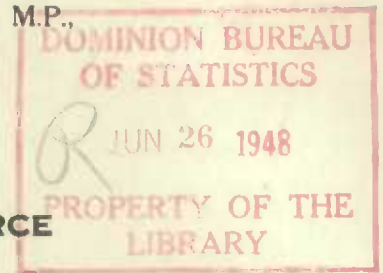


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Minister of Trade and Commerce



**CANADA**  
**DEPARTMENT OF TRADE AND COMMERCE**  
**DOMINION BUREAU OF STATISTICS**  
**EMPLOYMENT STATISTICS BRANCH**

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**AVERAGE WEEKLY SALARIES AND WAGES**  
**OF PERSONS EMPLOYED**  
**IN**  
**MANUFACTURING, MINING**  
**AND LOGGING**  
**IN 1939, AND IN 1942-47.**

(Preliminary Statistics)



OTTAWA  
June 25, 1948

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1914

CANADA

DEPARTMENT OF TRADE AND COMMERCE  
BUREAU OF STATISTICS  
EMPLOYMENT STATISTICS BRANCH

AVERAGE WEEKLY SALARIES AND WAGES  
OF PERSONS EMPLOYED

IN

MANUFACTURING INDUSTRY

AND LOGGING

1913 AND IN 1914

(Continued)



OTTAWA  
1914

DEPARTMENT OF TRADE AND COMMERCE  
DOMINION BUREAU OF STATISTICS  
EMPLOYMENT AND PAYROLL STATISTICS BRANCH  
OTTAWA - CANADA

AVERAGE WEEKLY SALARIES AND WAGES OF PERSONS EMPLOYED  
IN MANUFACTURING, LOGGING AND MINING,  
IN 1939, AND IN 1942-47.  
(Preliminary Data).

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FOREWARD

Preliminary results of a continuing study into the pre-war levels of earnings in industry as compared with those more recently indicated, show that the employees of leading manufacturing establishments, whose salaries and wages in 1939 had averaged \$23.11 per week, received gross weekly earnings of \$36.57 in 1947. The increase slightly exceeded 58 p.c. Of the 17 main divisions of manufacturing listed in the table on the next page, eight showed increases ranging from 30 p.c. to 49 p.c., while in nine groups the advances in the eight years varied from 50 p.c. to 80 p.c. Differences in the amounts by which the wage-rates have been adjusted since 1939 have been only one of several important factors contributing to the size of the increases in particular industries. Among these other major factors may be mentioned greater regularity of employment, together with a higher ratio of premium overtime work, changes in the methods of production during the period, the varying distributions of workers in 1939 and later years in the component sub-groups of particular industries, the supply situation in respect of materials and labour required in different industries, and variations in the distribution of workers as between the skilled, the unskilled and the casual labour categories. In some cases, the incidence of industrial disputes has also had an effect. Evaluation of the increases shown in the per capita figures in the eight years must take into account the obvious fact that the advances do not represent a net gain in the earnings of salaried employees and wage-earners. Since 1939, the cost-of-living index has risen by approximately 50 p.c., while the rates of income tax have increased, and the incidence of the tax is broader than in pre-war days.

In addition to data for numerous branches of manufacturing, the present bulletin gives statistics for mining and logging in 1939 and the last six years. In the former group, the general increase in average earnings between 1939 and 1947 amounted to 50 p.c. In this industry, the advance results mainly from higher wage rates, the general level of employment being somewhat lower in the latter year. The average weekly earnings of workers in logging have rather more than doubled in the eight years. Generally heightened employment, increasing **mechanization** of the industry and substantial advances in the wage rates have combined to raise the per capita earnings of bush workers in the larger camps from \$17.32 in 1939 to \$35.42 in 1947.

Statistics showing the movements of average weekly earnings in the other major branches of industrial employment will be issued in a later report.

Table 1.- Per Capita Weekly Earnings of Persons Employed in Leading Establishments in Specified Industries in Canada, Annual Averages, 1939 and 1942-1947.

(Subject to Revision).

I n d u s t r i e s	Per Capita Weekly Earnings						
	Average 1939	Average 1942	Average 1943	Average 1944	Average 1945	Average 1946	Average 1947
	\$	\$	\$	\$	\$	\$	\$
<b>MANUFACTURING</b>	23.11	29.17	31.50	32.66	32.65	32.51	36.57
Durable Manufactured Goods	24.44	32.23	34.40	35.82	35.68	34.76	39.07
Non-Durable Manufactured Goods	21.89	25.52	27.28	28.55	29.24	30.27	34.07
Electric Light and Power	29.82	34.37	35.92	37.23	37.15	38.40	41.30
Animal Products - edible	23.61	27.57	29.34	30.00	30.21	31.88	35.09
Dairy Products	23.55	28.19	30.93	30.48	31.29	32.38	34.50
Meat Products	25.98	28.54	29.72	30.23	31.20	32.35	37.56
Fish Canning	18.87	23.31	26.11	27.83	28.66	29.28	30.73
Fur and Products	24.41	26.37	28.50	29.40	29.80	30.42	34.34
Leather and Products	16.75	20.50	22.30	23.46	24.18	25.18	27.76
Boots and Shoes	15.67	19.60	21.68	22.53	23.42	24.49	26.64
Lumber and Products	19.18	23.94	26.00	27.63	27.67	29.12	32.66
Rough and Dressed Lumber	19.97	24.55	26.83	28.44	28.69	30.12	33.96
Furniture	18.35	23.88	25.13	26.45	26.86	27.90	31.40
Plant Products - edible	21.05	23.48	25.23	25.68	26.54	27.99	30.54
Flour and Milled Products	25.99	29.43	30.79	31.83	31.78	32.94	37.27
Sugar and Syrup	27.97	28.72	31.37	32.94	34.18	35.81	37.51
Fruit and Vegetable Products	15.90	19.17	20.97	22.07	22.80	23.85	26.36
Bread and Bakery Products	21.05	24.04	25.80	26.34	27.31	29.07	31.08
Chocolate and Confectionery Products	18.36	19.92	20.54	20.86	21.82	23.73	24.93
Pulp and Paper Products	27.45	31.08	31.92	33.10	33.80	36.20	41.62
Pulp and Paper	28.25	33.93	34.92	36.56	37.08	40.63	48.30
Paper Products	23.12	25.52	25.76	26.15	26.91	28.40	32.84
Printing and Publishing	28.35	30.33	31.50	32.71	33.49	34.61	38.07
Rubber Products	21.46	27.57	29.91	32.39	32.46	32.61	39.12
Textile Products	17.33	20.51	21.92	23.14	23.85	24.98	27.91
Thread, Yarn and Cloth	17.51	21.16	22.45	23.91	24.59	25.82	29.08
Cotton Yarn and Cloth	16.78	20.44	21.71	23.35	24.13	25.55	29.21
Woolen Yarn and Cloth	17.54	21.89	22.91	23.91	24.47	25.12	28.61
Artificial Silk and Silk Goods	16.79	21.46	23.29	24.58	25.41	26.64	30.27
Hosiery and Knit Goods	15.98	18.65	20.26	20.89	21.30	22.45	25.18
Garments and Personal Furnishings	17.11	20.02	21.57	22.93	23.93	24.99	27.39
Tobacco	17.62	18.17	20.90	23.25	24.35	25.20	28.43
Beverages	28.28	31.53	33.56	34.58	34.74	35.45	39.68
Distilled and Malt Liquors	29.45	32.63	34.82	35.64	35.63	36.01	40.67
Chemical and Allied Products	28.21	28.55	30.69	32.07	33.84	34.96	39.16
Clay, Glass and Stone Products	22.88	27.43	29.36	30.60	31.04	31.69	36.68
Electrical Apparatus	24.29	30.59	31.86	32.66	33.52	33.20	37.71
Iron and Steel Products	25.98	34.03	35.50	37.69	37.64	36.51	41.12
Crude, Rolled and Forged Products	27.18	33.25	34.67	36.69	36.79	36.93	43.26
Machinery (other than vehicles)	25.26	33.30	35.24	35.89	35.75	35.23	39.72
Agricultural Implements	23.55	31.06	33.23	34.64	34.19	34.85	40.30
Land Vehicles and Aircraft	26.86	34.95	36.96	38.42	38.86	38.33	42.56
Automobiles and Parts	26.11	38.54	41.27	42.47	40.49	38.16	44.20
Aeroplanes and Parts	25.20	33.62	36.08	38.30	40.41	40.70	41.86
Steel Shipbuilding	28.64	36.07	38.73	39.64	39.49	37.55	41.83
Heating Appliances	23.46	27.86	29.84	32.19	32.32	32.02	35.90
Iron and Steel Fabrication (n.e.s.)	27.81	35.94	37.99	38.94	38.67	37.28	41.52
Foundry and Machine Shop Products	22.87	33.24	35.03	37.03	36.41	35.00	39.24
Non-Ferrous Metal Products	26.93	31.78	33.30	34.68	35.31	35.64	39.96
Non-Metallic Mineral Products	32.34	35.70	37.15	38.10	38.78	38.74	43.57
Miscellaneous	21.40	26.76	29.32	31.35	30.25	29.19	31.87
<b>LOGGING</b>	17.32	20.34	24.78	26.54	26.89	29.03	35.42
<b>MINING</b>	28.68	34.79	36.09	38.05	38.60	39.21	43.03
Coal	22.16	31.09	33.18	36.95	38.19	39.03	41.61
Metallic Ores	33.46	38.60	39.70	40.68	41.02	41.63	46.25
Non-Metallic Minerals (except coal)	24.17	28.51	30.84	32.34	32.64	32.77	36.88

## INTRODUCTION.

Although the Canadian monthly record of employment in leading establishments in the major industrial groups goes back to 1921, the collection of the complementary statistics of salaries and wages was instituted only in the spring of 1941. From the commencement of the monthly payroll series, there have been constant requests from economists, industrialists and other students of business conditions, for comparable material on earnings in 1939, as generally typical of the pre-war period. In an effort to satisfy this continuing demand, the Bureau some time ago undertook to build up a record which would provide a basis for comparing, on an annual basis, the weekly earnings of persons employed by the larger firms in the period from 1938.

The detailed data necessary to carry out this purpose have not been fully assembled for all of the nine major industrial divisions included in the monthly surveys of employment and payrolls, and for which material will eventually be published, but the 1939 information has now been tabulated for the manufacturing, mining and logging industries. In view of the great public interest in such statistics, the preliminary results of the study<sup>1/</sup> in the case of those industries are given in the present memorandum, together with the previously-published annual data for the period since 1941. Later on, annual statistics will also be available for 1940 and 1941. (The procedure followed in carrying back the series to 1939 is briefly described in the notes commencing on page 6).

The annual average weekly earnings of salaried employees and wage-earners employed by leading establishments in some 50 divisions of manufacturing, in the three main groups of mining and in logging, in 1939 and in the period, 1942-1947 are given in Table 1 on page 2. These averages represent the earnings of full-time, part-time and casual workers, before deductions are made for income taxes, unemployment insurance, etc. Overtime payments are included. The figures do not make allowance for the value of board and lodging, where provided without charge, or at nominal rates; in the case of logging, these perquisites are frequently part of the remuneration.

Coverage.- The employees for whom the 1939 payroll data have been assembled numbered 610,947 in the case of manufacturing, 78,926 in mining, and 39,748 in logging. The first-named figure formed about 88 p.c. of the total working force reported in 1939 by all manufacturing establishments to the Annual Census of Industry; this proportion is based on the Industrial Census total for manufacturing adjusted to include the employees of central electric power stations and certain maintenance-of-equipment staffs of the steam railways, classified under manufacturing in the industrial code presently used in the Employment Statistics Branch. The workers employed by the larger mining operators co-operating in the monthly surveys in 1939 constituted 86.5 p.c. of the total employees reported by practically all mining companies to the Mining, Metallurgical and Chemical Branch of the Industrial Census. Employment data are not available to permit a similar comparison in the case of logging. In connection with these proportions, attention is drawn to the explanation regarding the scope of and the methods used in preparing the current statistics of employment and weekly earnings, appearing in the monthly bulletins on the employment situation, together with payrolls, in which comparisons are made between the industrial coverage of the monthly survey at June 1, 1941, and the figures of wage-earners and salaried employees at work as enumerated in the Decennial Census taken as of that date.

## INDUSTRIAL ANALYSIS.

The figures given in the table on the opposite page show significant

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<sup>1/</sup> This project has been carried out by Miss E.L. Hughes, Statistician.

increases in 1947 as compared with 1939 in the per capita weekly earnings of persons employed by leading firms in the various branches of manufacturing and mining, and also in logging. These advances, and those which were indicated in the same comparison in the intervening years, result partly from the generally high levels of employment which have characterized the situation during the war and in the post-war period, partly from extremely widespread upward revisions in wage and salary rates associated with rising living costs, and partly, in the case of manufacturing, from changes in the industrial distribution of employees.

In regard to the relation between changes in the industrial distribution and variations in the general levels of average earnings in manufacturing as a whole, and also in the larger industrial groups of manufacturing, it may be stated that in 1947, the employees reported by leading establishments in the heavy and the light manufactured goods industries were in the proportion of 48 p.c. in the former to 52 p.c. in the latter, while in 1939, a year of moderate activity in manufacturing, the corresponding ratios were 40 p.c. and 60 p.c., respectively. The per capita earnings of the indicated employees in the durable manufactured goods' division amounted to \$39.07 in 1947, as compared with \$34.07 in the non-durable manufactured goods division; in 1939, the averages in the two classes were \$24.44 and \$21.89, respectively. If the distribution of recorded employment in manufacturing between the two divisions had been the same in 1947 as in 1939, the general average of weekly earnings in leading manufacturing establishments last year would have been approximately \$36.07, as compared with the indicated figure of \$36.57; during the war, the disparity due to this factor was appreciably higher, that in 1943 approximating \$1.35 per week.

A feature of the situation revealed in the statistics of manufacturing since the end of the war is the growing tendency towards equality in the percentage increases shown in the earnings of the employees reported in the durable and the non-durable manufactured goods industries taken as a whole, as indicated in the following table:-

Table 2.- Preliminary Index Numbers of Average Weekly Earnings in Manufacturing.

<u>Industrial Group</u>	<u>1939</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>
Durable Manufactured Goods	100.0	131.9	140.8	146.6	146.0	142.2	159.9
Non-Durable Manufactured Goods	100.0	116.6	124.6	130.4	133.6	138.3	155.6
Electric Light and Power	100.0	115.3	120.5	124.8	124.6	128.8	138.5
All Manufactures	100.0	126.2	136.3	141.3	141.3	140.7	158.2

During the war, the rates of increase showed greater disparity than has recently been indicated, although there were significant advances in both classes from year to year. Factors contributing to the more marked differences in the period, 1942 to 1945, were the relatively high proportions of overtime work in the heavy manufactured goods industries, which were mainly engaged on production for the war, together with the employment of considerable proportions of part-time workers in certain classes in the non-durable manufactured goods industries, many of which had low priority in procuring labour during the period of stringency. The return to a more normal distribution of employment between the two classes, together with the diminution of overtime work and the relaxation of controls on salaries and wages since the end of the war, has contributed to the relative similarity more recently indicated in the proportions of increase in the average earnings of persons employed in the durable and the non-durable divisions of manufacturing as compared with 1939.

In spite of the comparatively high degree of equality in the percentage increases from 1939 to 1947 in the heavy and light manufacturing industries taken as units, there was considerable disparity in the rates of increase indicated in the various classes of manufacturing shown in Table 1. Thus of these 17 industrial groups, two showed advances ranging from 34 p.c. to 39 p.c.; in six classes, the increases varied from 40 p.c. to 49 p.c.; in three classes, from 50 p.c. to 59 p.c.; in four classes, from 60 p.c. to 69 p.c.; in one class, the advance exceeded 70 p.c., and in another, 80 p.c. In some industries, differences in the methods of production during the eight years have contributed to the magnitude of the changes. In many cases, the varying distribution of workers in 1939 and 1947 in the sub-groups making up particular industrial groups has been a factor. The adequacy of the supplies of materials used in the industry also enters into the situation, as does the availability of labour in various areas.

In all industries, the increases recorded in the per capita figures since 1939 have been substantial; on the whole, the largest percentage gains in the eight years have taken place in those classes in which the earnings in 1939 were below the general average, thus tending to reduce the differentials between the various branches of manufacturing. Despite this levelling process, it is obvious from the table on page 2 that there remain important disparities in the levels of earnings from industry to industry. To some extent, these are associated with variations in the average hours worked<sup>1/</sup>, while other well-known factors of equal or greater weight are differences in the skill generally required of workers in various industries, and variations in the sex distribution, with related differences in the age distributions. The location of establishments in larger or smaller centres of population in some cases also has an effect on the levels of earnings in particular industries, but in other cases this factor appears of comparatively little weight.

Statistics for Manufacturing in the Economic Areas.

The following table shows the preliminary figures of average weekly earnings in manufacturing in the five economic areas in 1939 and in 1947, together with the changes in the latter from the former year:-

Table 3.- Annual Average Weekly Salaries and Wages as Reported by Leading Manufacturing Establishments. (Preliminary Statistics)

Area	1939	1947	Increase in 1947 from 1939	
	\$	\$	\$	P.C.
Maritime Provinces	21.65	34.05	12.40	57.3
Quebec	21.10	34.69	13.59	64.4
Ontario	24.01	37.78	13.77	57.4
Prairie Provinces	25.14	35.49	10.35	41.2
British Columbia	25.45	39.32	13.87	54.5
CANADA	23.11	36.57	13.46	58.2

Except in the Prairie Area, there was a fair degree of similarity in the percentage changes in the eight years in the levels of per capita earnings of employees in the larger manufacturing plants. That the general increase in the average in the Prairie Provinces taken as a unit was not equal to the gain noted in any of the other

<sup>1/</sup> See the monthly bulletins on average hours of work and average hourly earnings.

areas is largely due to the industrial distribution of the persons reported in manufacturing. One of the factors contributing to the greater-than-average percentage rise in the per capita figure in Quebec during the period of observation is a change in the industrial distribution of the factory workers for whom data are available, there having been an unusually large increase since 1939 in employment in the heavy manufacturing industries in that province.

Industrial Classification.- In concluding these notes regarding the material published in Table 1 for leading establishments in manufacturing, mining and logging, it may be mentioned that the lengthy task of obtaining data for 1939-41 from various sources has been further complicated by the need to revise the employment and payrolls series to conform to a new industrial classification. Final work on this classification has recently been delayed, in order to bring about the closest possible degree of uniformity with an international industrial classification being established by the United Nations. This new classification differs materially from the classification hitherto used in the Employment Statistics Branch in the case of several industries, calling among other revisions, for the transfer of certain groups from manufacturing to the non-manufacturing divisions. These changes cannot be effected until final adjustments to the Canadian Standard Industrial Classification have been completed. Thus it will be some time before the finally-revised and reconstructed series on employment, payrolls and average weekly earnings in the nine major industrial groups in the period since 1938 can be published for the Dominion, the provinces and the leading cities.

Although the statistics given in the present bulletin must be regarded as subject to revision, it should be noted that the changes in industrial coding required under the new classification will be carried back throughout the period, so that the resultant changes in the per capita figures for certain industrial groups will probably affect in more or less equal degree the statistics for the various years. It therefore seems a reasonable assumption that the trends in the different industries from year to year, as indicated in Table 1 on Page 2, will not be greatly altered when the final revisions are effected.

Notes on the Methods Used in Compiling Payroll Data  
for 1939, 1940 and 1941 as a Whole.

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The monthly surveys of employment and payrolls<sup>1/</sup> are limited in the main to firms employing 15 persons and over, the restriction being dictated by practical considerations of cost of collection in terms of money and time. The co-operating establishments are asked to provide statements showing the numbers of persons receiving pay in their last pay periods in the month, together with the amounts currently disbursed in salaries and wages in the same pay periods. The annual per capita weekly earnings since 1941 are averages of the figures obtained in the monthly surveys.

In the case of certain industries, the Industrial Census Division of the Bureau collects yearly reports from practically all establishments, regardless of size, the material relating to employment and annual aggregate salaries and wages, as well as to many other subjects. Although there are important differences inherent in data obtained monthly and those compiled from annual reports, the trends of employment and payrolls shown by the two series are generally similar. It was therefore decided to make use of these records in carrying back the payroll statistics to 1939, where a satisfactory degree of correspondence was found in the overlapping figures for the individual establishments. This meant that the 1939-41 payroll figures for the leading employers could be constructed only on an annual basis. In any case, it would have been virtually impossible to obtain from any source the data necessary to build up a monthly record for the back years.

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<sup>1/</sup>See the explanatory notes appearing in the monthly bulletins on employment and payrolls regarding the methods used in preparing the current statistics, and their scope.



**Methods .-** The collection of data for individual establishments was the main task. From the Census of Industry files, material was selected for the firms reporting monthly to the Employment Statistics Branch. Comparison was made establishment by establishment for 1939 and 1940 between the figures of numbers of employees obtained in the two series; for 1941, when the current record of payrolls was instituted, the firm by firm comparison was made between the numbers of employees and the payrolls. In the majority of cases, agreement was close, and no further validation of the use of the annual figures of the Census of Industry was required. In the cases where significant differences were observed, the materials from the two sources in 1942 and later years were studied to discover appropriate factors of adjustment. Where the 1941 differences were large and could not be reconciled from data for subsequent years, the firms were requested to clarify the differences, or to supply statistics for 1939-41 on the same basis in respect of coverage as they now report to the monthly surveys.

When this set of 1939-41 figures from the Census of Industry records was assembled the calculation involved the division of establishment payroll totals by 52 to obtain weekly average figures of salaries and wages in the various industries and the adding of these, together with the figures of annual average numbers of employees for the same establishments. The average weekly earnings were then obtained by dividing the payrolls totals for the various industries by the employees. The results of this study<sup>1/</sup> for 1939 appear in Table 1 on page 2, together with previously-published per capita weekly figures for manufacturing, mining and logging in the period, 1942-47.

Comparison of the Data of the Monthly Surveys and the Annual  
Census of Manufactures.

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A comparison of the average weekly earnings of persons employed by the leading manufacturing establishments reporting to the monthly surveys, and the various averages which may be computed from the general data of the annual Census of Manufactures since 1938 appears in Table 4. For the purposes of this comparison, the figures for central electric power stations were taken from the annual averages of the monthly figures, as shown in Table 1; the 1939 average in column 4 of Table 4 also embodies certain other changes as compared with the figure for manufacturing entered in the first column of Table 1, in order to afford a better basis of comparison with the material of the Census of Manufactures.

In the case of the Industrial Census' averages given in columns 1 and 2 of Table 4, the figures of weekly earnings were obtained by dividing by 52, the annual average salaries and wages reported by establishments in manufacturing. These figures include yearly bonuses paid to employees; in some cases, especially during the war, such payments were substantial. The figures in column 3 include annual payments of that kind to the salaried personnel, but not to the wage-earners, while the weekly figures in column 5, being averages of the per capita figures reported monthly, for the most part exclude bonuses paid on an annual basis. It may be pointed out that averages based on monthly figures will be rather more subject to variation than those computed from annual data, the former being affected to a greater extent by seasonal influences, holidays, industrial disputes and other more or less temporary conditions.

Comparison of the data in the upper part of Table 4 shows considerable similarity in the various per capita figures. The index numbers in the lower part, based on 1942 as the first full year of the monthly record, provide a ready means

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1/ In the several important industries for which no statistics are available in any branch of the Bureau to use in building up the record of payrolls in leading establishments from 1939, the employers have been asked to furnish the necessary material. This part of the project is still in progress.

TABLE 4.- AVERAGE WEEKLY SALARIES AND WAGES OF PERSONS EMPLOYED  
IN MANUFACTURING, 1939-1947.

Year	<u>Statistics of the Annual Census of Manufactures</u>			<u>Statistics of the Monthly Surveys</u>	
	Computed from aggregate payroll figures for all manufacturers (Col.1) \$	Computed from aggregate payrolls reported by firms having 15 employees and over (Col.2) \$	Computed upon wages reported in one week in month of highest employment by all manufacturers, plus average weekly earnings of salaried personnel (Col.3) \$	Computed from data for firms reporting to the monthly surveys (Col.4) \$	Annual Average of Weekly Salaries and Wages reported monthly (Col.5) \$
<u>Per Capita Weekly Earnings</u>					
1939	21.56	22.23 <sup>1/</sup>	22.47	22.76 <sup>3/</sup>	...
1940	23.23	23.90 <sup>1/</sup>	24.06	*	...
1941	25.31	25.98	26.13	*	26.49 <sup>4/</sup>
1942	28.09	28.89	29.11	...	29.14
1943	30.79	31.60	30.95	...	31.43
1944	31.92	32.78	32.45	...	32.59
1945	31.71	32.61	32.38	...	32.56
1946	31.63	*	2/	...	32.38 <sup>5/</sup>
1947	*	*	2/	...	36.45
<u>Index Numbers, 1942=100</u>					
1939	76.8	76.9	77.2	78.2	...
1940	82.7	82.7	82.7	*	...
1941	90.1	89.9	89.8	*	90.9
1942	100.0	100.0	100.0	...	100.0
1943	109.6	109.4	106.3	...	107.9
1944	113.6	113.5	111.5	...	111.8
1945	112.9	112.9	111.2	...	111.7
1946	112.6	*	2/	...	111.14 <sup>4/</sup>
1947	*	*	2/	...	125.1

1/ In 1939 and 1940, the statistics of employment and payrolls were not segregated for firms in the under-15 category; these figures are estimated on the assumption that the exclusion of statistics for the small firms in those years would have raised the general average by 67 cents, as in 1941. If the difference had equalled the average in the years, 1941-45, the 1939 estimated figure would be \$22.37, and that in 1940, \$24.04.

2/ This series was discontinued in 1946.

3/ Average for manufacturing exclusive of electric light and power. A further slight adjustment of the figure for manufacturing as published in Table 1 was also made to increase comparability, in respect of industrial coverage, with the Census of Manufactures' data in this table.

4/ Average for the months, June 1 to Dec. 1, 1941; the salaries and wages during this period were at a higher level than in the earlier part of the year, due to the compulsory payment of cost-of-living bonuses, and increases in their rates, as well as to the seasonal movement and wartime acceleration of industry.

5/ This figure was affected by important industrial disputes in existence in 1946, as well as by changes in the industrial distribution following the cessation of hostilities.

\* Not yet available.

of comparing the year-to-year movements in the various series; the extent of agreement in these fluctuations in manufacturing as a whole is substantial.

The Census statistics for the broad industrial groups given in Table 5 are computed from the annual aggregates of salaries and wages reported by all manufacturing establishments, reduced to a weekly basis, and divided by the average number of employees in the same years, while the per capita weekly earnings to the right of the table are annual averages of the monthly figures. In this table, (similar to that first published in the 1943 Annual Review of Employment and Payrolls), the totals for manufacturing exclude central electric stations, thus differing from Table 1.

For the purposes of the present study, the chief significance of the materials in Tables 4<sup>1/</sup> and 5 lies in their indication of the general comparability of the statistics obtained over a period of some years in the monthly surveys of employment and payrolls and those later reported to the Annual Census of Industry and Merchandising; the data given in Table 4 also provide evidence that the methods used in carrying back the monthly record of payrolls to 1939 have proved generally satisfactory.

Table 5.- Average Weekly Earnings in Manufacturing, Computed from the Annual Average Figures of the Census of Manufactures and from the Data of the Monthly Surveys of Employment and Payrolls, 1939, and 1942 - 1945.

Industrial Groups	Census of Industry Data for all establishments Annual Per Capita Weekly Figures in					Current Data of Employment and Payrolls, Weekly Averages				
	1939	1942	1943	1944	1945	1939 <sup>2/</sup>	1942	1943	1944	1945
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Vegetable Products	20.15	24.15	25.87	27.07	27.86	21.66	24.67	26.65	27.94	28.74
Animal Products	18.92	22.89	25.00	26.38	27.09	20.60	24.44	26.38	27.54	28.30
Textile Products	17.02	21.58	23.29	24.59	25.25	17.33	20.51	21.92	23.14	23.85
Wood and Paper Products	21.96	26.06	27.70	28.84	29.53	24.13	28.00	29.37	30.73	31.31
Iron and Steel Products	25.19	33.88	36.78	38.21	38.10	25.98	34.15	36.36	37.69	37.64
Non-Ferrous Metal Products	25.75	31.02	32.81	33.72	34.47	25.74	31.55	33.08	33.79	34.45
Non-Metallic Mineral Products	25.42	30.50	33.06	34.17	33.82	27.35	31.57	33.37	34.52	34.97
Chemical Products	26.87	27.77	30.56	32.30	33.58	28.21	28.47	30.42	32.07	33.84
Miscellaneous Manufactures <sup>3/</sup>	20.42	23.28	29.33	31.10	29.78	20.46	26.70	29.40	31.36	30.25
All Manufactures	21.56	28.04	30.79	31.92	31.71	22.76	29.10	31.43	32.59	32.56

In summing up this section dealing with methods as briefly outlined above, it may be noted that the validation of the process is threefold. (1) The close agreement for individual establishments which was insisted upon as described on pages 6-7, (2) The agreement, despite some differences in coverage, in the trends of employment and average earnings shown in the data of the Census of Manufactures and those of the monthly surveys of employment and payrolls in the years since 1942, as indicated in

<sup>1/</sup>The 1942-47 trends of average weekly earnings in manufacturing and in the durable and the non-durable goods industries since 1939 are given in Table 2.

<sup>2/</sup>Figures in this column are computed from Census records for the firms co-operating in the monthly surveys.

<sup>3/</sup>In these industries, the considerable disparity in the 1942 data result mainly from differences in the material reported to the Annual Census of Manufactures and the monthly surveys by one large plant.

Tables 4 and 5, and (3) The agreement between the Census of Manufactures' figures of annual average salaries and wages reduced to a weekly basis, and the figures of per capita earnings computed from the wages reported by practically all establishments for the wage-earners whom they employed in one week in the month of highest employment, plus the annual average weekly earnings of their salaried employees. The latter comparison gives evidence that the influence of month-to-month variations in the levels of activity during the years investigated was not a disturbing element in the use of annual aggregate payroll data to project backwards the earnings statistics of the monthly surveys.

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