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## LINE 17

The only figure for investment in pipe lines, a rough estimate for 1922 (*Estimated National Wealth*), is extrapolated by mileage figures for interstate pipe lines (Walter Splawn, 'Transportation by Pipe Lines', *Oil and Gas Journal*, Sept. 22, 1938). No data for intrastate mileage are available for these years, but for 1924-38 the ratio of interstate to total mileage is quite stable.

The 1922 Federal Trade Commission percentage distribution into the value of land, improvements, and equipment (*National Wealth and Income*) is applied throughout the period.

## LINE 18

Sum of lines 8-17.

## LINE 19

Sum of lines, 6, 7, and 18.

TABLE IV 3

Value of Equipment, Census Dates, 1880-1922 (millions of dollars)  
Based on Reported Valuation

	VALUATION	BASE				
		1880 (1)	1890 (2)	1900 (3)	1912 (4)	1922 (5)
1 Agriculture	Market	407	494	750	1,392	2,292
2 Mining	Book	143	202	399	980	2,001
3 Manufacturing	Book	670	1,584	2,543	6,091	15,949
4 Other industrial	Market	889	1,778	2,227	3,809	5,901
5 Total taxable, excl. public utilities		2,109	4,058	5,919	12,272	26,143
6 Tax exempt	Book	222	438	730	1,507	2,536
7 Steam railroads	Book	418	846	1,468	3,134	4,905
8 Street railways	Book	19	60	288	1,007	1,265
9 Pullman, express, etc.	Book	37	64	82	104	463
10 Telephone	Book	9	36	208	592	1,257
11 Telegraph	Book	46	77	84	122	206
12 Shipping & canals	Market	156	221	343	785	1,022
13 Electric light & power	Book	0	23	134	777	1,692
14 Waterworks	Book	12	12	13	14	18
15 Irrigation	Book	1	3	5	18	28
16 Pipe lines	Book	1	2	8	18	25
17 Total public utilities		699	1,344	2,633	6,571	10,881
18 Total equipment		3,030	5,840	9,282	20,350	39,560

## LINE 1

COL. 1-3: Value of farm equipment is reported in the Census of Agriculture.

COL. 4 AND 5: The estimates are those prepared by the Bureau of Agricultural Economics (*Income Parity for Agriculture*, Part II, Sec. 3, Washington, D. C., Aug. 1940). Forty percent of the value of automobiles is included to cover business use of passenger cars.

The figure for 1922 is \$2,292 million; that reported in *Estimated National Wealth* is \$2,605 million. The latter excludes automobiles and trucks, estimated by the Bureau of Agricultural Economics to be \$750 million, of which \$358 million was included in our estimate.

## LINE 2

COL. 1 AND 2: The method is the same as that described for value of improvements (see the notes to Table IV 2, line 2, col. 1 and 2).



Table IV 3 continued:

LINE 2 (concl.)

COL. 3-5: Value of equipment is obtained by multiplying capital other than real estate by the ratio of machinery to it. The derivation of the former is given in the notes to Table IV 2, line 2, col. 3-5; for the latter the 1890 figure is used (see the notes to Table IV 2, line 2, col. 2).

LINE 3

COL. 1 AND 2: The method is the same as that described for value of improvements (see the notes to Table IV 2, line 3, col. 1 and 2).

COL. 3: See the notes to Table IV 2, line 3, col. 3 for the method. Value of equipment, \$2,543 million, checks with the value in the wealth report for 1900, \$2,541 million.

COL. 4: The value of machinery is given in *Wealth, Debt, and Taxation: 1913, I.*

COL. 5: The estimate is obtained by multiplying total capital (see the notes to Table IV 2, line 3, col. 5) by the ratio of the value of machinery to it (*Estimated National Wealth* and used also by Douglas).

We checked our estimate of the value of machinery in 1922 against Chawner's estimates of expenditures for manufacturing equipment. The method and sources are the same as those for Table IV 2, line 3, col. 5. Our total is \$15,949 million; that based on Chawner's data is \$15,755 million.

LINE 4

As no estimates for this item are available for any year, we had to make our own. The National Bureau (Financial Research Program) has collected data on fixed assets for Massachusetts nonmanufacturing corporations. The material is available for several years but unfortunately for a varying and small number of corporations. For the largest sample, covering 129 corporations, 1920-21, the ratio of the value of machinery to the value of fixed assets is .274 in 1920 and .270 in 1921. We took .25 for the entire period, 1880-1922. Since the manufacturing ratio of the value of machinery to the value of fixed assets rose only slightly (from .50 in 1880 to .55 in 1922) the assumption of constancy in the ratio for 'other industrial' probably does not introduce a great error. On the basis of the value of real estate (see the notes to Table IV 2, line 4) and this ratio the value of equipment can be estimated.

The data in the Notre Dame report are a possible check on our estimate. Appendix B, Table 8, of *A Study of the Physical Assets, Sometimes Called Wealth, of the United States* gives total commercial and industrial fixed assets, based upon corporate data from *Statistics of Income*, and divided (a) by industry and (b) into land, buildings, and equipment. The figure for all industries other than manufacturing and mining is \$22,868 million in 1922; our figure is \$23,603 million (\$17,702 million for real estate and \$5,901 for equipment).

The Notre Dame division by type of asset, based on the Federal Trade Commission division of real estate and the Census of Wealth estimate of manufacturing machinery, and allowing for no other type of equipment, is questionable. Its ratio of equipment to total commercial and industrial fixed assets is .32. Ours, obtained by combining manufacturing, mining, and 'other industrial', is .40.

LINE 5

Sum of lines 1-4.

LINE 6

For the value of equipment in 1922 we took the Notre Dame estimate and assumed that in the preceding years it was the same percentage of the value of buildings.

LINE 7

The method is the same as for the value of real estate (see the notes to Table IV 2, line 8).

## LINE 8

The method is the same as for the value of real estate (see the notes to Table IV 2, line 9).

## LINE 9

The method is the same as for the value of real estate (see the notes to Table IV 2, line 10).

## LINE 10

The method is the same as for the value of real estate (see the notes to Table IV 2, line 11).

## LINE 11

The method is the same as for the value of real estate (see the notes to Table IV 2, line 12).

## LINE 12

COL. 1: The value of vessels is from the *1880 Census of Transportation*.

COL. 2: The value of vessels is from the *1890 Census Compendium*.

In the *1916 Census of Water Transportation* the value of vessels is reported as \$207 million; in the *1890 Census Compendium*, as \$221 million (\$215 million plus \$6 million for canal boats).

COL. 3: The value of vessels is estimated as the product of the tonnage and the value per ton. Tonnage is interpolated between 1890 and 1906 (for 1890 given in the *Census Compendium* and for 1906 in the *Census of Water Transportation*) by tonnage of the total merchant marine (*1923 Annual Report*, Bureau of Navigation). Value per ton, computed for 1890 and 1906, is interpolated along a straight line. Value figures for 1890 and 1906 are from the sources cited for tonnage.

COL. 4: The value of vessels is estimated as the product of tonnage and value per ton, but both are interpolated along a straight line since the tonnage figures in the Bureau of Navigation report increase from 1906 to 1916 whereas the tonnage figures in the *Census of Water Transportation* decrease.

COL. 5: The value of vessels, the difference between the figure for shipping and canals, excluding the Navy (*Estimated National Wealth*), and the cost of operated canals (see the notes to Table IV 2, line 13, col. 5), \$1,022 million, is larger than the 1916 figure, \$960 million. If abandoned canals had also been deducted from the total value of vessels in 1922 would have been lower than in 1916. This seemed unlikely since the tonnage given in the Bureau of Navigation report for 1922 is much bigger than the 1916 tonnage figure, as is the 1926 tonnage than the 1916, both reported in the *1926 Census of Water Transportation*.

## LINE 13

The method is the same as for the value of real estate (see the notes to Table IV 2, line 14).

## LINE 14

The method is the same as for the value of real estate (see the notes to Table IV 2, line 15).

## LINE 15

The method is the same as for the value of real estate (see the notes to Table IV 2, line 16).

## LINE 16

The method is the same as for the value of real estate (see the notes to Table IV 2, line 17).

## LINE 17

Sum of lines 7-16.

## LINE 18

Sum of lines 5, 6, and 17.

TABLE IV 4  
Price Indexes (1929:100), Census Dates, 1880-1922

	1880 (1)	1890 (2)	1900 (3)	1912 (4)	1922 (5)
CONSTRUCTION					
1 Market price, all construction*	79.2	77.7	79.5	97.9	173.2
2a Market price, residential	42.2	41.4	42.3	52.1	92.2
2b Market price, residential, 2d variant	43.2	43.6	43.2	50.5	77.5
3a Market price, other private	41.5	40.7	41.7	51.3	90.8
3b Market price, other private, 2d variant	42.8	43.2	43.0	50.1	76.8
4a Market price, farm	41.8	41.0	42.0	51.7	91.5
4b Market price, farm, 2d variant	43.0	43.4	43.1	50.3	77.2
5 Book value, all construction	44.6	46.2	44.6	49.1	62.8
EQUIPMENT					
6a Market price	62.1	49.0	49.8	55.9	94.7
6b Market price, 2d variant	64.4	50.0	47.3	54.2	96.4
7 Book value	66.6	51.1	44.8	52.5	98.0

\* 1913:100

#### LINE 1

This index, necessary for the extrapolation of lines 2-4 and basic to the computation of line 5, is a weighted average of an index of building materials prices, and of an index of building wage rates. Constant weights for these two components, used for the entire period, are derived from the data for 1919-33 on the cost of materials and the cost of materials and wages and salaries, in 1929 prices (*Commodity Flow and Capital Formation*, Table VI-5, lines 19 and 20).

The construction materials price index is derived from Shaw's unpublished data.

The wage index for 1890 and later years is derived from Paul H. Douglas' figures on full time weekly earnings in the building trades (*Real Wages in the United States*; Houghton Mifflin, 1930, p. 137). The data for the years prior to 1890 are based on wage rates for various occupations in several states (Bureau of Labor Statistics *Bulletin* 499). The occupational groups covered are bricklayers, carpenters, engineers, firemen, hod carriers, masons, painters, plasterers, and plumbers. Linked relatives are based on quotations for two successive years for identical states. The 1890 index is extrapolated to the earlier years by the arithmetic average of the relatives.

#### LINE 2a

COL. 1-4: The index is extrapolated from 1922 by means of line 1.

COL. 5: The value of residential construction in current prices divided by the value in 1929 prices. The value figures are from Part I, Tables I 7 and I 8, col. 1.

#### LINE 2b

Average of lines 2a and 5.

#### LINE 3a

The method is the same as for line 2.

#### LINE 3b

Average of lines 3a and 5.

#### LINE 4a

The average of lines 2 and 3 is used here since farm values include both residential and business property.

#### LINE 4b

Average of lines 4a and 5.

#### LINE 5

The index of prices underlying book values is based on the construction cost index (line 1) and the assumption of a fifty-year life. The materials price index is extra-

polated to 1840 by the index for lumber and building materials (*Wholesale Prices, Wages and Transportation*, Part I, p. 91). The wage data are available back to 1840 in the Bureau of Labor Statistics *Bulletin 499* (see the notes to line 1 for the derivation of the index).

The weights used in computing the index of prices underlying book values are the product of the constant price values of new construction and the estimated percentage of construction in use in a given year. The construction values (see the notes to Tables II 5, col. 7, and II 14, col. 4) are annual averages for the decades from 1829-38 to 1909-18 and annual estimates from 1914 on. The percentage in use is based on the assumption of a fifty-year life so that in 1890, for example, 2 percent of construction in 1841, 4 percent in 1842, etc. are the weights assigned to the price index for those years. The decade averages, however, are for periods whose terminal years do not coincide with the specific years for which the index of prices underlying book values is desired. We were therefore compelled, in deriving the index for 1890, for example, to use average annual construction, 1889-98, in deriving the weights for 1889 and 1890.

The resultant index of prices underlying book values is used to extrapolate the 1922 index (see the notes to col. 5).

COL. 1: Since there are no price data for years before 1840 the index of prices underlying book values in 1880 does not take account of construction for 1831-39.

COL. 5: *Capital Consumption and Adjustment*, Table 35.

#### LINE 6a

Shaw's price index for producer durable goods is adjusted by minor groups to the 1929 level. His data are available for 1869, 1879, and 1889-1922. Interpolation for 1880 is by the price index for metals and implements excluding pocket knives (*Wholesale Prices, Wages and Transportation*, Part I, p. 92; see also the notes to Table II 6, col. 1).

#### LINE 6b

Average of lines 6a and 7.

#### LINE 7

The method is like that used for line 5 except that annual data on the value of production are used and a thirteen-year life is assumed. For the derivation of the values see Table II 4, col. 1. For the price index see the notes to line 6a; extrapolation of the index back to 1868 is on the basis indicated there for the interpolation for 1880.

TABLE IV. 5  
Value of Real Estate Improvements, Census Dates, 1880-1922  
1929 Prices (millions of dollars)

	1880 (1)	1890 (2)	1900 (3)	1912 (4)	1922 (5)
<b>A ADJUSTED BY CURRENT COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>					
1 Agriculture	4,878	6,478	8,469	13,325	12,207
2 Mining	206	439	735	1,317	1,783
3 Manufacturing	821	1,919	3,281	7,055	13,968
4 Other industrial	3,311	6,120	7,609	11,782	9,163
5 Residential	7,964	16,271	22,522	39,685	34,603
6 Total taxable, excl. public utilities	17,180	31,227	42,616	73,164	71,724
7 Tax exempt	1,416	2,701	4,663	8,708	11,408
8 Steam railroads	7,638	12,651	15,959	21,824	21,051
9 Street railways	235	629	2,559	6,454	5,317
10 Pullman, express, etc.	9	15	20	20	70
11 Telephone	20	72	403	930	1,404
12 Telegraph	97	153	163	192	229
13 Shipping & canals	328	384	536	928	814
14 Electric light & power	0	96	505	2,249	3,365
15 Waterworks	473	491	548	534	518
16 Irrigation	61	131	219	665	788
17 Pipe lines	23	92	319	661	717
18 Total public utilities	8,884	14,714	21,231	34,457	34,273
19 Total improvements	27,480	48,642	68,510	116,329	117,405
<b>B ADJUSTED BY AN AVERAGE OF CURRENT AND PAST COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>					
20 Agriculture	4,742	6,120	8,253	13,696	14,468
21 Mining	206	439	735	1,317	1,783
22 Manufacturing	821	1,919	3,281	7,055	13,968
23 Other industrial	3,210	5,766	7,379	12,064	10,833
24 Residential	7,780	15,450	22,053	40,943	41,166
25 Total taxable, excl. public utilities	16,759	29,694	41,701	75,075	82,218
26 Tax exempt	1,416	2,701	4,663	8,708	11,408
27 Steam railroads	7,638	12,651	15,959	21,824	21,051
28 Street railways	235	629	2,559	6,454	5,317
29 Pullman, express, etc.	9	15	20	20	70
30 Telephone	20	72	403	930	1,404
31 Telegraph	97	153	163	192	229
32 Shipping & canals	328	384	536	928	814
33 Electric light & power	0	96	505	2,249	3,365
34 Waterworks	473	491	548	534	518
35 Irrigation	61	131	219	665	788
36 Pipe lines	23	92	319	661	717
37 Total public utilities	8,884	14,714	21,231	34,457	34,273
38 Total improvements	27,059	47,109	67,595	118,240	127,899

Values in 1929 prices are obtained by dividing the reported values (Table IV 2) by the appropriate price indexes (Table IV 4). Table IV 4, line 4a is used for line 1; Table IV 4, line 5 for lines 2, 3, 7-17, 21, 22, 26-36; Table IV 4, line 3a for line 4; Table IV 4, line 2a for line 5; Table IV 4, line 4b for line 20; Table IV 4, line 3b for line 23, and Table IV 4, line 2b for line 24.

TABLE IV 6  
Value of Equipment, Census Dates, 1880-1922  
1929 Prices (millions of dollars)

	1880 (1)	1890 (2)	1900 (3)	1912 (4)	1922 (5)
<b>A ADJUSTED BY CURRENT COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>					
1 Agriculture	655	1,008	1,506	2,490	2,420
2 Mining	215	395	891	1,867	2,042
3 Manufacturing	1,006	3,100	5,676	11,602	16,274
4 Other industrial	1,432	3,629	4,472	6,814	6,231
5 Total taxable, excl. public utilities	3,308	8,132	12,545	22,773	26,967
6 Tax exempt	333	857	1,629	2,870	2,588
7 Steam railroads	628	1,656	3,277	5,970	5,005
8 Street railways	29	117	643	1,918	1,291
9 Pullman, express, etc.	56	125	183	198	472
10 Telephone	14	70	464	1,128	1,283
11 Telegraph	69	151	188	232	210
12 Shipping & canals	251	451	689	1,404	1,079
13 Electric light & power	0	45	299	1,480	1,727
14 Waterworks	18	23	29	27	18
15 Irrigation	2	6	11	34	29
16 Pipe lines	2	4	18	34	26
17 Total public utilities	1,069	2,648	5,801	12,425	11,140
18 Total equipment	4,710	11,637	19,975	38,068	40,695
<b>B ADJUSTED BY AN AVERAGE OF CURRENT AND PAST COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>					
19 Agriculture	632	988	1,586	2,568	2,378
20 Mining	215	395	891	1,867	2,042
21 Manufacturing	1,006	3,100	5,676	11,602	16,274
22 Other industrial	1,380	3,556	4,708	7,028	6,121
23 Total taxable, excl. public utilities	3,233	8,039	12,861	23,065	26,815
24 Tax exempt	333	857	1,629	2,870	2,588
25 Steam railroads	628	1,656	3,277	5,970	5,005
26 Street railways	29	117	643	1,918	1,291
27 Pullman, express, etc.	56	125	183	198	472
28 Telephone	14	70	464	1,128	1,283
29 Telegraph	69	151	188	232	210
30 Shipping & canals	242	442	725	1,448	1,060
31 Electric light & power	0	45	299	1,480	1,727
32 Waterworks	18	23	29	27	18
33 Irrigation	2	6	11	34	29
34 Pipe lines	2	4	18	34	26
35 Total public utilities	1,060	2,639	5,837	12,469	11,121
36 Total equipment	4,626	11,535	20,327	38,404	40,524

Values in 1929 prices are obtained by dividing the reported values (Table IV 3) by the appropriate price indexes (Table IV 4). Table IV 4, line 6a is used for lines 1, 4, and 12; Table IV 4, line 7 for lines 2, 3, 6-11, 13-16, 20, 21, 24-29, 31-34; Table IV 4, line 6b for lines 19, 22, and 30.

TABLE IV 7: Value of Improvements and Equipment, January 1, 1919 (millions of dollars)

	I M P R O V E M E N T S			E Q U I P M E N T		
	Reported Value (1)	Price Index (1929:100) (2)	Value 1929 Prices (3)	Reported Value (4)	Price Index (1929:100) (5)	Value 1929 Prices (6)
1 Agriculture						
a Adj. by current cost	9,541	102.2	9,336	2,625	122.6	2,141
b Adj. by av. of current & past cost	9,541	80.2	11,897	2,625	104.1	2,524
2 Mining	1,113	58.3	1,909	1,899	85.5	2,221
3 Manufacturing	7,293	58.3	12,509	13,118	85.5	15,343
4 Other industrial						
a Adj. by current cost	7,687	98.0	7,844	5,064	122.6	4,131
b Adj. by av. of current & past cost	7,687	78.2	9,830	5,064	104.0	4,869
5 Residential	31,754		33,905			
6 Total taxable, excl. public utilities						
a Sum of 1a, 2, 3, 4a, & 5	57,388		65,503	22,706		23,836
b Sum of 1b, 2, 3, 4b, & 5	57,388		70,050	22,706		24,957
7 Tax exempt	5,496	58.3	9,427	1,944	85.5	2,274
8 Steam railroads	12,247	58.3	21,007	3,264	85.5	3,818
9 Street railroads	3,565	58.3	6,115	1,244	85.5	1,455
10 Pullman, express, etc.	24	41	250	250	85.5	292
11 Telephone	670	58.3	1,149	905	85.5	1,058
12 Telegraph	116	58.3	199	153	85.5	179
13 Shipping & canals						
a Adj. by current cost	513*	58.3	880	969	122.6	790
b Adj. by av. of current & past cost	513*	58.3	880	969	104.0	932
14 Electric light & power	1,604	58.3	2,751	1,196	85.5	1,399
15 Waterworks	299	58.3	513	17	85.5	20
16 Irrigation	427	58.3	732	24	85.5	28
17 Pipe lines	357	58.3	612	20	85.5	23
18 Total public utilities						
a Sum of 8-12, 13a, 14-17	19,822		33,999	8,042		9,062
b Sum of 8-12, 13b, 14-17	19,822		33,999	8,042		9,204
19 Total improvements						
a Sum of 6a, 7, & 18a	82,706		108,929	32,692		35,172
b Sum of 6b, 7, & 18b	82,706		113,476	32,692		36,435

\* Book valuation and, therefore, adjusted by cost index.

## COLUMN 1

LINE 1: The estimate is for March 1 as obtained from the Bureau of Agricultural Economics.

LINE 2: Capital invested is reported in the 1919 *Census of Mines and Quarries*. The value of real estate is obtained by multiplying capital invested by the ratio of real estate to it. The ratio is interpolated along a straight line between 1890 and 1922 (for the latter see the notes to Table IV 2, line 2, col. 2 and 5).

The value of improvements is obtained by multiplying the value of real estate by the ratio of improvements to it. The ratio is interpolated along a straight line between 1890 and 1922 (for the latter see the notes to Table IV 2, line 2, col. 2 and 5).

This value figure is for the end of 1919, and no data are available by which a figure for January 1, 1919 could be computed.

LINE 3: Capital invested is reported in the 1919 *Census of Manufactures*. The value of improvements is obtained by multiplying capital invested by the ratio of improvements to it (Paul H. Douglas, *Theory of Wages*, Ch. 5, Table 4).

Here also the figure is for December 31, 1919 but there is some evidence that the estimate for the first of the year would not be much smaller. Chawner estimates expenditures for plant in 1919 as \$815 million, and for equipment, \$1,409 million. Fabricant estimates depreciation as \$1,152 million, leaving a \$1,072 million net increase in 1919 in the value of plant and equipment. It can be assumed therefore that the December 31, 1919 figure is representative of the situation at the beginning of the year (the error involved after converting the increase in the value of plant and equipment to 1929 prices amounts to less than 5 percent of the December 31, 1919 value).

LINE 4: The value of manufacturing improvements is used to interpolate the value of other industrial improvements between 1912 and 1922 (for the latter see the notes to Table IV 2, line 4, col. 4 and 5).

LINE 5: From the value of residential improvements in 1922 (see Table IV 2, line 5, col. 5) residential real estate construction, 1919-22, is subtracted, and to it residential real estate consumption, 1919-22, is added (see Part I, Table I 7, col. 1, and the notes to Table I 16, col. 1).

LINE 7: The total value of real estate and equipment is interpolated between 1912 and 1922 (see the notes to Table IV 2, line 7, and Table IV 3, line 6, for derivation of estimates for these years) by the value reported for property of states and of cities of 30,000 and over. The values of both state and city property in 1912 are reported in the *Census of Wealth, Debt, and Taxation, 1913*. The state property figures in 1918 and 1922 are from *Financial Statistics of States, 1919 and 1923*. Since the majority of the states report for fiscal years ending June 30 we have not made any further adjustment. The property figures for cities of 30,000 and over in 1918 and 1922 are from *Financial Statistics of Cities, 1918 and 1923* (no data are available for 1922).

The ratios of improvements and of equipment to total real estate and equipment are interpolated along a straight line between 1912 and 1922 (see the notes to Table IV 2, line 7, and Table IV 3, line 6) and applied to the estimated total for 1918 to yield the values of improvements and equipment.

LINE 8: The gross value of road and equipment for steam railroads and switching and terminal companies are both given in the 1918 *Statistics of Railways*. The ratios of real estate to road and equipment and land to real estate are interpolated along a straight line between 1912 and 1922 (see the notes to Table IV 2, line 8, col. 4 and 5). By applying these ratios to the value of road and equipment, we get the values of improvements and of equipment.



Table IV 7 continued:

## COLUMN 1 (concl.)

Total depreciation on road and equipment for both steam railroads and switching and terminal companies, also reported in the *1918 Statistics of Railways*, is divided into depreciation on road and on equipment by means of the 1920 figures for depreciation on equipment and total depreciation (*1938 Statistics of Railways*). The 1920 relation is assumed to apply in 1918.

LINE 9: Value of road and equipment at the end of 1917 is reported in the *Census of Electric Railways*. The ratios of real estate to road and equipment and of land to real estate are interpolated along a straight line between 1912 and 1922 (see the notes to Table IV 2, line 9, col. 3-5). By applying these ratios we get the values of improvements and of equipment at the end of 1917. To obtain the value of improvements, December 31, 1918 we add construction expenditures in 1918 as estimated by Lowell Chawner (*Construction Activity in the United States, 1915-1937*).

LINE 10: The value of plant and equipment is interpolated between 1912 and 1922 by gross revenues reported by the Pullman Company (*Statistical Abstract, 1923*). The ratios of real estate to plant and equipment and land to real estate are interpolated along a straight line between 1912 and 1922 (see the notes to Table IV 2, line 10, col. 3-5). By applying these ratios we get the values of improvements and of equipment.

LINE 11: Value of plant and equipment, December 31, 1917 is reported in the *1932 Census of Telephones*. For the procedure see the notes to line 9; for the sources see the notes to Table IV 2, line 11.

LINE 12: Value of plant and equipment, December 31, 1917 for telegraph companies is reported in the *1932 Census of Electric Light and Power Stations* and that for wireless companies in the *1917 Census of Telegraphs*. For the procedure see the notes to line 9; for the sources, see the notes to Table IV 2, line 12.

LINE 13: Value of vessels is interpolated between 1916 and 1922 by the gross tonnage reported (*1923 Annual Report, Bureau of Navigation*). On the basis of the value of vessels the value of improvements is derived by the procedure described in the notes to Table IV 2, line 13.

LINE 14: Value of plant and equipment, December 31, 1917 is reported in the *Census of Electric Light and Power Stations*. For the procedure see the notes to line 9; for the sources see the notes to Table IV 2, line 14.

LINES 15 AND 16: Value of capital is interpolated along a straight line between 1912 and 1922. See the notes to Table IV 2, lines 15 and 16, for the 1912 and 1922 figures and the procedure used to derive the values of improvements and of equipment.

LINE 17: The procedure is described in the notes to Table IV 2, line 17.

## COLUMN 2

The price indexes are averages for the year; values are for the first of the year. So far as prices were moving upward during this period the figures in constant prices are underestimates.

LINES 1a AND 4a: Market price index. The sources and methods are given in the notes to Table IV 4, lines 3a and 4a.

LINES 1b AND 4b: Average of market and cost price indexes; see the notes to Table IV 4, lines 3b and 4b.

LINES 2, 3, 7-17: Index of prices underlying book values. The sources and methods are given in the notes to Table IV 4, line 5.

## COLUMN 3

LINES 1-4, 7-17: Col. 1 divided by col. 2.

LINE 5: See the notes to col. 1, line 5; Table I 8, col. 1; and the notes to Table I 16, col. 6.

## COLUMN 4

LINE 1: Estimate prepared by the Bureau of Agricultural Economics (*Income Parity for Agriculture*, Part II, Sec. 3, Washington, D. C., Aug. 1940). To allow for business use, it includes 40 percent of the value of automobiles.

LINE 2: The value of equipment is obtained by multiplying the value of other assets (capital invested minus real estate) by the ratio of equipment to it. For the derivation of the value see the notes to col. 1, line 2; for the ratio see the notes to Table IV 3, line 2, col. 3-5.

LINE 3: See the notes to col. 1, line 3. The ratio of equipment to capital invested is also from Douglas' *Theory of Wages*.

LINE 4: The value of real estate is derived by dividing the value of improvements (see the notes to col. 1, line 4) by the ratio of improvements to it. The ratio is interpolated along a straight line between 1912 and 1922 (see the notes to Table IV 2, line 4, col. 4 and 5). With value of real estate estimated the value of equipment is derived by the procedure described in the notes to Table IV 3, line 4.

LINES 7, 8, 10-17: See the notes to col. 1, lines 7, 8, 10-17.

LINE 9: See the notes to col. 1, line 9. To obtain the value of expenditures in 1918 the 1919 figure was extrapolated by the number of street railway cars built, the procedure used by George Terborgh (see *Federal Reserve Bulletin*, Sept. 1939).

## COLUMN 5

LINES 1a, 4a, AND 13a: Market price index. The sources and methods are given in the notes to Table IV 4, line 6a.

LINES 1b, 4b, AND 13b: Average of market and cost price indexes; see the notes to Table IV 4, line 6b.

LINES 2, 3, 7-12, 14-17: Index of prices underlying book values. The sources and methods are given in the notes to Table IV 4, line 7.

## COLUMN 6

LINES 1-4, 7-17: Col. 4 divided by col. 5.

TABLE IV 8

Value of Additions to Improvements and Equipment, Gross and Net Current Prices, 1919-1938 (millions of dollars)

	IMPROVE- MENTS Gross (1)	EQUIP- MENT Gross (2)	IMPROVE- MENTS & EQUIP- MENT Gross (3)	CONSUMP- TION OF IMPROVE- MENTS & EQUIP- MENT (4)	IMPROVE- MENTS & EQUIP- MENT Net (5)
1 Agriculture	3,650	11,067	14,717	17,254	-2,537
2 Mining & manufacturing	8,098	38,804	46,902	52,795	-5,893
3 Other industrial	12,455	30,787	43,242	29,639	13,603
4 Residential	50,414	...	50,414	42,281	8,133
5 Total taxable, excl. public utilities	74,617	80,658	155,275	141,969	13,306
6 Nonprofit institutions	6,841	...	...	...	...
7 Public <sup>a</sup>	20,352	...	...	...	...
8 Tax exempt	27,193	2,999	30,192	16,667	13,525
9 Steam railroads	5,582	5,350	10,932	...	...
10 Transit	1,170	1,169	2,339	...	...
11 Telephone	2,762	3,785	6,547	...	...
12 Electric light & power	5,011	4,630	9,641	...	...
13 Other public utilities <sup>b</sup>	3,000	1,463	4,463	...	...
14 Total public utilities	17,525	16,397	33,922	18,533	15,389
15 Total <sup>a</sup>	119,334	100,054	219,388	177,169	42,219

<sup>a</sup> Excludes construction of streets and roads, \$18,684 million.

<sup>b</sup> Includes pipe lines, gas, and telegraph and cables.

#### COLUMN 1

LINE 1: Sum of annual estimates of nonresidential construction (see the notes to Table I 7, col. 2).

LINES 2, 3, AND 6: 'Other private construction' (Table I 7, col. 2) minus agricultural construction (an unpublished series underlying the former) yields a total which is distributed among mining and manufacturing, other industrial, and nonprofit institutions. This distribution is based upon the percentage distribution of expenditures on plant for mining and manufacturing, commercial and miscellaneous, and buildings for nonprofit institutions (George Terborgh, 'Estimated Expenditures for New Durable Goods, 1919-1938', *Federal Reserve Bulletin*, Sept. 1939 and Feb. 1940). The series for mining and manufacturing, however, is adjusted to exclude mining development outlays.

'Other industrial' (line 3) covers all types of private property other than railroads, electric light and power, telephones, electric railways and buses, pipe lines, gas, telegraph and cables, mining and manufacturing, and agriculture. It therefore includes miscellaneous public utilities not estimated separately below.

LINE 4: Table I 7, col. 1 contains the annual estimates of which this item is the sum.

LINE 5: Sum of lines 1-4.

LINE 7: From annual estimates of total public construction (Table I 7, col. 5) the value of construction of streets and roads (Lowell J. Chawner, *Construction Activity in the United States* and the *Survey of Current Business*, June 1943 and June 1944), was deducted.

LINE 8: Sum of lines 6 and 7.

LINES 9-13: The allocation of the total public utility estimate (see the notes to line 14) to the minor public utility groups is based on the percentage distribution of Terborgh's estimates for those groups (see the notes to lines 2, 3, and 6 for the source of Terborgh's data).

LINE 14: Table I 7, col. 3 contains the annual estimates of which this item is the sum.

LINE 15: Sum of lines 5, 8, and 14.

#### COLUMN 2

LINE 1: Sum of annual estimates prepared by the BAE (*Income Parity for Agriculture*, Part II, Sec. 3). To allow for business use, it includes 40 percent of expenditures on automobiles.

LINES 2 AND 3: Total expenditures on mining and manufacturing and other industrial business equipment is the difference between total expenditures on equipment (the sum of annual estimates in Table I 6, col. 2) and expenditures on agriculture, public utility, and tax exempt equipment. Agricultural expenditures are from line 1; public utility and tax exempt expenditures, from lines 14 and 8, respectively. The residual is apportioned between the two groups by the percentage distribution of the similar total from Terborgh's data (see the notes to col. 1, lines 2, 3, and 6 for source).

LINE 5: Sum of lines 1-3.

LINE 8: Expenditures on equipment are derived for 1923-33 from the estimates of the value of equipment in the Notre Dame report (*A Study of the Physical Assets, Sometimes Called Wealth, of the United States*). Since the data are on a cost basis and no allowance is made for depreciation, according to that report, the increase from year to year reflects actual expenditures. From 1923 the estimate is extrapolated back to 1919 with expenditures on improvements as index; from 1933 it is extrapolated forward to 1938 by the same index.

LINES 9-13: The data are taken directly from Terborgh's tables (see the notes to col. 1, lines 2, 3, and 6 for source).

LINE 14: Sum of lines 9-13.

LINE 15: Sum of lines 5, 8, and 14.

#### COLUMN 3

Sum of col. 1 and 2.

#### COLUMN 4

For the coverage of these estimates and comparability with the data on expenditures see the notes to Table IV 9, col. 4.

LINE 1: Sum of annual estimates prepared by the BAE (*Income Parity for Agriculture*, Part II, Sec. 3 and 5). To allow for business use, it includes 40 percent of depreciation on automobiles.

LINES 2, 3, AND 14: The total for these groups, agriculture, and residential property is derived from the annual series' (Table I 16, col. 1). The residual after deducting agriculture (line 1) and residential (line 4) is distributed among the three groups on the basis of the industrial distribution of depreciation and depletion charges, reported for 1919-35 in terms of accounting measures by Fabricant in *Capital Consumption and Adjustment*, Tables 17 and III, and estimated by similar methods for 1936-38. For their conversion to charges in 1929 prices see the notes to Table IV 9, col. 4. The annual data in 1929 prices are multiplied by Fabricant's price index (*ibid.*, Table 32, for 1919-35, and estimated by similar methods for 1936-38) to yield the current price series by which the total is distributed.

LINE 4: Sum of the annual data underlying Table I 16, col. 1.

Table IV 8 concluded:

COLUMN 4 (concl.)

LINE 5: Sum of lines 1-4.

LINE 8: Sum of the annual data in Table I 16, col. 2.

LINE 15: Sum of lines 5, 8, and 14.

COLUMN 5

Col. 3 minus col. 4.

TABLE IV 9

Value of Additions to Improvements and Equipment, Gross and Net  
1929 Prices, 1919-1938 (millions of dollars)

	IMPROVE- MENTS Gross (1)	EQUIP- MENT Gross (2)	IMPROVE- MENTS & EQUIP- MENT Gross (3)	CONSUMP- TION OF IMPROVE- MENTS & EQUIP- MENT (4)	IMPROVE- MENTS & EQUIP- MENT Net (5)
1 Agriculture	3,666	11,091	14,757	17,603	-2,846
2 Mining & manufacturing	8,170	39,854	48,024	54,011	-5,987
3 Other industrial	12,673	31,830	44,503	30,652	13,851
4 Residential	52,255	...	52,255	45,478	6,777
5 Total taxable, excl. public utilities	76,764	82,775	159,539	147,744	11,795
6 Nonprofit institutions	7,003	...	...	...	...
7 Public <sup>a</sup>	20,586	...	...	...	...
8 Tax exempt <sup>a</sup>	27,589	3,050	30,639	17,213	13,426
9 Steam railroads	5,658	5,327	10,985	...	...
10 Transit	1,181	1,193	2,374	...	...
11 Telephone	2,799	3,946	6,745	...	...
12 Electric light & power	5,046	4,739	9,785	...	...
13 Other public utilities <sup>b</sup>	3,035	1,491	4,526	...	...
14 Total public utilities	17,719	16,696	34,415	19,476	14,939
15 Total <sup>a</sup>	122,072	102,521	224,593	184,433	40,160

<sup>a</sup> Excludes construction of streets and roads, \$18,993 million.

<sup>b</sup> Includes pipe lines, gas, and telegraph and cables.

COLUMN 1

The preliminary totals for 1919-38 are the sum of the annual data converted to 1929 prices. The final estimates are then derived by the methods described for the current price data. For the methods and the sources of the annual data in current prices see the notes to Table IV 8, col. 1; for the price indexes, see the following notes.

LINES 1, 2, 3, AND 6: The price index is that implicit in 'other private construction' and is derived from Tables I 7 and I 8, col. 2.

LINE 4: The price index is derived from Tables I 7 and I 8, col. 1.

LINE 7: The price index is the Aberthaw index of construction costs (see the notes to Table I 8, col. 2 for source), assumed applicable to public building.

LINES 9-14: The price index is that implicit in public utility construction, and is derived from Tables I 7 and I 8, col. 3.

## COLUMN 2

Here also the preliminary totals for 1919-38 are the sum of the annual data converted to 1929 prices. The final estimates are then derived by the methods described for the current price data. For the methods and the sources of the annual data in current prices see the notes to Table IV 8, col. 2. The price index is Shaw's for producer durable goods, adjusted by minor groups to the 1929 base.

## COLUMN 3

Sum of col. 1 and 2.

## COLUMN 4

LINE 1: The annual series in current prices (see the notes to Table IV 8, col. 4, line 1 for source) is converted to 1929 prices by Fabricant's current price index for business capital goods (*Capital Consumption and Adjustment*, Table 32, for 1919-35, and estimated by similar methods for 1936-38).

LINES 2, 3, AND 14: Annual estimates of capital consumption for business use underlie the series in Table I 16, col. 6, but they include a series on agricultural capital consumption. To distribute the total for business use the residual after subtracting line 1 is used.

Accounting measures of depreciation and depletion, given by Fabricant for 1919-35 for mining and manufacturing, other industrial, and public utilities (*Capital Consumption and Adjustment*), are extrapolated to 1936-38 by *Statistics of Income* corporate data. The annual data are converted to 1929 prices by Fabricant's index of prices underlying depreciation charges (*op. cit.*, Table 35, and unpublished estimates for 1936-38 prepared by similar methods). The percentage distribution of the resultant totals for 1919-38 is used in apportioning total consumption among the industrial groups.

Line 3 includes forestry and fishing, service, finance and real estate, construction, trade, and miscellaneous. Differing in coverage from the expenditure data in that it excludes miscellaneous public utilities not estimated separately, it results in an overestimate of the net change in the value of improvements and equipment for this group. Line 14, therefore, suffers from the same lack of comparability between expenditures and consumption.

LINE 4: Sum of annual estimates underlying the series in Table I 16, col. 6.

LINE 5: Sum of lines 1-4.

LINE 8: Sum of annual estimates in Table I 16, col. 7. The data are not comparable with the expenditure estimates since they cover government property only. No estimates are available for consumption of other tax exempt property.

LINE 15: Sum of lines 5, 8, and 14.

## COLUMN 5

Col. 3 minus col. 4.

TABLE IV 10

Growth of Reproducible Wealth other than Household  
Selected Dates, 1880-1939, 1929 Prices (millions of dollars)

	REAL ESTATE IMPROVEMENTS & EQUIPMENT (1)	(2)	INVENTORIES (3)	BALANCE OF FOREIGN CLAIMS (4)	TOTAL REPRODUCIBLE WEALTH (5)	(6)
A BASED ON WEALTH ESTIMATES						
1 June 1, 1880	32,190	31,685	11,399	-1,600	41,989	41,484
2 June 1, 1890	60,279	58,644	16,766	-4,800	72,245	70,610
3 June 1, 1900	88,485	87,922	20,963	-4,800	104,648	104,085
4 Dec. 31, 1912	154,397	156,644	29,710	-5,000	179,107	181,354
5 Dec. 31, 1922	158,100	168,423	42,515	5,000	205,615	215,938
B BASED ON CAPITAL FORMATION DATA						
6 Jan. 1, 1879	29,968		10,554	-1,700	38,822	
7 Jan. 1, 1889	51,157		16,188	-4,700	62,645	
8 Jan. 1, 1899	86,511		20,073	-5,500	101,084	
9 Jan. 1, 1909	132,064		26,063	-5,700	152,427	
10 Jan. 1, 1919	177,299		35,201	2,400	214,900	
11 Jan. 1, 1929	227,744		47,211	8,000	282,955	
12 Jan. 1, 1939	236,454		46,528	4,600	287,582	

## COLUMN 1

LINES 1-5: Table IV 5, line 19, plus Table IV 6, line 18.

LINE 6: The value of real estate improvements and equipment is the difference between their estimated values on June 1, 1880 and the flow of each from January 1, 1879 to June 1, 1880, derived by applying to the flow for the decade 1879-88 (given in the form of annual averages in Table II 14, col. 2 and 5) the ratio of the output in 1879 plus one-half the output in 1880 to the total output in 1879-88. All data are in 1929 prices.

LINES 7-12: The sum of line 6 and the flow of producer durables and net construction (Table II 15, col. 6 and 7).

## COLUMN 2

LINES 1-5: Table IV 5, line 38, plus Table IV 6, line 36.

## COLUMN 3

LINE 1: The value of inventories on June 1, 1880, in current prices, was derived from the wealth data (*Estimated National Wealth*, Table 3). From the total for "Livestock, whether on or off farms, and farming tools and machinery" the value of agricultural equipment (Table IV 3) was subtracted to yield the value of livestock. The value of mining inventories had already been computed (Table IV 2). The Census of Wealth includes "three-quarters of the annual product of agriculture and manufactures and of the annual importation of foreign goods, assumed to be the average supply in the hands of producers or dealers". We reduced this figure one-third, assuming one-half the value of product to be the inventory figure. Finally, we took the value of specie as reported.

Each of these four components of inventories was then converted to 1929 prices. The price index for livestock is based on the weighted average of the price per head of milk cows, other cattle, hogs, sheep, horses, and mules. Averages of the January 1, 1880 and January 1, 1881 data were taken to represent June 1880. The price index for the mining and other commodity inventories is the BLS index of wholesale prices. The value of specie reported was divided into gold and silver on the basis of figures in the *Annual Report* of the Director of the Mint. The value of gold in 1929 prices is the same as in current prices. For silver the price index

is based on the price per fine ounce in New York. The unallocable balance is assumed to be the same in 1929 prices as in current. The value of inventories on June 1, 1880, in 1929 prices, is the sum of the four items.

LINES 2-5: The sum of line 1 and the net change in inventories (Table II 15, col. 8), the annual averages for the decades used being those mentioned in Section 6 of the text.

LINE 6: For January 1, 1879 the value of inventories, in 1929 prices, was estimated by subtracting from the June 1, 1880 figure 1.5 times the annual average of the change in inventories for the 1879-88 decade (Table II 15, col. 8).

LINES 7-12: The sum of line 6 and the net change in inventories (Table II 15, col. 8).

#### COLUMN 4

Algebraic totals of foreign investments in the United States (—) and of United States investments abroad (+). The net balance is estimated in current prices, then converted to 1929 prices by the BLS wholesale price index. For the years beginning with 1919, the approximations to the net balance in current prices are based upon the estimates in the *United States in the World Economy* (Department of Commerce, Economic Series 23, Washington, D. C., 1943, especially Table 13, p. 123). The estimates in this publication for the end of 1919, 1930, 1933, and 1939 are shifted to the dates in Table IV 10 with the help of the annual balances on all capital transactions (*ibid.*, Table I, following p. 216), adjusted to check with the cumulated differences in the net balance of capital indebtedness. For the years prior to 1919, the approximations are based upon various estimates, chiefly those derived or cited in the Bullock, Williams, and Tucker study (*Review of Economic Statistics*, July 1919) as well as in Cleona Lewis, *America's Stake in International Investments* (Brookings Institution, 1938, especially Ch. XXI, pp. 439-56).

The figures on the net balance in current prices are (in billions of dollars): 1879 and 1880, 1.1; 1889 and 1890, 2.8; 1899 and 1900, 2.8; 1909, 3.9; 1912, 3.7; 1919, 3.4; 1922, 5.4; 1929, 8.0; 1939, 3.7. In deriving the figures for the years before 1899 American investment abroad was set roughly at \$0.1 billion in 1879 and 1880 and at \$0.2 billion in 1889 and 1890.

#### COLUMN 5

Sum of col. 1, 3, and 4.

#### COLUMN 6

LINES 1-5: Sum of col. 2, 3, and 4.



**TABLE IV 11**  
**Value of Real Estate Improvements and Equipment**  
**Selected Dates, 1880-1939, 1929 Prices (millions of dollars)**

	REAL ESTATE IMPROVEMENTS		EQUIPMENT		TOTAL	
	(1)	(2)	(3)	(4)	(5)	(6)
<b>A BASED ON WEALTH ESTIMATES</b>						
1 June 1, 1880	27,480	27,059	4,710	4,626	32,190	31,685
2 June 1, 1890	48,642	47,109	11,637	11,535	60,279	58,644
3 June 1, 1900	68,510	67,595	19,975	20,327	88,485	87,922
4 Dec. 31, 1912	116,329	118,240	38,068	38,404	154,397	156,644
5 Dec. 31, 1922	117,405	127,899	40,695	40,524	158,100	168,423
<b>B BASED ON CAPITAL FORMATION DATA</b>						
6 Jan. 1, 1879	25,766		4,202		29,968	
7 Jan. 1, 1889	42,470		8,687		51,157	
8 Jan. 1, 1899	73,866		12,645		86,511	
9 Jan. 1, 1909	109,052		23,012		132,064	
10 Jan. 1, 1919	140,725		36,574		177,299	
11 Jan. 1, 1929	175,164		52,580		227,744	
12 Jan. 1, 1939	180,864		55,590		236,454	

**COLUMN 1**

LINES 1-5: Table IV 5, line 19.

LINES 6-12: See the notes to Table IV 10, col. 1, lines 6-12.

**COLUMN 2**

LINES 1-5: Table IV 5, line 38.

**COLUMN 3**

LINES 1-5: Table IV 6, line 18.

LINES 6-12: See the notes to Table IV 10, col. 1, lines 6-12.

**COLUMN 4**

LINES 1-5: Table IV 6, line 36.

**COLUMN 5**

Sum of col. 1 and 3.

**COLUMN 6**

Sum of col. 2 and 4.

TABLE IV 12

Value of Real Estate Improvements and Equipment, by Industry  
Selected Dates, 1880-1938, 1929 Prices (millions of dollars)

	J U N E 1			D E C E M B E R 3 1		
	1880 (1)	1890 (2)	1900 (3)	1912 (4)	1922 (5)	1938 (6)
<b>A ADJUSTED BY CURRENT COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>						
1 Agriculture	5,533	7,486	9,975	15,815	14,627	8,631
2 Mining	421	834	1,626	3,184	3,825	
3 Manufacturing	1,827	5,019	8,957	18,657	30,242	
4 Mining & manufacturing	2,248	5,853	10,583	21,841	34,067	25,995
5 Steam railroads	8,266	14,307	19,236	27,794	26,056	
6 Street railways	264	746	3,202	8,372	6,608	
7 Pullman, express, etc.	65	140	203	218	542	
8 Telephone	34	142	867	2,058	2,687	
9 Telegraph	166	304	351	424	439	
10 Shipping & canals	579	835	1,225	2,332	1,893	
11 Electric light & power	0	141	804	3,729	5,092	
12 Waterworks	491	514	577	561	536	
13 Irrigation	63	137	230	699	817	
14 Pipe lines	25	96	337	695	743	
15 Other industrial	4,743	9,749	12,081	18,596	15,394	25,826
16 Residential	7,964	16,271	22,522	39,685	34,603	40,682
17 Tax exempt	1,749	3,558	6,292	11,578	13,996	25,127
18 Total	32,190	60,279	88,485	154,397	158,100	184,261
<i>Major categories</i>						
19 Private industrial (1 + 4 + 15)	12,524	23,088	32,639	56,252	64,088	60,452
20 Residential (16)	7,964	16,271	22,522	39,685	34,603	40,682
20a Total private (19 + 20)	20,488	39,359	55,161	95,937	98,691	101,134
21 Public utilities (5 through 14)	9,953	17,362	27,032	46,882	45,413	58,000
22 Tax exempt (17)	1,749	3,558	6,292	11,578	13,996	25,127
<i>Major business categories</i>						
23 Agriculture (1)	5,533	7,486	9,975	15,815	14,627	8,631
24 Electric light & power (11)	0	141	804	3,729	5,092	
25 Mining & manufacturing (4)	2,248	5,853	10,583	21,841	34,067	25,995
26 Transportation (5, 6, 7, 10, & 14)	9,199	16,124	24,203	39,411	35,842	
27 Communication (8 & 9)	200	446	1,218	2,482	3,126	
28 Other industrial (12, 13, 15)	5,297	10,400	12,888	19,856	16,747	
29 Total	22,477	40,450	59,671	103,134	109,501	118,452

Table IV 12 concluded:

	J U N E 1			D E C E M B E R 3 1		
	1880 (1)	1890 (2)	1900 (3)	1912 (4)	1922 (5)	1931 (6)
<b>B ADJUSTED BY AN AVERAGE OF CURRENT AND PAST COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>						
1 Agriculture	5,374	7,108	9,839	16,264	16,846	11,575
2 Mining	421	834	1,626	3,184	3,825	
3 Manufacturing	1,827	5,019	8,957	18,657	30,242	
4 Mining & manufacturing	2,248	5,853	10,583	21,841	34,067	25,992
5 Steam railroads	8,266	14,307	19,236	27,794	26,056	
6 Street railways	264	746	3,202	8,372	6,608	
7 Pullman, express, etc.	65	140	203	218	542	
8 Telephone	34	142	867	2,058	2,687	
9 Telegraph	166	304	351	424	439	
10 Shipping & canals	570	826	1,261	2,376	1,874	
11 Electric light & power	0	141	804	3,729	5,092	
12 Waterworks	491	514	577	561	536	
13 Irrigation	63	137	230	699	817	
14 Pipe lines	25	96	337	695	743	
15 Other industrial	4,590	9,322	12,087	19,092	16,954	28,550
16 Residential	7,780	15,450	22,053	40,943	41,166	40,682
17 Tax exempt	1,749	3,558	6,292	11,578	13,996	25,127
18 Total	31,685	58,644	87,922	156,644	168,423	190,075
<i>Major categories</i>						
19 Private industrial (1 + 4 + 15)	12,212	22,283	32,509	57,197	67,867	66,120
20 Residential (16)	7,780	15,450	22,053	40,943	41,166	40,682
20a Total private (19 + 20)	19,992	37,733	54,562	98,140	109,033	106,802
21 Public utilities (5 through 14)	9,944	17,353	27,068	46,926	45,394	58,142
22 Tax exempt (17)	1,749	3,558	6,292	11,578	13,996	25,127
<i>Major business categories</i>						
23 Agriculture (1)	5,374	7,108	9,839	16,264	16,846	11,575
24 Electric light & power (11)	0	141	804	3,729	5,092	
25 Mining & manufacturing (4)	2,248	5,853	10,583	21,841	34,067	25,992
26 Transportation (5, 6, 7, 10, & 14)	9,190	16,115	24,239	39,455	35,823	
27 Communication (8 & 9)	200	446	1,218	2,482	3,126	
28 Other industrial (12, 13, 15)	5,144	9,973	12,894	20,352	18,307	
29 Total	22,156	39,636	59,577	104,123	113,261	124,262

## COLUMNS 1-5

LINES 1-18, Parts A &amp; B: Sum of Tables IV 5 and IV 6, col. 1-5 for the respective industries.

## COLUMN 6

LINES 1-18: Sum of Table IV 7, col. 3 and 6, and Table IV 9, col. 5 for the respective industries.

TABLE IV 13

Increase in Value of Real Estate Improvements and Equipment,  
by Industry, Selected Dates, 1880-1939, 1929 Prices  
(millions of dollars)

	June 1, 1880 to June 1, 1900 (1)	June 1, 1900 to Jan. 1, 1919 (2)	June 1, 1880 to Jan. 1, 1919 (3)	Jan. 1, 1919 to Jan. 1, 1939 (4)	June 1, 1880 to Jan. 1, 1939 (5)
<b>A ADJUSTED BY CURRENT COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>					
1 Agriculture	4,442	1,502	5,944	-2,846	3,098
2 Mining	1,205	2,504	3,709		
3 Manufacturing	7,130	18,895	26,025		
4 Mining & manufacturing	8,335	21,399	29,734	-5,987	23,747
5 Steam railroads	10,970	5,589	16,559		
6 Street railways	2,938	4,368	7,306		
7 Pullman, express, etc.	138	130	268		
8 Telephone	833	1,340	2,173		
9 Telegraph	185	27	212		
10 Shipping & canals	646	445	1,091		
11 Electric light & power	804	3,346	4,150		
12 Waterworks	86	-44	42		
13 Irrigation	167	530	697		
14 Pipe lines	312	298	610		
15 Other industrial	7,338	-106	7,232	13,851	21,083
16 Residential	14,558	11,383	25,941	6,777	32,718
17 Tax exempt	4,543	5,409	9,952	13,426	23,378
18 Total	56,295	55,616	111,911	40,160	152,071
<i>Major categories</i>					
19 Private industrial (1 + 4 + 15)	20,115	22,795	42,910	5,018	47,928
20 Residential (16)	14,558	11,383	25,941	6,777	32,718
20a Total private (19 + 20)	34,673	34,178	68,851	11,795	80,646
21 Public utilities (5 through 14)	17,079	16,029	33,108	14,939	48,047
22 Tax exempt (17)	4,543	5,409	9,952	13,426	23,378
<i>Major business categories</i>					
23 Agriculture (1)	4,442	1,502	5,944	-2,846	3,098
24 Electric light & power (11)	804	3,346	4,150		
25 Mining & manufacturing (4)	8,335	21,399	29,734	-5,987	23,747
26 Transportation (5, 6, 7, 10, & 14)	15,004	10,830	25,834		
27 Communication (8 & 9)	1,018	1,367	2,385		
28 Other industrial (12, 13, 15)	7,591	380	7,971		
29 Total	37,194	38,824	76,018	19,957	95,975

Table IV 13 concluded:

	June 1, 1880 to June 1, 1900 (1)	June 1, 1900 to Jan. 1, 1919 (2)	June 1, 1880 to Jan. 1, 1919 (3)	Jan. 1, 1919 to 1939 (4)	June 1, 1880 to Jan. 1, 1939 (5)
<b>B ADJUSTED BY AN AVERAGE OF CURRENT AND PAST COST (FOR MARKET VALUATION) AND PAST COST (FOR BOOK VALUATION)</b>					
1 Agriculture	4,465	4,582	9,047	-2,846	6,201
2 Mining	1,205	2,504	3,709		
3 Manufacturing	7,130	18,895	26,025		
4 Mining & manufacturing	8,335	21,399	29,734	-5,987	23,747
5 Steam railroads	10,970	5,589	16,559		
6 Street railways	2,938	4,368	7,306		
7 Pullman, express, etc.	138	130	268		
8 Telephone	833	1,340	2,173		
9 Telegraph	185	27	212		
10 Shipping & canals	691	551	1,242		
11 Electric light & power	804	3,346	4,150		
12 Waterworks	86	-44	42		
13 Irrigation	167	530	697		
14 Pipe lines	312	298	610		
15 Other industrial	7,497	2,612	10,109	13,851	23,960
16 Residential	14,273	11,852	26,125	6,777	32,902
17 Tax exempt	4,543	5,409	9,952	13,426	23,378
18 Total	56,237	61,989	118,226	40,160	158,386
<i>Major categories</i>					
19 Private industrial (1 + 4 + 15)	20,297	28,593	48,890	5,018	53,908
20 Residential (16)	14,273	11,852	26,125	6,777	32,902
20a Total private (10 + 20)	34,570	40,445	75,015	11,795	86,810
21 Public utilities (5 through 14)	17,124	16,135	33,259	14,939	48,198
22 Tax exempt (17)	4,543	5,409	9,952	13,426	23,378
<i>Major business categories</i>					
23 Agriculture (1)	4,465	4,582	9,047	-2,846	6,201
24 Electric light & power (11)	804	3,346	4,150		
25 Mining & manufacturing (4)	8,335	21,399	29,734	-5,987	23,747
26 Transportation (5, 6, 7, 10, & 14)	15,049	10,936	25,985		
27 Communication (8 & 9)	1,018	1,367	2,385		
28 Other industrial (12, 13, 15)	7,750	3,098	10,848		
29 Total	37,421	44,728	82,149	19,957	102,106

## COLUMN 1

LINES 1-18, Parts A & B: Difference between col. 3 and col. 1 of Table IV 12 for the respective industries.

## COLUMN 2

LINES 1-18: Difference between the sum of col. 3 and 6 of Table IV 7 and col. 3 of Table IV 12 for the respective industries.

## COLUMN 3

Sum of col. 1 and 2.

## COLUMN 4

LINES 1-18, 21: Table IV 9, col. 5 for the respective industries.

## COLUMN 5

Sum of col. 3 and 4.

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