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APPENDIX A

BASIC DATA

Most of the data in this appendix have been taken from the following sources: Raymond W. Goldsmith, *A Study of Saving in the United States*, Princeton University Press, 1955 (hereafter referred to as *Saving*); Goldsmith, *The National Wealth of the United States in the Postwar Period*, Princeton for NBER, 1962 (hereafter referred to as *Postwar Wealth*); and Goldsmith, Robert E. Lipsey, and Morris Mendelson, *Studies in the National Balance Sheet of the United States*, Princeton for NBER, 1963 (hereafter referred to as *Balance Sheet*).



TABLE A-1
 Components of Gross Fixed Capital Formation,
 Billions of Current Dollars, 1897-1962

	New Construction			Durable Equipment			Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)	
1897	.27	1.09	.17	.26	.55	.57	14.45
1898	.27	1.04	.18	.26	.58	.67	14.95
1899	.31	1.06	.19	.31	.68	.87	17.29
1900	.27	1.44	.21	.35	.70	1.01	18.57
1901	.35	1.48	.23	.41	.77	1.04	20.33
1902	.43	1.74	.23	.46	.83	1.22	21.00
1903	.53	1.49	.31	.50	.86	1.28	22.82
1904	.51	1.37	.34	.50	.86	1.14	22.03
1905	.65	1.52	.36	.59	.97	1.34	23.94
1906	.78	1.95	.38	.72	1.11	1.70	28.33
1907	.79	2.21	.47	.76	1.14	1.84	30.94
1908	.67	1.78	.53	.68	.90	1.20	26.93

(continued)

TABLE A-1 (contd.)

	New Construction			Durable Equipment				Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)		
1909	.74	1.97	.51	.83	1.09	1.43	31.46	
1910	.78	1.99	.55	.92	1.16	1.66	33.41	
1911	.73	1.84	.61	.99	1.20	1.57	33.21	
1912	.78	2.14	.60	1.22	1.24	1.93	35.89	
1913	.77	2.50	.63	1.35	1.32	2.15	37.46	
1914	.68	1.98	.68	1.30	1.17	1.72	35.82	
1915	.72	1.82	.70	1.48	1.15	1.76	39.66	
1916	.79	2.35	.69	2.14	1.52	2.79	48.93	
1917	.70	2.58	.67	2.48	1.80	4.06	64.54	
1918	.63	2.25	.68	2.29	1.98	4.97	77.22	
1919	1.26	3.06	.89	3.39	2.42	4.47	85.32	
1920	1.35	4.05	1.19	4.44	2.96	5.10	91.26	
1921	1.42	3.02	1.52	3.46	2.26	3.10	72.48	
1922	2.03	3.92	1.66	3.80	2.28	3.28	72.78	
1923	2.48	5.23	1.61	4.86	2.91	4.60	85.49	

(continued)

TABLE A-1 (contd.)

	New Construction			Durable Equipment			Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)	
1924	2.90	5.61	1.89	4.96	2.68	4.23	85.94
1925	3.22	6.08	2.13	5.63	2.98	4.62	90.34
1926	3.14	6.79	2.13	5.99	3.02	4.95	96.93
1927	2.87	6.76	2.40	5.40	3.06	4.62	95.38
1928	2.82	6.34	2.47	5.74	3.10	4.84	97.19
1929	2.23	6.08	2.47	6.24	3.30	5.82	104.44
1930	1.40	4.49	2.83	4.57	2.72	4.51	91.10
1931	1.18	2.58	2.62	3.24	2.27	2.87	76.27
1932	.55	1.13	1.83	1.88	1.72	1.59	58.47
1933	.39	.84	1.61	2.01	1.48	1.57	55.96
1934	.55	.96	2.16	2.52	1.75	2.35	64.98
1935	.87	1.13	2.20	3.40	1.90	3.07	72.50
1936	1.26	1.72	3.49	4.32	2.32	4.17	82.74
1937	1.52	2.38	3.06	4.64	2.63	5.08	90.87
1938	1.60	1.96	3.36	3.39	2.41	3.77	85.23

(continued)

TABLE A-1 (contd.)

	New Construction			Durable Equipment			Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)	
1939	2.21	2.17	3.68	4.23	2.62	4.31	91.10
1940	2.58	2.47	3.24	5.18	2.86	5.64	100.62
1941	3.10	3.10	4.13	6.36	3.44	7.14	125.82
1942	1.46	1.95	5.64	2.92	3.84	4.85	159.13
1943	.66	1.32	3.77	2.18	4.26	4.02	192.51
1944	.65	1.54	2.24	1.92	4.58	5.67	211.39
1945	1.12	2.29	1.71	2.32	5.37	7.27	213.56
1946	4.00	5.98	2.17	8.27	8.25	10.73	210.66
1947	6.56	7.60	3.23	12.92	8.84	16.67	234.29
1948	9.50	9.59	4.67	14.74	9.27	18.92	259.43
1949	8.42	9.64	6.27	17.19	8.98	17.24	258.05
1950	12.15	10.15	6.82	21.87	10.15	18.94	284.60
1951	12.84	11.70	8.53	20.11	10.71	21.29	328.98
1952	13.08	11.76	9.51	19.54	10.65	21.26	347.00
1953	14.37	12.83	10.09	22.99	10.89	22.30	365.38

(continued)

TABLE A-1 (concluded)

	New Construction			Durable Equipment				Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)		
1954	14.91	13.15	10.89	22.60	10.64	20.79	363.11	
1955	19.05	14.79	10.65	28.42	12.16	23.12	397.47	
1956	17.34	16.63	11.42	26.41	12.92	27.19	419.18	
1957	17.00	18.53	14.08	27.71	13.74	28.50	442.76	
1958	16.69	17.68	15.46	25.25	13.82	23.11	444.22	
1959	21.67	18.21	16.21	29.42	15.18	25.94	482.80	
1960	20.61	20.56	15.95	30.14	15.88	27.56	504.40	
1961	20.42	21.57	17.03	28.48	16.04	25.92	518.70	
1962	22.49	22.61	17.71	32.38	16.95	29.04	553.90	

Table A-1: Source Notes, by Column

1. 1897–1919: Sum of expenditures for new nonfarm residential construction (*Saving*, Table R-25, column 9) and for additions and alterations on residential structures (*Saving*, Table R-31, column 3), multiplied by the proportion of one-family residential construction to total residential construction. The ratios are obtained from *Saving*, Table R-25, column 4; it is assumed that the ratios for 1897, 1898, and 1899 are the same as the 1900 ratio.

1920–45: Sum of expenditures for new nonfarm residential construction (*Saving*, Table R-28, column 2), plus expenditures for additions and alterations on residential structures from *Construction Volume and Costs, 1915–1956* (a Statistical Supplement to *Construction Review*), p. 2, multiplied by the proportion of expenditures on single-family residential structures to total residential structures. The ratios are calculated from columns 3, 9, and 20 in Table R-23 of *Saving*, which cover the period up to 1939, and from columns 2 and 11 of Table R-24 in *Saving* for the period 1940–45.

1946–62: Sum of expenditures on new nonfarm residential structures plus expenditures on additions and alterations to nonfarm residential structures, all multiplied by the ratio of expenditures on new single-family dwelling units to total expenditures on residential dwelling units. The expenditure totals are from *Postwar Wealth*, Table B-1, column 9 up to 1958; from 1959 to 1962, the totals are taken from current issues of *Construction Review*, revised upward by the ratio of the estimates in *Postwar Wealth* and in *Construction Review* during 1957 and 1958.

The ratios of single-family to total are estimated as follows: For the period 1946 to 1953, the proportion of single-family units in total new construction (*Postwar Wealth*, Table B-189, column 2 divided by column 1) is multiplied by the unit-value ratio of single-family units to total units (*Postwar Wealth*, Table B-190, column 2 divided by column 1). For the period 1954–62, the ratio of construction contract awards for single-family units to total residential units is obtained from the Dodge contract award series. The Dodge series covers 48 states from 1956 on and 37 eastern states prior to 1956. These ratios are linked to those estimated in *Postwar Wealth*. The linked ratios are arbitrarily adjusted downward for three years where the linked ratios come close to or exceed 100 per cent (1954, 1955, and 1956). The resulting ratios of expenditures on single-family dwelling units to total residential construction are shown below.

After the series above had been compiled and the manuscript substantially completed, an alternative source for some of the above data was brought to my attention. David Blank in *The Volume of Residential Construction, 1889–1950*, Technical Paper 9, New York, NBER, 1954, compiled ratios of single-family to total new construction (Table 17, p. 68). Blank's data differ somewhat from those calculated from the Goldsmith data and, judging from the basic sources used by both, the Blank ratios

	<i>Postwar Wealth</i>	<i>Ratios Estimated from Dodge Contract Awards</i>		<i>Linked Ratios</i>	<i>Final Ratios</i>
		<i>37 States</i>	<i>48 States</i>		
1946	.925			.925	.925
1947	.914			.914	.914
1948	.881			.881	.881
1949	.851			.851	.851
1950	.907	.753		.907	.907
1951	.937	.730		.937	.937
1952	.943	.768		.943	.943
1953	.946	.821		.946	.946
1954		.868		.999	.950
1955		.885		1.019	.960
1956		.851	.866	.979	.950
1957			.815	.922	.922
1958			.786	.889	.889
1959			.808	.913	.913
1960			.763	.863	.863
1961			.758	.857	.857
1962			.758 ^a	.857	.857

^a Assumed equal to 1961.

may be more accurate. In general, the Blank ratios tend to be a bit higher than Goldsmith's prior to the 1920's; the two are identical after that date. None of the findings in the manuscript would be affected to any appreciable degree.

2. Defined to include expenditures on all nongovernmental structures except for nonfarm single-family residential housing. Estimates are obtained as follows: For 1897–1946, construction outlays for private nonfarm business enterprises are obtained from *Saving*, Table R-27, column 6, and Table R-28, column 5; farm construction is obtained from *Saving*, Table A-7, column 1. The amount of nonfarm residential construction in multifamily dwellings is estimated as the difference between total and single-family residential construction; both estimates are described in the notes to column 1.

1947–62: Estimated as the sum of nonresidential dwelling construction, public utility construction, "other" private construction, 25 per cent of nonhousekeeping construction outlays, and total farm construction, all obtained from Table 2 of *Construction Volume and Costs, 1915–1956*. For years subsequent to 1953, comparable data are obtained from various current issues of *Construction Review*. To this sum outlays for multifamily residential construction are added, obtained as the difference between total and single-family residential outlays as indicated in the notes to column 1.

3. 1897-1914: Sum of federal government outlays for public works (*Saving*, Table F-11, column 7), change in fixed assets of federal government corporations (*Saving*, Table F-4, column 8), reproducible capital outlays of state governments (*Saving*, Table G-15, column 1), and local government outlays for streets, highways, and structures (*Saving*, Table G-6, columns 2 and 6), all multiplied by a factor of 1.1 to bring the level up to that for the series from 1915 onward.

1915-62: Estimated as total new public construction less outlays for military facilities, obtained from Table 3 of *Construction Volume and Costs, 1915-1956*; these estimates cover the period 1915-53. Data for years subsequent to 1953 are obtained from the comparable categories in various current issues of *Construction Review*.

4. 1897-1945: Sum of columns 2, 3, 6, and 8 in *Saving*, Table Q-5, plus sum of the same columns in Table A-24 of *Saving*. These columns cover expenditures on furniture, household appliances, musical instruments (which include radios and television sets in recent years), and new passenger vehicles.

Through an oversight, the data on major durables expenditures from 1897-1945 do not include dealer gross margins on used cars bought by consumers. Such data can be found in *Saving*, Table P-16, column 2 plus column 4. Because of this oversight, the major durables series is too low by varying amounts; over the ten years 1920-29, which is the only period for which the correction might affect the analysis, the average error is 3.6 per cent. The data needed to adjust the series follow (in billions of current dollars).

	<i>Dealer Margin on Used Cars</i>	<i>Consumer Expendi- tures on New Cars</i>	<i>Consumer Expendi- tures on Major Durables</i>	(1) + (3)	<i>Dealer Margin as % of (3)</i>
	(1)	(2)	(3)	(4)	(5)
1920	.123	2.07	4.44	4.56	2.8
1921	.073	1.60	3.46	3.53	2.1
1922	.102	1.98	3.80	3.90	2.7
1923	.150	2.70	4.86	5.01	3.1
1924	.175	2.49	4.96	5.14	3.5
1925	.221	3.02	5.63	5.83	3.9
1926	.205	3.20	5.99	6.20	3.4
1927	.209	2.61	5.40	5.61	3.9
1928	.285	2.92	5.74	6.03	5.0
1929	.371	3.29	6.24	6.61	5.9

1946-58: Sum of consumer expenditures on furniture, household appliances, musical instruments, passenger cars, and dealer gross mar-

gins on used passenger cars, obtained from *Postwar Wealth*, Tables B-18 and B-71 (columns 2, 3, 6, 8) and B-27 and B-28 (columns 2, 4).

1959-62: Estimated from the *Survey of Current Business (SCB)*, various National Income numbers. The *SCB* data and the *Postwar Wealth* data are conceptually comparable, but the *SCB* estimates of household expenditures on automobiles are lower because a smaller fraction of total expenditures on automobiles is allocated to households. I have adjusted the *SCB* estimates upward to conform to those used in *Postwar Wealth*.

5. 1897-1945: Sum of columns 4, 5, 7, 9, 10, and 11 in *Saving*, Tables Q-5 and A-24. These columns cover expenditures on home furnishings, china, silverware, etc.; books, passenger car accessories, medical appliances; and miscellaneous household durables.

1946-62: Sum of expenditures on home furnishings, china, silverware, etc.; books, passenger car accessories, medical appliances; and miscellaneous household durables obtained from the *Survey of Current Business*, various National Income numbers. The *SCB* series is larger than the comparable series derived from *Postwar Wealth* (Tables B-18 and B-71) because *SCB* counts many more passenger car accessories as durables than *Postwar Wealth* does. The *SCB* coverage has been used because it is consistent with the pre-1946 data in *Saving*.

6. 1897-1948: Sum of expenditures by nonfarm producers on durable goods (Table P-5, column 1 in *Saving*), farmers' expenditures on farm machinery (Table A-16, column 1 in *Saving*), farmers' expenditures on tractors (Table A-18, column 1 in *Saving*), and six other series from *Saving* (column 1, Table P-13; column 1, Table P-14; column 3, Table P-16; column 1, Table A-19; column 1, Table A-20; and column 1, Table A-29).

1949-62: Expenditures on producers' durable equipment obtained from current issues of the *Survey of Current Business*.

7. 1897-1928: Estimates from *Saving*, Table N-1.

1929-62: Estimates from *Survey of Current Business*, supplements and current issues.

TABLE A-2
 Components of Gross Fixed Capital Formation,
 Billions of 1929 Dollars, 1897-1962

	New Construction			Durable Equipment			Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)	
1897	.66	2.60	.41	.98	1.69	1.39	32.40
1898	.61	2.37	.41	.90	1.73	1.50	33.59
1899	.66	2.31	.42	1.05	1.99	1.81	35.80
1900	.56	2.96	.44	1.01	1.90	2.05	37.44
1901	.74	3.13	.49	1.13	1.92	2.14	40.90
1902	.90	3.59	.48	1.20	2.04	2.47	41.50
1903	1.09	3.02	.62	1.25	2.07	2.70	43.64
1904	1.04	2.77	.69	1.22	2.03	2.33	43.19
1905	1.29	3.00	.69	1.39	2.30	2.71	45.87
1906	1.49	3.67	.68	1.59	2.58	3.34	50.94
1907	1.46	4.07	.80	1.44	2.54	3.46	52.35
1908	1.22	3.33	.96	1.20	2.11	2.38	48.70

(continued)

TABLE A-2 (contd.)

	New Construction			Durable Equipment			Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)	
1909	1.40	3.67	.90	1.55	2.65	2.66	56.28
1910	1.47	3.69	.93	1.58	2.78	3.04	56.16
1911	1.39	3.39	1.02	1.52	2.69	2.72	55.16
1912	1.45	3.86	.99	1.76	2.70	3.37	55.47
1913	1.48	4.52	1.05	1.79	2.75	3.71	57.82
1914	1.31	3.63	1.13	1.76	2.40	2.93	55.53
1915	1.35	3.29	1.32	1.93	2.36	2.74	60.64
1916	1.39	3.79	1.11	2.78	2.67	3.92	67.30
1917	1.05	3.58	.87	3.13	2.34	4.65	74.19
1918	.79	2.62	.76	2.54	2.04	4.49	78.88
1919	1.38	2.94	.83	3.10	2.33	3.84	77.42
1920	1.14	3.10	.86	3.24	2.25	4.18	73.30
1921	1.48	3.06	1.36	2.84	1.94	2.86	68.70
1922	2.32	4.20	1.65	3.62	2.26	3.47	72.78
1923	2.52	5.18	1.45	4.67	2.65	4.62	83.98

(continued)

TABLE A-2 (contd.)

	New Construction			Durable Equipment				Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)			Producer Durables (6)	
				Other Household Durables (5)				
1924	2.99	5.58	1.71	4.85	2.49	4.29	85.43	
1925	3.35	6.03	2.01	5.70	2.83	4.69	87.97	
1926	3.24	6.71	2.05	6.26	2.99	5.03	93.83	
1927	3.00	6.76	2.30	5.57	3.04	4.70	95.09	
1928	2.94	6.29	2.44	6.16	3.08	4.89	96.14	
1929	2.23	6.08	2.47	6.24	3.30	5.82	104.44	
1930	1.43	4.83	2.98	5.12	2.83	4.74	94.50	
1931	1.32	2.96	3.06	4.13	2.60	3.20	87.89	
1932	.72	1.55	2.54	2.82	2.20	1.88	74.74	
1933	.51	1.07	1.86	3.10	1.92	1.91	72.72	
1934	.66	1.11	2.25	3.66	2.17	2.64	79.56	
1935	1.08	1.27	2.33	4.91	2.39	3.46	87.83	
1936	1.49	1.92	3.60	6.18	2.87	4.67	99.55	
1937	1.62	2.42	2.99	6.40	3.13	5.29	105.42	
1938	1.66	2.01	3.34	4.76	2.95	3.89	100.59	

(continued)

TABLE A-2 (contd.)

	New Construction			Durable Equipment				Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)		
1939	2.26	2.19	3.79	6.03	3.21	4.48	108.74	
1940	2.53	2.41	3.28	7.31	3.38	5.71	118.22	
1941	2.83	2.81	3.99	8.32	3.82	6.94	136.78	
1942	1.26	1.64	5.05	4.40	3.78	4.45	153.32	
1943	.55	1.05	3.27	3.04	4.05	3.58	170.44	
1944	.49	1.16	1.97	2.44	4.12	5.10	182.62	
1945	.80	1.64	1.45	2.75	4.61	6.49	180.38	
1946	2.60	3.73	1.54	7.80	6.27	8.44	162.28	
1947	3.52	3.90	1.94	10.05	6.04	11.38	162.17	
1948	4.53	4.52	2.50	10.36	6.16	11.95	168.37	
1949	4.13	4.59	3.41	11.56	5.96	10.38	168.14	
1950	5.64	4.67	3.67	14.86	6.60	11.17	182.73	
1951	5.54	5.00	4.21	13.06	6.25	11.53	196.35	
1952	5.49	4.90	4.50	12.81	6.28	11.43	203.07	
1953	5.93	5.14	4.71	14.75	6.40	11.80	211.97	

(continued)

TABLE A-2 (concluded)

	New Construction			Durable Equipment			Gross National Product (7)
	Single-Family Residential (1)	Enterprise, Farm, and Multifamily Residential (2)	Public Nonmilitary (3)	Major Household Equipment and Automobiles (4)	Other Household Durables (5)	Producer Durables (6)	
1954	6.20	5.23	5.16	15.18	6.24	10.90	208.58
1955	7.68	5.87	4.94	18.83	7.17	11.80	225.59
1956	6.70	6.28	4.98	18.10	7.40	13.11	230.30
1957	6.45	6.79	5.31	18.20	7.70	12.90	234.72
1958	6.27	6.36	6.44	16.99	7.70	10.17	230.53
1959	7.88	6.34	6.68	19.03	8.35	11.22	246.09
1960	7.38	6.90	6.49	19.41	8.73	11.90	253.22
1961	7.29	7.18	6.89	18.94	8.90	11.22	257.54
1962	7.90	7.36	6.98	20.78	9.35	12.58	271.34

Table A-2: Source Notes, by Column

1. Column 1 in Table A-1 deflated by index of construction costs (1929 = 100). Cost indexes are obtained as follows:
 - 1897-1944: *Saving*, Table R-20, column 1.
 - 1945-62: Boeckh index of residential construction costs (*Construction Volume and Costs, 1915-1956*, Table 10, column 4) up to 1953, same index from current issues of *Construction Review* from 1954 to 1962.
2. Total enterprise construction is the sum of all private nonfarm non-residential construction, all farm construction, and the multifamily share of residential construction.

Private nonfarm enterprise construction (the series obtained from *Saving*, column 6 of Table R-27 and column 5 of R-28) is deflated by the price index from column 3 of Table R-20 in *Saving* for the period 1897-1949. For 1950-62, the Boeckh index for commercial and factory buildings (*Construction Volume and Costs, 1915-1956*, Table 10) is used to deflate the enterprise construction series described in the notes to column 2 of Table A-1.

Farm construction in 1929 prices is obtained directly from *Saving* for the period 1897-1949 (Table A-7, column 2). For the period 1950-62, the farm construction series obtained from Table 2 of *Construction Volume and Costs, 1915-1956* is deflated by the Boeckh index of residential costs described in the notes to column 1 of this table.

The multifamily share of residential structures described in Table A-1 is deflated by the Boeckh index of residential costs described in the notes to column 1 of this table.
3. 1897-1914: Column 3 of Table A-1 deflated by average of columns 6 and 8 in Table R-20 of *Saving*.

1915-62: Public nonmilitary construction in 1947-49 prices is obtained from Table 16 of *Construction Volume and Costs, 1915-1956* and various current issues of *Construction Review*; this series is then converted to a base of 1929 prices = 100 by applying a factor of .5603.
4. 1897-1945: Sum of columns 2, 3, 6 and 8 in Tables Q-6 and A-25 of *Saving*.

1946-62: Data on automobile and major durables expenditures in column 4 of Table A-1 deflated by separate price indexes as follows.

For major household durables, a price index relating 1929 to 1947-49 is obtained from data in Table Q-16 of *Saving*. This table has price indexes for all categories of consumer durables based on 1929 = 100. The furniture, appliances, and musical instruments categories show 1947-49 prices equal to, respectively, 138.2, 126.7, and 53.9 on the 1929 base. Weighting by expenditures, the combined index for all three categories is estimated at 1947-49 = 115.2 when 1929 = 100. Price indexes for these same categories during the 1946-58 period are taken from *Postwar Wealth*, Table B-33, on a base 1947-49 = 100. Again weighting by expenditures, a combined price index is obtained as indicated below.

APPENDIX A

1946	80.6	1953	101.3
1947	95.4	1954	98.5
1948	104.0	1955	95.2
1949	100.5	1956	92.6
1950	98.4	1957	93.2
1951	105.3	1958	92.2
1952	102.5		

Next, this index is converted to a base of 1929 = 100 by multiplying the series by 115.2, the 1947-49 index based on 1929 = 100. Finally, the last few years are obtained by extrapolation, using the implicit deflator for the durable goods component of GNP taken from the *Survey of Current Business*. The final price index for the 1946-62 period, 1929 = 100, is shown below.

1929	100.0	1954	113.5
1946	92.8	1955	109.7
1947	109.9	1956	106.7
1948	119.8	1957	107.4
1949	115.8	1958	106.2
1950	113.4	1959	107.6
1951	121.3	1960	107.6
1952	118.1	1961	106.6
1953	116.7	1962	107.1

The same general procedure was used for automobiles. The 1947-49 = 100 index in Table B-33 of *Postwar Wealth* is converted to a base of 1929 = 100 by means of the new-car price index in Table Q-16 of *Saving*. The implicit automobiles and parts deflator in the GNP accounts is used to extrapolate the series from 1959 through 1962. The resulting price index for automobiles, 1929 = 100, is shown below.

1929	100.0	1954	203.1
1946	139.5	1955	204.5
1947	162.8	1956	212.8
1948	179.1	1957	224.9
1949	190.7	1958	232.8
1950	190.3	1959	238.9
1951	200.6	1960	236.9
1952	211.9	1961	234.6
1953	212.3	1962	236.9

It should be noted that the major durables and automobile price indexes show widely divergent trends over the entire period. The prices of major household durables seem to be about the same in 1962 as they were in 1929, but automobile prices appear to be almost two and a half times as high.

5. 1897–1945: Sum of columns 4, 5, 7, 9, 10, and 11 in Tables Q-6 and A-25 of *Saving*.

1946–62: Column 5 of Table A-1 deflated by index of prices for these durables, obtained as follows: (1) From *Saving*, Table Q-16, it appears that 1947–49 prices for the durables in this category were approximately 50 per cent higher than 1929 prices, using expenditure weights from *Postwar Wealth*, Table B-18. (2) The *Postwar Wealth* expenditure data were aggregated for these durables—using Table B-18 (current prices, nonfarm households) and Table B-19 (1947–49 prices, nonfarm households) and from these two series an implicit deflator was calculated. (3) The deflator in (2) was converted to a 1929 prices = 100 base by multiplying by 150, the conversion index in (1). (4) The price index for 1959–62 was estimated by linking the implicit GNP deflator for consumer durables to the index in (3). The resulting price index for other durables, 1929 = 100, follows.

1929	100.0	1954	170.6
1946	131.6	1955	169.5
1947	146.4	1956	174.6
1948	150.4	1957	178.5
1949	150.6	1958	179.4
1950	153.8	1959	181.8
1951	171.4	1960	181.8
1952	169.6	1961	180.2
1953	170.1	1962	181.2

6. 1897–1945: *Saving*, sum of column 1 in Table P-6, column 2 in Table A-16, column 2 in Table A-18, column 2 in Table P-13, column 2 in Table P-14, column 1 in Table P-17, column 2 in Table A-19, column 2 in Table A-20, and column 2 in Table A-29.

1946–62: Expenditures for producers' durable equipment in 1954 prices from *Survey of Current Business* linked to *Saving* data by the ratio of *Saving* (1929 prices)/*SCB* (1954 prices) during 1929. The factor is .5243, and it includes the influence of both the difference in price levels between the respective base years and a very slight difference in the *Saving* and *SCB* estimates for 1929 current dollar outlays on producer durables.

7. 1897–1928: Column 1 of Table N-2 in *Saving*.

1929–62: Data in 1954 prices from *Survey of Current Business*, various current issues and supplements; the 1954 constant-price series is converted to a base of 1929 prices = 100 by using the implicit GNP price deflator in the *SCB* series.

TABLE A-3
Estimates of Gross Investment in Tangible and Intangible Assets, Selected Categories and Years
 (billion dollars)

	Tangible Assets					Intangible Assets				Ratios to GNP			
	Enterprises		Households		Govt. Civilian	Total	Educa- tion	Research and Develop- ment	Total	Grand Total	Tangi- ble Assets	Total Intan- gible Assets	Grand Total
	Struc- tures	Equip- ment	Struc- tures	Equip- ment									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
CURRENT PRICES													
1900	1.44	1.01	0.27	0.35	0.21	3.28	0.40	0.04	0.44	3.72	17.7	2.4	20.0
1910	1.99	1.66	0.78	0.92	0.55	5.90	0.81	0.07	0.88	6.78	17.6	2.6	20.3
1920	4.05	5.10	1.35	4.44	1.19	16.13	2.51	0.18	2.69	18.82	17.7	3.0	20.6
1930	4.49	4.51	1.40	4.57	2.83	17.80	4.97	0.34	5.31	23.11	19.5	5.8	25.4
1940	2.47	5.64	2.58	5.18	3.24	19.11	6.33	0.57	6.90	26.01	19.0	6.9	25.8
1950	10.15	18.94	12.15	21.87	6.82	69.93	17.00	2.84	19.84	89.77	24.6	7.0	31.5
1960	20.56	27.56	20.61	30.14	15.95	114.82	37.85	13.89	51.74	166.56	22.8	10.3	33.0
1929 PRICES													
1900	2.96	2.05	0.56	1.01	0.44	7.02	0.81	0.07	0.88	7.90	18.8	2.4	21.1
1910	3.69	3.04	1.47	1.58	0.93	10.71	1.36	0.11	1.47	12.18	19.1	2.6	21.7
1920	3.10	4.18	1.14	3.24	0.86	12.52	2.02	0.15	2.17	14.69	17.1	3.0	20.0
1930	4.83	4.74	1.43	5.12	2.98	19.10	5.16	0.35	5.51	24.61	20.2	5.8	26.0
1940	2.41	5.71	2.53	7.31	3.28	21.24	7.44	0.67	8.11	29.35	18.0	6.9	24.8
1950	4.67	11.17	5.64	14.86	3.67	40.01	10.92	1.82	12.74	52.72	21.9	7.0	28.8
1960	6.90	11.90	7.38	19.41	6.49	52.08	19.00	7.09	26.09	78.17	20.6	10.3	30.9

Table A-3: Source Notes, by Column

Columns 1 through 6 are taken from Tables A-1 and A-2 of this study. Estimates in column 7 (investment in formal schooling) are from Theodore W. Schultz, "Capital Formation by Education," *Journal of Political Economy*, December 1960, Table 7. Schultz's estimates are converted to 1929 dollars with a GNP deflator. The basic data, the deflator, and the 1929 dollar estimates are shown below. The 1960 figure is my own estimate, based on extrapolation of the Schultz data between 1950 and 1956.

	<i>Basic Data, Schultz (current \$ million)</i>	<i>GNP Deflator (1929 = 100)</i>	<i>Constant Dollar Estimates (1929 \$ million)</i>
1900	400	49.6	806
1910	810	59.5	1,361
1920	2,510	124.5	2,016
1930	4,970	96.4	5,156
1940	6,330	85.1	7,437
1950	17,000	155.8	10,915
1956	28,700	182.0	15,768

The basic data for column 8 (expenditures for research and development) are from three National Science Foundation publications (*Research and Development in Industry, 1960*, January 1963, p. 7, and *Review of Data on Research and Development*, September 1962, p. 3, and September 1963, p. 4) and from Nestor Terleckyj, *Research and Development: Its Growth and Composition*, Studies in Business Economics No. 82, New York, National Industrial Conference Board, 1963, Tables A-2 and A-3. The NSF data are available only for 1953-62, while Terleckyj has constructed rough estimates for a number of years starting with 1921. The NSF data have been used where available, and estimates for years between the benchmark years provided by Terleckyj are interpolations. For years prior to 1920, it is arbitrarily assumed that R. & D. outlays were the same fraction of GNP as they were around 1921, namely, 0.2 per cent.

