniture and finished lumber	8.49	7.12	4.72	7.78	4.52	4.00	3.34	2.73	5.51	5.30	3.69	2.14
Paper and allied products	12.14	8.84	5.39	8.51	6.57	5.02	5.22	5.07	6.14	6.53	4.17	3.28
Printing and publishing	8.57	7.06	5.92	5.75	4.48	4.37	4.40	4.09	5.95	5.86	5.13	3.99
Chemicals and allied products	8.75	7.23	6.46	8.98	5.61	4.25	4.32	4.94	6.70	5.89	5.07	4.16
Petroleum and coal products	5.49	7.21	3.80	5.35	4.78	3.71	4.43	3.41	4.73	4.34	3.70	2.54
Rubber products	4.92	4.95	2.60	7.99	4.56	3.22	3.74	3.26	4.94	4.44	3.60 ^a	2.70
Leather and products	8.72	4.75	2.97	5.78	2.05	3.27	2.94	3.31	4.92	3.91	4.00	3.14
Stone, clay, and glass products	7.17	7.59	6.85	9.15	5.44	4.28	4.71	5.61	7.55	6.08	3.94 ^a	2.83
Primary metal products	6.08	6.64	4.77	7.27	5.27	3.16	4.15	3.44	5.91	5.41	4.17	2.22
Fabricated metal products	9.53	8.77	5.16	8.19	6.09	4.48	4.34	3.79	4.95	4.65	3.70	2.66 ^b
Machinery, except transportation and electrical	7.97	8.59	6.14	7.92	6.15	5.24	4.58	4.15	4.73	5.41	4.26	2.45
Electrical machinery and equipment	7.73	8.30	6.01	9.94	5.85	5.39	5.21	4.91	4.85	4.28	4.97 ^a	3.69
Transportation equipment, except vehicles	-2.61	3.41	2.81	5.37	3.16	3.15	3.67	5.06	5.14	4.45	4.54	3.10
Motor vehicles	9.39	11.22	12.87	14.09	7.24	6.39	6.06	6.06	11.95	5.82	6.01	0.73
Professional and scientific instruments	6.94	7.34	5.33	6.99	5.50	5.12	5.14	6.28	6.29	5.73	4.58	4.06
Residual manufactures	6.01	5.43	3.53	6.93	4.50	3.34	2.74	2.61	3.72	3.40	2.47	2.37
Ordnance	5.95	7.30	3.65	8.76	6.06	5.94	6.16	5.06	6.90	5.42	3.23	^b
Total manufacturing	7.63	7.45	5.38	7.62	5.05	4.02	4.22	3.98	5.66	4.85	4.09	2.87

^a 1957 figures on 1958 industrial classification basis, where different from those above, are as follows: food, 3.13 per cent; rubber, 2.98 per cent; stone, clay, and glass 3.97 per cent; electrical machinery, 4.68 per cent. See Appendix E for details.

^b Ordnance included in fabricated metal in 1958.

TABLE 2.^a
 RATES OF RETURN IN CURRENT PRICES, MANUFACTURING INDUSTRIES, 1948-57
 (per cent)

Industry	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Food and kindred products	4.51	4.33	4.77	2.78	2.70	3.34	3.27	4.07	3.59	3.10
Beverages	6.77	6.22	5.92	3.80	3.45	3.74	3.03	4.03	3.12	3.18
Tobacco products	7.02	7.12	6.86	5.12	5.04	5.25	5.94	7.03	7.02	7.28
Textile mill products	10.16	3.73	6.82	3.37	1.33	1.43	0.31	2.00	2.10	1.38
Apparel and fabric products	5.06	2.19	4.61	1.63	1.83	1.68	1.71	2.74	2.79	2.01
Lumber and wood products	8.75	3.71	9.12	5.55	3.78	3.16	3.78	5.92	3.07	1.16
Furniture and fixtures	7.04	4.64	7.57	4.32	3.90	3.20	2.67	5.34	5.06	3.49
Paper and allied products	8.71	5.25	8.23	6.24	4.82	4.99	4.88	5.85	6.06	3.80
Printing and publishing	6.98	5.78	5.58	4.26	4.23	4.25	3.99	5.76	5.58	4.84
Chemicals and allied products	7.12	6.30	8.71	5.34	4.09	4.14	4.77	6.40	5.51	4.68
Petroleum and coal products	7.08	3.69	5.16	4.53	3.55	4.22	3.27	4.49	4.02	3.39
Rubber products	4.89	2.55	7.79	4.37	3.14	3.64	3.18	4.78	4.23	3.39
Leather and products	4.70	2.94	5.65	1.96	3.21	2.88	3.26	4.80	3.76	3.84
Stone, clay, and glass products	7.47	6.68	8.86	5.17	4.12	4.52	5.42	7.24	5.68	3.63
Primary metals products	6.55	4.65	7.03	5.00	3.03	3.96	3.31	5.65	5.05	3.83
Fabricated metal products	8.65	5.06	7.96	5.80	4.34	4.19	3.69	4.77	4.40	3.47
Machinery, except transportation and electrical equipment	8.48	6.04	7.71	5.87	5.11	4.45	4.05	4.57	5.14	4.02
Electrical machinery and equipment	8.21	5.92	9.71	5.60	5.27	5.08	4.81	4.70	4.07	4.71
Transportation equipment, except motor vehicles	3.38	2.77	5.24	3.04	3.09	3.60	4.99	5.01	4.28	4.35
Motor vehicles	11.09	12.66	13.79	6.95	6.22	5.87	5.89	11.55	5.47	5.60
Ordnance and accessories	7.25	3.61	8.46	5.75	5.77	5.79	4.78	6.71	5.19	3.05
Professional and scientific instruments	7.25	5.25	6.81	5.25	4.99	5.00	6.14	6.08	5.45	4.33
Miscellaneous manufactures	5.35	3.47	6.75	4.30	3.25	2.66	2.55	3.60	3.24	2.33
Total manufactures	7.34	5.27	7.39	4.80	3.89	4.07	3.86	5.44	4.56	3.81

^a Replaces Table A-11, p. 130.

TABLE 3^a
 COMPARISON OF RATE OF RETURN, IN BOOK VALUES AND 1947 PRICES,
 TWO-DIGIT INDUSTRIES, SELECTED YEARS, 1938-56

Year	Unweighted Average Rate of Return		Coefficient of Rank Correlation	Average Absolute Deviation Between Book-Value Rate and 1947 Price Rate (per cent)
	Book Values	1947 Prices (per cent)		
1938	2.87	2.34	.986	.54
1947	9.94	7.56	.953	2.36
1954	5.50	3.96	.962	1.54
1956	6.51	4.74	.954	1.77

^aReplaces Table 14, p. 52.

TABLE 4^a
 MEANS AND STANDARD DEVIATIONS OF RATES OF RETURN
 OF TWO-DIGIT INDUSTRIES, BOOK VALUES AND 1947 PRICES

	1938-47	1947-54
	(per cent)	
Average rate of return		
1947 prices	5.83	5.52
Book values	7.07	7.54
Standard deviation of rates		
1947 prices	1.15	1.32
Book values	1.17	1.66

^aReplaces table on page 62.

TABLE 5
 RATES OF RETURN IN ALL MANUFACTURING INDUSTRIES,
 BOOK VALUES AND 1947 PRICES
 (per cent)

Year	Book Values		1947 Prices	
	Before Tax	After Tax	Before Tax	After Tax
1926	7.66	6.66	...	...
1927	6.62	5.75	...	...
1928	7.83	6.93	...	...
1929	8.21	7.36	...	...
1930	3.19	2.87	...	...
1931	-0.24	-0.54	...	...
1932	-2.29	-2.50	...	...
1933 ^a	1.60	1.17	...	...
1934 ^a	3.16	2.57	...	...
1935	4.92	4.12	...	...
1936	7.51	6.23	...	...
1937	7.58	6.22	...	...
1938	3.42	2.62	2.75	2.03
1939	7.29	6.00	6.46	5.28
1940	10.05	7.12	8.95	6.24
1941	16.36	8.56	14.43	7.30
1942	17.93	7.30	15.18	5.85
1943	19.49	7.30	16.17	5.72
1944	17.45	6.59	14.62	5.22
1945	12.92	5.43	10.65	4.17
1946	13.37	8.13	10.64	6.18
1947	16.54	10.34	12.84	7.61
1948	16.54	10.43	12.58	7.45
1949	12.77	7.93	9.44	5.38
1950	18.13	9.97	14.82	7.62
1951	16.86	7.34	13.36	5.05
1952	13.21	5.96	10.40	4.02
1953	13.46	6.05	10.81	4.22
1954	11.35	5.68	9.05	3.98
1955	14.52	7.47	12.09	5.66
1956	13.10	6.85	10.58	4.85
1957	11.96	6.29	9.26	4.09
1958	9.36	4.92	6.99	2.87
1959	11.82	6.30	...	...
1960	10.40	5.48	...	...

^aData for 1933 and previous years not comparable with succeeding years. See text, p. 205, for details.