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CHAPTER 14

TELEGRAPHS¹

§ 14a. The Census Figures

The Telegraph industry was covered by the Census in 1907, 1912, and 1917, years admirably located so far as the period 1909 to 1918 is concerned and the figures are in a form so well adapted to the needs of this investigation that estimates for the Census years may be made with reasonable accuracy. The Census presents the figures for wireless telegraphs in a category separate from that dealing with land telegraphs and ocean cables, but all have been combined in the study here presented. Table 14A covers the Census data.

§ 14b. Disbursements to Stock and Bond Holders

The entries in Table 14A are presumably fairly close to the truth. The next problem is to interpolate estimates for the intercensal years. Most of the telegraph industry is in the hands of the Western Union and the Mackay Companies; hence it would seem an exceedingly simple matter to use their records for the purpose mentioned. As a matter of fact, accurate interpolation by this method is impossible. Some of the obstacles are as follows:

1. The Mackay Company is a holding company and it does not present a consolidated account or reports for most of its subsidiaries.
2. Much of the recorded business of both companies has apparently been excluded from the Census, the reason for the exclusion not being ascertainable, but presumably duplication in accounts has been discovered.
3. The accounts of the Mackay subsidiaries are not presented in sufficient detail to answer our purposes.
4. The fiscal years of the corporations do not correspond with the calendar years.

The net result is that the corporation reports and Census figures for the same years show no resemblance to each other. It has, however, been felt that the use of the corporation statistics, unsatisfactory as they are, will give slightly better results than would direct interpolations along smooth curves—hence the usual procedure has been followed, the criteria chosen being indicated in the tables. The reader is warned, however, against

¹ Mr. William A. Countryman of the Census Bureau has been kind enough to read over this report and offer valuable suggestions, most of which have been adopted.

TABLE 14A

**THE ESTIMATED VALUE PRODUCT IN THE CENSUS YEARS OF THE
TELEGRAPH INDUSTRY IN THE CONTINENTAL UNITED STATES**

Year	1907	1912	1917
Dividend Payments. ^a (Thousands).....	\$ 7,477	\$ 6,180	\$ 9,928
Interest Paid on Funded Debt. ^b (Thousands).....	2,653	2,769	2,584
Total Payments for Interest and Dividends (Thousands)	\$10,130	\$ 8,949	\$12,512
Receipts of Interest and Dividends from Other Corporations. ^c (Thousands).....	1,415	780	2,547
Interest and Dividend Payments Originating in the Telegraph Industry. (Thousands).....	\$ 8,715	\$ 8,169	\$ 9,965
Rent of Offices and Real Estate. ^d (Thousands).....	1,221	1,686	2,498
Total Disbursements to Property Owners. (Thousands)	\$ 9,936	\$ 9,855	\$12,463
Savings ^e of All Companies. ^a (Thousands).....	2,173	209	8,625
Total Share of Property. (Thousands)	\$12,109	\$10,064	\$21,088
Wages and Salaries Paid. ^f (Thousands).....	\$17,890	\$25,609	\$40,105
Estimated Other Compensation to Employees. ^g (Thousands).....	10 ^h	50 ^h	330 ^h
Total Share of Employees. (Thousands)	\$17,900	\$25,659	\$40,435
Average Number of Employees Actually at Work.....	23,210	38,253	52,160
Average Full-time Annual Compensation per Employee	\$635	\$671	\$775
SUMMARY.			
Total Share of Property. (Thousands).....	\$12,109	\$10,064	\$21,088
Total Share of Employees. (Thousands).....	17,900	25,659	40,435
Total Value Product of Industry. (Thousands)	\$30,009	\$35,723	\$61,523
Per Cent of Value Product Going to Employees.....	59.6	71.8	65.6

T. = United States Census of Telegraphs.

^a T. 1917, pp. 16, 23, and 25.

^b T. 1917, pp. 16, 23, and 25; a study of the income statements of the Western Union and Mackay Companies shows that practically the entire amount recorded by the Census as "Interest" must be bond interest. The items here given fail to include the mortgage interest paid by the wireless companies. The exact amounts are unknown but they are too small to be of moment.

^c T. 1917, pp. 16, and 25. The consolidated balance sheet shows such large holdings of securities that apparently the Census item "Income from other sources" must consist primarily of bond interest and dividends; see T. 1917, pp. 22-23. This item is not reported for wireless companies; hence it is assumed to be negligible and is omitted from consideration.

^d T. 1917, pp. 17 and 23. A small item was added in each year for estimated rent paid by wireless stations. The estimates were 60, 55, and 63 thousands of dollars for the respective Census years beginning with 1907. The estimates were based on assumed annual rents per station of \$500 in 1907, \$750 in 1912, and \$1,000 in 1917. The final estimate of total gross rents was multiplied by 0.7 in order to obtain a figure for net rents, the 0.3 being allowed for repairs, depreciation, etc.

^e Commonly called "Corporate surplus."

^f T. 1917, pp. 14, 22, and 25.

TABLE 14A NOTES—Continued

^a Pensions, compensation for injuries, etc.

^b Pure guesses.

^c An organized system of benefits was initiated by the Western Union Co. in 1916; for amount, see Standard Corporation Record card for 1920, No. W1.

attaching too great importance to apparent fluctuations from year to year as, in some instances, such variations in the figures are doubtless due wholly to purely accidental errors. Were it not that the data are all tied

TABLE 14B

THE ESTIMATED GROSS DISBURSEMENTS IN THE FORM OF DIVIDENDS AND INTEREST ON THE FUNDED DEBT MADE BY ALL TELEGRAPH CORPORATIONS IN THE CONTINENTAL UNITED STATES

A	Dividend payments in thousands of dollars				Interest payments in thousands of dollars				Dividends plus interest (Thousands of dollars) E + I
	B	C	D	E	F	G	H	I	
Calendar year	Census figures, all companies ^a	Combined dividends of Western Union and Mackay Cos. ^{ba}	Ratio of B to C	Estimated dividends of all companies D × C	Census figures, all companies ^a	Interest paid by Western Union and the Commercial Cable Cos. ^{ba}	Ratio of F to G	Estimated interest on funded debt of all companies G × H	
1907	7,477	6,947	1.076 ^d	7,477 ^a	2,653	9,576	.2770 ^d	2,653 ^a	10,130
1909		6,623	.933 ^e	6,180		9,710	.2861 ^e	2,778	8,958
1910		7,059	.894 ^e	6,310		9,711	.2887 ^e	2,804	9,114
1911		7,060	.884 ^e	6,240		9,700	.2901 ^e	2,814	9,054
1912	6,180	7,061	.875 ^d	6,180 ^a	2,769	9,503	.2914 ^d	2,769 ^a	8,949
1913		7,061	.872 ^e	6,160		9,337	.2900 ^e	2,708	8,868
1914		8,058	.872 ^e	7,026		9,337	.2870 ^e	2,680	9,706
1915		9,055	.871 ^e	7,887		9,336	.2823 ^e	2,636	10,523
1916		10,054	.870 ^e	8,747		9,332	.2775 ^e	2,590	11,337
1917	9,928	11,407	.870 ^d	9,928 ^a	2,584	9,332	.2769 ^d	2,584 ^a	12,512
1918		11,371	.868 ^e	9,865		9,332	.2760 ^e	2,576	12,441
1919		11,338	.867 ^e	9,835		9,332	.2754 ^e	2,570	12,405

^a See Table 14A. The Census apparently excludes interest charges on bonds secured by foreign cable lines and dividends paid to foreign investors.

^b Figures for fiscal years 1907 to 1912 inclusive adjusted to calendar years by averaging. Data from Poor's and Moody's *Manuals of Public Utilities*.

^c The Commercial Cable Co. is a subsidiary of the Mackay Cos.

^d Computed.

^e Read from a smooth curve.

to the Census at five year intervals, the whole study might well be regarded as practically worthless. As it is, it cannot well go far astray in the relatively brief spaces of time intervening between Census years.

Not all of the payments to stock and bond holders are made from income

originating in the Telegraph field, for Telegraph Companies hold many income bearing securities of outside concerns. Income derived from these securities must be deducted, since, according to our plan of operation, it is assigned to the field in which it originates and must not be duplicated. Some of these receipts may represent merely intercorporate payments

TABLE 14C

THE ESTIMATED NET DISBURSEMENTS OF DIVIDENDS AND INTEREST ON THE FUNDED DEBT MADE BY ALL TELEGRAPH CORPORATIONS IN THE CONTINENTAL UNITED STATES

A	B	C	D	E	F	G
Calendar year	Receipts from dividends and bond interest of other corporations in Census years ^a (Thousands)	Income of Western Union Co. from loans and investments (Thousands)	Ratio of B to C	Estimated income of all companies from dividends and bond interest (Thousands) C × D	Gross dividends and interest on funded debt paid ^f (Thousands)	Payments of dividends and interest on funded debt originating in telegraph industry (Thousands) F — E
1907.....	\$1,415	\$1,460 ^c	.97 ^d	\$1,415	\$10,130	\$8,715
1909.....		1,640 ^c	.80 ^e	1,311	8,958	7,647
1910.....		1,408 ^b	.75 ^e	1,055	9,114	8,059
1911.....		1,503 ^b	.70 ^e	1,051	9,054	8,003
1912.....	780	1,182 ^b	.66 ^d	780	8,949	8,169
1913.....		1,116 ^b	.73 ^e	815	8,868	8,053
1914.....		1,023 ^b	.93 ^e	952	9,706	8,754
1915.....		1,304 ^b	1.30 ^e	1,697	10,523	8,826
1916.....		1,702 ^b	1.60 ^e	2,725	11,337	8,612
1917.....	2,547	1,485 ^b	1.72 ^d	2,547	12,512	9,965
1918.....		1,391 ^b	1.80	2,510	12,441	9,931
1919.....		1,607 ^b	1.86 ^e	2,993	12,405	9,412

^a See Table 14A.

^b Moody's *Manual of Public Utilities* for 1920, pp. 1130-1132.

^c Assumed that ratio of this income to that of 1910 is the same as the ratio of net earnings for the same years—data are missing.

^d Computed.

^e Read from a smooth curve.

^f See Table 14B.

within the industry. Such payments, of course, must be eliminated. Table 14C represents an attempt to get rid of all duplication and arrive at the actual net disbursements made in the form of interest and dividends.

To the net disbursements in the form of dividends and interest must be added the rents paid for offices and real estate if we are to arrive at the

total net payments going to individuals who have property claims against the industry. Rents have been assumed to vary roughly in proportion to the gross revenues of the Western Union Company, the theory being that more business requires more office space and that gross revenues measure

TABLE 14D

THE ESTIMATED TOTAL DISBURSEMENTS TO ENTREPRENEURS AND OTHER PROPERTY OWNERS MADE BY THE TELEGRAPH INDUSTRY OF THE CONTINENTAL UNITED STATES

A	B	C	D	E	F	G
Calendar year	Rent of offices and real estate in Census years ^a (Thousands)	Gross earnings of Western Union Company ^b (Thousands)	Ratio of B to C	Estimated rent paid for offices (Thousands) C × D	Net payments of dividends and interest on funded debt ^c (Thousands)	Total disbursements to entrepreneurs and other property owners (Thousands) E + F
1907..	\$1,221	\$30,719	.0397 ^d	\$1,221 ^f	\$8,715	\$ 9,936
1909..		31,647	.0393 ^e	1,244	7,647	8,891
1910..		34,116	.0390 ^e	1,331	8,059	9,390
1911..		38,570	.0387 ^e	1,493	8,003	9,496
1912..	1,686	44,024	.0383 ^d	1,686 ^f	8,169	9,855
1913..		45,784	.0374 ^e	1,712	8,053	9,765
1914..		46,265	.0360 ^e	1,666	8,754	10,420
1915..		51,172	.0345 ^e	1,765	8,826	10,591
1916..		61,919	.0334 ^e	2,068	8,612	10,680
1917..	2,498	76,996	.0324 ^d	2,498 ^f	9,965	12,463
1918..		86,702 ^h	.0319 ^e	2,766	9,931	12,697
1919..		103,756 ^c	.0315 ^e	3,268	9,412	12,680

^a See Table 14A.

^b Amounts for fiscal years 1907-1912 averaged to obtain estimates for calendar years. Data derived from Poor's and Moody's *Manuals of Public Utilities*.

^c Data from card issued Jan. 17, 1921, by Standard Corporation Service.

^d Computed.

^e Read from smooth curve.

^f Census figures—see Table 14A.

^g See Table 14C.

^h Other income of \$1,391,128 subtracted from gross income as reported in *Statistical Abstract of U. S.* for 1919, p. 321. "Other Income" reported in Moody's *Manual of Public Utilities* for 1920, p. 1161.

the value of business done. It has also been assumed that 30 per cent of the gross rent is necessary to cover expenses of operating the buildings and allowances for depreciation, leaving only 70 per cent as net income from the investment in the buildings and land. The final estimates appear in Table 14D.

§ 14c. Corporate Savings

The estimates presented in the preceding tables, while probably inaccurate, nevertheless presumably approach the truth. No estimate is, however, complete if the corporate savings are left out. It may be true that these companies have saved much in addition to their normal surplus by charging improvements to operating expenses. Whether this possi-

TABLE 14E

THE ESTIMATED TOTAL SHARE OF THE ENTREPRENEURS AND OTHER PROPERTY OWNERS IN THE VALUE PRODUCT OF TELEGRAPH COMPANIES IN THE CONTINENTAL UNITED STATES, A CRUDE APPROXIMATION TO THE CORPORATE SAVINGS OF THESE COMPANIES BEING INCLUDED

Calendar year	Amounts in Thousands of Dollars				
	Corporate savings, as reported by the Census ^a	Reported surplus of Marconi, Mackay, and Western Union Companies ^b	Estimated corporate savings of all companies	Total disbursements of interest on funded debt, dividends and rent ^c	Total disbursements to propertied classes and corporate surplus (Sum of two preceding columns)
1907...	\$2,173	\$ 111	\$2,173 ^c	\$ 9,936	\$12,109
1909...		2,758	5,000 ^d	8,891	13,891
1910...		2,507	4,200 ^d	9,390	13,590
1911...		1,728	2,500 ^d	9,496	11,996
1912...	209	820	209 ^c	9,855	10,064
1913...		540	300 ^d	9,765	10,065
1914...		649	1,000 ^d	10,420	11,420
1915...		5,508	7,000 ^d	10,591	17,591
1916...		6,228	8,100 ^d	10,680	18,780
1917...	8,625	7,383 ^f	8,625 ^c	12,463	21,088
1918...		4,637 ^f	5,410 ^d	12,697	18,107
1919...		6,101 ^f	7,130 ^d	12,680	19,810

^a See Table 14A.

^b Compiled from the annual reports represented in Poor's and Moody's *Manuals of Public Utilities*. Amounts for fiscal years adjusted by averaging to obtain estimates for the calendar years.

^c Census figures—see Table 14A.

^d Crudely estimated by aid of a smooth curve.

^e See Table 14D.

^f Surplus of Western Union Co. only.

bility has been duly considered and guarded against in compiling the Census reports, is not known. It is certain, however, that the published corporation reports of surplus show no resemblance to the ones given by the Census. It has proved impossible, therefore, to interpolate the estimates

for the surplus according to the usual rules. The best that can be done with the data at hand is to adjust the figures roughly so that the principal fluctuations shown by the corporation reports are given consideration. These crude results appear in Table 14E.

§ 14d. Purchasing Power of Share of Property Owners and Entrepreneurs

The purchasing power of the income received by property owners is arrived at by dividing the number of dollars by an index of the average

TABLE 14F

THE PURCHASING POWER OF THAT PART OF THE INCOME DERIVED FROM THE TELEGRAPH INDUSTRY OF THE CONTINENTAL UNITED STATES DISBURSED TO ENTREPRENEURS AND OTHER PROPERTY OWNERS OR SAVED BY THE CORPORATIONS

(Amounts in Thousands of Dollars)

A	B	C	D	E	F	G
Calendar year	Disbursements to entrepreneurs and other property owners ^a	Index of prices of goods consumed by wealthy classes ^c	Purchasing power at prices of 1913 $B \div C$	Corporate savings ^b	Index of construction costs ^d	Constructive power of corporate savings at prices of 1913 $E \div F$
1907 ...	\$ 9,936			\$2,173	1.023	\$2,124
1909 ...	8,891	.973	\$ 9,138	5,000	.881	5,675
1910 ...	9,390	.988	9,504	4,200	.903	4,651
1911 ...	9,496	.995	9,544	2,500	.903	2,769
1912 ...	9,855	1.000	9,855	209	.982	213
1913 ...	9,765	1.000	9,765	300	1.000	300
1914 ...	10,420	1.010	10,317	1,000	.968	1,033
1915 ...	10,591	.996	10,634	7,000	1.059	6,610
1916 ...	10,680	1.074	9,944	8,100	1.336	6,063
1917 ...	12,463	1.198	10,403	8,625	1.495	5,769
1918 ...	12,697	1.364	9,309	5,410	1.525	3,548
1919 ...	12,680	1.628	7,789	7,130	1.607	4,437

^a See Table 14D; includes interest, dividends, and rents.

^b See Table 14E.

^c See Table 2E; represents families spending on the average, \$25,000 per annum.

^d Worked out by the statistical department of the American Telephone and Telegraph Co.

prices of commodities consumed by the well-to-do classes. This operation has been carried out and the results appear in Table 14F.

A glance at Table 14F makes it evident that the lean period for the owners of the telegraph industry was in 1912 and 1913. This was followed by a period of prosperity; although, in 1918, the share of the property owners again declined slightly, only to recover again in 1919.

§ 14e. The Number of Employees and Their Share in the Value Product

The corporate reports of the telegraph companies do not show either the number of employees or the amounts paid in wages. They do not even tell how many messages have been sent. It is, therefore, impossible to interpolate these quantities between the years in which we have Census data

TABLE 14G

THE ESTIMATED SHARE OF THE EMPLOYEES IN THE VALUE PRODUCT OF THE TELEGRAPH INDUSTRY OF THE CONTINENTAL UNITED STATES

A	B	C	D	E	F	G
Calendar year	Wages and salaries paid in Census years ^a (Thousands)	Total operating expenses of the Western Union Co. ^b (Thousands)	Ratio of B to C	Estimated total wages and salaries (Thousands) C × D	Estimated benefits paid to employees ^f (Thousands)	Total compensation of employees (Thousands) E + F
1907.	\$17,890	\$18,641	.960 <i>c</i>	\$17,890 <i>e</i>	\$ 10	\$17,900
1909.		24,904	.706 <i>d</i>	17,580	20	17,600
1910.		28,334	.673 <i>d</i>	19,070	30	19,100
1911.		33,063	.657 <i>d</i>	21,710	40	21,750
1912.	25,609	39,521	.648 <i>c</i>	25,609 <i>c</i>	50	25,659
1913.		42,327	.647 <i>d</i>	27,390	60	27,450
1914.		40,579	.645 <i>d</i>	26,200	70	26,270
1915.		40,973	.643 <i>d</i>	26,320	80	26,400
1916.		48,728	.642 <i>d</i>	31,260	330	31,590
1917.	40,105	62,783	.639 <i>c</i>	40,105 <i>e</i>	330	40,435
1918.		76,713	.639 <i>d</i>	49,000	330	49,330
1919.		78,646	.638 <i>d</i>	50,160	330	50,490

^a See Table 14A.

^b Figures for fiscal years 1907 to 1912 averaged to obtain estimates for calendar years; for data see Poor's and Moody's *Manuals of Public Utilities*.

^c Computed.

^d Read from a smooth curve.

^e Census figures—see Table 14A.

^f The Western Union Co. established a system of benefits in 1916. See Cards W1 and 2, of Standard Corporation Record Service. Before that date, payments were probably rather insignificant. The amounts entered for years previous to 1916 are pure guesses.

with any degree of precision. Since, however, an estimate must be made, recourse has been had to the assumptions that the wages are proportional to total operating expenses and that the number of employees varies in proportion to a combination of the total volume of business done, and the number of offices operated. This index is chosen because it is evident that the number of offices is a matter of fundamental moment in this con-

nection, and it seems reasonable to suppose that, in times of flush business, the companies would find it imperative to increase somewhat the average number of employees per office. The fact that the index maintains a fairly constant ratio to the Census figures seems to show that it has some merit. The attempt is made to measure the volume of business by dividing the gross revenues by an index representing the price of messages. No record has been found showing any changes in the rates for messages until March 31, 1919; hence, during the period 1909 to 1918, this price index has been assumed to be constant.

The application of these assumptions appears in Tables 14G and 14H.

TABLE 14H

THE ESTIMATED TOTAL ANNUAL VALUE PRODUCT OF THE TELEGRAPH INDUSTRY OF THE CONTINENTAL UNITED STATES AND THE PRIMARY DIVISION OF THIS PRODUCT

Calendar year	Values in thousands of dollars			Per cent of value product going to employees
	Total value product	Total compensation of employees ^a	Disbursements to property owners and corporate surplus ^b	
1907.....	\$30,009	\$17,900	\$12,109	59.6
1909.....	31,491	17,600	13,891	55.9
1910.....	32,690	19,100	13,590	58.4
1911.....	33,746	21,750	11,996	64.5
1912.....	35,723	25,659	10,064	71.8
1913.....	37,515	27,450	10,065	73.2
1914.....	37,690	26,270	11,420	69.7
1915.....	43,991	26,400	17,591	60.0
1916.....	50,370	31,590	18,780	62.7
1917.....	61,523	40,435	21,088	65.7
1918.....	67,437	49,330	18,107	73.1
1919.....	70,300	50,490	19,810	71.8

^a See Table 14G, Column G.

^b See Table 14E, last column.

The compilation of Table 14G makes it possible to ascertain what fraction of the total value product of the telegraph industry goes to compensate the employees for their efforts. The facts in this connection appear in Table 14H.

The general conclusion must be that, while the percentages have fluctuated violently, the employees since 1911, have tended to receive a greater and the property owners, a lesser share of the total value product than was the case during the period 1907 to 1911.

§ 14f. Average Annual Earnings of Employees

Tables 14I and 14J throw light on the changes that have occurred in the size of the average reward of employees in the telegraph industry.

TABLE 14I

THE ESTIMATED NUMBER OF PERSONS AT WORK FOR OR NORMALLY EMPLOYED BY THE TELEGRAPH COMPANIES OF THE CONTINENTAL UNITED STATES

A	B	C	D	E	F	G	H	I	J	K
Cal- endar year	Average number employed in Census years ^a	Gross operating revenues of Western Union Company ^b (Thou- sands)	Index of tele- graph rates ^c	Index of physical volume of business C D	Twice the number of Western Union Tele- graph offices ^f	Adjust- ment index for number of employees E + F	Ratio of B to G	Esti- mated number of em- ployees actually at work G × II	Fraction of number attached to industry who were actually working ^g	Estimated number of em- ployees attached to industry I ÷ J
1907	28,210	\$30,719	1.00	30,719	48,613	79,332	.3556 ^c	28,210	.976	28,800
1909		31,647	1.00	31,647	49,156	80,803	.3824 ^d	30,900	.964	32,050
1910		34,116	1.00	34,116	49,751	83,867	.3913 ^d	32,820	.964	34,050
1911		38,570	1.00	38,570	50,318	88,888	.3971 ^d	35,300	.967	36,500
1912	38,253	44,024	1.00	44,024	51,392	95,416	.4009 ^c	38,253	.968	39,500
1913		45,784	1.00	45,784	50,120	95,904	.4025 ^d	38,600	.950	40,650
1914		46,265	1.00	46,265	51,568	97,833	.4034 ^d	39,470	.943	41,850
1915		51,172	1.00	51,172	50,284	101,456	.4051 ^d	41,200	.933	44,150
1916		61,919	1.00	61,919	50,468	112,387	.4072 ^d	45,760	.975	46,920
1917	52,160	76,996	1.00	76,996	50,932	127,928	.4077 ^c	52,160	.979	53,300
1918		86,702	1.00	86,702	50,904	137,606	.4083 ^d	56,185	.971	57,870
1919		103,756	1.15	90,223	50,318	140,541	.4087 ^d	57,440	.980 ^h	58,600 ^h

^a Census figures—see Table 14A.

^b See Table 14D, Column C.

^c Computed.

^d Read from a smooth curve.

^e For origin, see text. Rates were raised 20 per cent on March 31, 1919.

^f *Statistical Abstract of the U. S.* and *Moody's Manual of Public Utilities.*

^g Estimated by means of a special study recorded in Table 2K.

^h Tentative estimate only.

It is evident that among the regular employees of every industry, there are, at any given time, a considerable number who are not at work. This being true, the average number at work is necessarily always considerably less than the number who depend on the industry for a livelihood. The Census records only the number actually at work. In the last columns of Table 14I, this item has been adjusted in a way intended to give an approximation to the number attached to the industry. The mode of adjustment used is described in § 2d.

Table 14J is devoted to an estimate of the average amount received annually by each employee commonly employed by telegraph companies and the purchasing power of that amount on the basis of prices of 1913.

TABLE 14J

THE ESTIMATED AVERAGE ANNUAL COMPENSATION OF WORKERS NORMALLY EMPLOYED IN THE TELEGRAPH INDUSTRY OF THE CONTINENTAL UNITED STATES

A	B	C	D	E	F
Year	Estimated total compensation paid to employees ^a (Thousands)	Estimated number of employees normally attached to this industry ^b	Average money compensation per employee $B \div C$	Average index of prices of commodities bought by manual and clerical workers	Annual compensation of the average employee in dollars of 1913 value $D \div E$
1909.....	\$17,600	32,050	\$549	.955	\$575
1910.....	19,100	34,050	561	.978	574
1911.....	21,750	36,500	596	.984	606
1912.....	25,659	39,500	650	.994	654
1913.....	27,450	40,650	675	1.000	675
1914.....	26,270	41,850	628	1.01	622
1915.....	26,400	44,150	598	1.03	581
1916.....	31,590	46,920	673	1.10	612
1917.....	40,435	53,300	759	1.29	588
1918.....	49,330	57,870	852	1.58	539
1919.....	50,490	58,600 ^c	862 ^c	1.773	486

^a See Table 14G.

^b See Table 14I.

^c Tentative estimate only.

The errors in the data are too great to permit of drawing any conclusions from the minor fluctuations in the recorded wage, but apparently the purchasing power of the average employee's compensation tended somewhat downward after 1913, and in 1919 was no higher than it was in 1909. It is then evident that a gain in the percentage of the value product received does not necessarily mean an improvement in the general economic welfare of those employed in an industry.