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No. 7

INCOME IN THE VARIOUS STATES

Its Sources and Distribution 1919, 1920, and 1921

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INCOME IN THE VARIOUS STATES

Its Sources and Distribution 1919, 1920, and 1921

By

MAURICE LEVEN

BASED UPON ESTIMATES OF
THE NATIONAL TOTALS
BY

WILLFORD ISBELL KING

OF THE STAFF OF THE
NATIONAL BUREAU OF ECONOMIC RESEARCH,
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PREFACE

The first attempt to measure the distribution of income by States was made by Dr. Oswald W. Knauth. The results of his study, which covered the year 1919, appeared as Publication No. 3 of the National Bureau of Economic Research. Dr. Knauth's work was that of a pioneer, and his efforts not only yielded results that were immediately useful, but they also blazed the way for the present investigation.

The object of this volume is two-fold: first, to present a detailed analysis of income in the various States for the period covered, i.e., 1919, 1920, and 1921; and second, to develop a technique for the computation of estimates by States for succeeding years on a uniform basis.

It will be noted that the figures for 1919 appearing in the present volume are somewhat different from the corresponding estimates in Dr. Knauth's *Distribution of Income by States in 1919*. It is hoped that, owing to the greater mass of material and the greater refinement of method used in the preparation of the present report, the newer estimates represent a closer approximation to the facts. But even these estimates are offered merely as a further step in the process of refinement. Since the preparation of this report more material has been made available,—particularly by the Department of Agriculture,—and improvements of method have suggested themselves, which would make it possible to estimate some of the items entering into the totals with greater precision. However, the changes, if effected, would not be significant enough to justify the recomputation of the data at this time.

In addition to the directors of the National Bureau and to members of its staff my acknowledgments and thanks should also be given to Dr. L. C. Gray and Dr. O. C. Stine, of the Department of Agriculture, to Dr. J. K. Norton, of the National Education Association, and to Dr. Gladden W. Baker, of the American Telephone and

Telegraph Company, who have read the manuscript, in whole or in part, and have made many helpful criticisms.

I am also indebted to numerous organizations, both public and private, which have co-operated with me at various times during the preparation of this report by answering inquiries and furnishing valuable printed information.

MAURICE LEVEN.

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[1] Population not residing on farms.

THE NATIONAL TOTALS

as estimated by

WILLFORD I. KING

Revisions in the Method of Computing the Total Income of the People of the United States and the Totals for 1919, 1920, and 1921

PRELIMINARY STATEMENT

THE NATIONAL TOTALS

Scientific knowledge grows by a process of accretion. The development of the work of the National Bureau of Economic Research in its study of income in the United States furnishes an illustration of this truth. Three years ago it presented its first report on that subject. Since that date, many additional sources of information have been found, a number of new collections of statistical data have become available, and several improved methods of utilizing the material on hand have been devised. For these reasons, most of my time and that of my assistants has, since 1922, been spent in improving the estimates of income for the years 1909 to 1918 and in extending the figures to cover 1921. It is believed that the accuracy of the income totals for the United States has been materially increased by the investment of this large amount of effort. It is certain that, like the pot of gold at the end of the rainbow, the goal of perfection is still and always must be some distance ahead. However, I feel certain that I am distinctly closer to this goal today than I was three years ago. I hope to make the distance still smaller as time passes. The estimates have been improved somewhat even since Mr. Leven started to apportion the income between the different States, a fact which accounts for the aggregates for the United States being, in some instances, slightly different from the sum of the items for the respective States. There is no expectation that this work of revising and improving the figures will cease. My hope is that it may go on as long as better results can be secured. The reader is asked then to regard all the figures in this volume as estimates, with some distance intervening, as a rule, between them and the truth, but with the gap, in most cases, too narrow to invalidate the important conclusions set forth. It is hoped that, as the years pass, the gap will be made even narrower in many places.

When using the totals presented in this volume the reader should keep in mind what these aggregates do and do not stand for. They

do not represent the income of the national government, the value of the psychic income of the people, the social income,[1] or the income as it would be if all the people of the Nation or a State acted as an indivisible whole. They are merely sums of those kinds of individual book incomes commonly accounted for in terms of money. If every individual kept an accurate set of private accounts and thereby arrived at his net money income for the year, and if all these net incomes were added together, the resulting totals would be those which this report attempts to approximate.

Those who have read *Income in the United States*[2] will wish to know in what way the methods there described have been modified. These changes may all be grouped under seven main heads:

1. Reclassification of the gainfully employed.
2. Separation of salaried employees from wage workers and of salaries from wages.
3. Segregation of the mercantile industry from the unclassified group.
4. Merging of the miscellaneous hand trades with the unclassified group.
5. Inclusion of income received from foreign sources and deduction of income paid to foreigners.
6. Adoption of a uniform practice of using as divisors index numbers of the prices of consumption goods.
7. Substitution for business savings of changes in the command over consumption goods given to individuals by variations in their wealth.

The above changes will be discussed seriatim.

Reclassification of the Gainfully Occupied.

The investigation of the unemployment situation in the United States in 1920–1922 made by the National Bureau of Economic Research for President Harding's Conference on Unemployment brought to light certain new facts concerning the relationship of different industries to each other with respect to employment

[1] The term *social income* as here used is intended as an equivalent for the concept "flow of physical commodities and services" suggested by Professor John R. Commons.

[2] Published by The National Bureau of Economic Research, 1922; Vol. II, Part I.

conditions. These discoveries indicated that an industrial classification of the gainfully occupied population of the Continental United States might be made which would be somewhat more accurate than the one given in *Income in the United States,* Vol. II, Sec. 2d. The figures have, therefore, been revised throughout.

The first step was to revise the estimate of population by adopting the method suggested by Mr. Donald R. Belcher of the American Telephone and Telegraph Company, and to recalculate thus the population total for the United States on the basis of absolute numbers rather than rates. When this revision was completed, the next step taken was to estimate the population of the United States 15 years of age and over as accurately as possible. From the latter totals for the various years the corresponding totals of native white married women have been deducted, this subtraction being made upon the ground that, since relatively few of this class work for a direct monetary compensation, a better indicator of the number of gainfully occupied is secured when they are omitted. By aid of the residues used as index numbers, estimates of the total number of gainfully occupied in each year have been interpolated between the Census dates.

The number of entrepreneurs in each industry has been estimated in much the same way described in *Income in the United States,* Vol. II, Sec. 2d. The appearance of the 1920 Census of Occupations has, however, made possible a distinctly higher degree of accuracy in the estimates than could previously be attained; but even yet the figures are merely rough approximations.

TABLE A.—ESTIMATED TOTAL NUMBER OF ENTREPRENEURS
December 31 (Thousands)

Industry	1918	1919	1920	1921
All Industries	9,708	10,029	10,068	10,089
Agriculture	6,375	6,380	6,383	6,386
Mines, Quarries, and Oil Wells	23	22	21	20
Manufacturing	214	208	203	197
Construction	166	160	160	160
Transportation	27	27	28	28
Banking	3	3	3	3
Mercantile	1,254	1,374	1,409	1,430
Unclassified	1,645	1,854	1,861	1,865

The total number of employees attached to all industries has been calculated for each year by subtracting the number of entrepreneurs from the total number gainfully occupied. The average numbers in the various classes are estimated for the years covered by this study to have been as follows:

TABLE B.—NUMBER OF PERSONS GAINFULLY OCCUPIED

AVERAGE FOR THE YEAR (thous.)	1919	1920	1921
Total persons gainfully occupied	40,282	40,008	40,819
Total number of entrepreneurs	9,752	10,049	10,079
Total number of employees	30,530	29,959	30,740

The requirements of the study have made it necessary to apportion these employees among the industries on the basis of their normal affiliations. The first step has been to estimate the number of employees at work in each field in each year. For most of the fields, the data available are sufficient in quantity to enable this estimate to be made with a reasonable degree of accuracy. In the other fields rough approximations must, perforce, suffice. According to the best available evidence, from one to three per cent of those attached to an industry are idle even at the peak of a boom. It further appears to be true that, when a depression strikes an industry, those attached to the industry remain for some time unemployed and do not at once transfer their activities to other fields. Their tendency to "stay put" is partly ascribable to inertia; but another powerful influence tending in the same direction is the fact that, when one industry is so depressed that its workers might be expected to seek employment elsewhere, most other industries are not sufficiently active to desire to take on additional help. In view of these facts, the method of estimating the number of workers attached to an industry is first to plot a curve showing the number at work and then to draw smooth trends through points two or three per cent higher than the crests of the cycle waves.

Separation of Salaried Employees from Wage Workers.

In this study, salaried employees and wage workers have been treated separately, the division between these two classes being

drawn on the same lines as those laid down by the Bureau of the Census: that is the managerial staff, the office workers, and those having relatively high security of tenure are usually counted as salaried, while the remaining employees are classed as wage workers. By plotting two separate curves for each industry, the following estimates have been arrived at:

TABLE C.—ESTIMATED THOUSANDS OF EMPLOYEES ATTACHED TO INDUSTRY

Industry		1919	1920	1921
All Industries	Salaried	7,992	6,901	7,138
	Wage	22,538	23,058	23,602
Agriculture	Salaried	70	71	71
	Wage	2,499	2,419	2,404
Mines, Quarries, and Oil Wells	Salaried	77	75	74
	Wage	1,105	1,142	1,156
Manufacturing	Salaried	1,468	1,568	1,497
	Wage	9,813	9,733	9,089
Construction	Salaried	96	75	76
	Wage	1,002	779	778
Transportation	Salaried	669	742	758
	Wage	2,598	2,743	2,738
Banking	Salaried	195	205	205
	Wage	[a]	[a]	[a]
Mercantile	Salaried	509	522	565
	Wage	2,593	2,693	2,733
Government	Salaried	4,108	2,807	2,786
	Wage	[a]	[a]	[a]
Unclassified	Salaried	800	835	1,106
	Wage	2,928	3,550	4,705

[a] Wage workers included with salaried employees.

One of the most striking changes to be observed during the three years is the growth in the number of employees assigned to "unclassified" industries. The totals for this group are residues representing what is left over after the employment in the recorded industries has been accounted for. The information concerning

the industries of mining, manufacturing, construction, transportation, and government is deemed sufficiently accurate to give us assurance that little growth in employment occurred in those fields. The year 1921 was the worst year of the agricultural depression — hence it seems unlikely that the farm attracted new employees. Computations for earlier years indicate that manufacturing and the army drew heavily from the unclassified fields in the years 1917 to 1920. It appears, therefore, that, after the crash in 1920, employees drifted back to their old callings — at least no other explanation of their industrial affiliations seems so plausible.

The foregoing figures in conjunction with wage and salary data serve as a basis for computing the income paid to the employees by the various industries.

Segregation of the Mercantile Industry from the Unclassified Group.

Among the major departures from the course pursued in the earlier study of income must be listed the segregation of the mercantile industry. This task was found to be quite laborious, and, unfortunately, the data obtainable proved less dependable than had been hoped. As a result, the figures derived may be widely in error. It is still believed, however, that the separation of this industry from the "Unclassified" group has increased to some extent the accuracy of the totals for all industries, and that the driving of this entering wedge may lead later to more significant results.

Merging of the Miscellaneous Hand Trades with the Unclassified Group.

What may seem like a backward step is the throwing back of the miscellaneous hand trades into that catch-all group entitled *Unclassified Industries*.[1] This policy was finally decided upon because the making of the estimates for the minor hand trades was very laborious and yet no way was discovered of obtaining results of sufficient reliability to command much confidence.

The figures for Miscellaneous Income and for income derived by entrepreneurs and other property owners from *Unclassified Indus-*

[1] *Construction* is now ranked as a separate industry and *Power Laundries*, *Custom Grist Mills*, and *Custom Saw Mills* are joined with *Factories* under the title *Manufacturing*.

tries must be considered as nothing but the roughest kind of estimates. It is unfortunate that they involve such a large fraction of the national income, but there seems to be no feasible method of avoiding this weakness.

Inclusion of Income Received from Foreign Sources and Deduction of Income Paid to Foreigners.

A minor adjustment which has been made in order to meet the criticisms of certain reviewers is an estimate of the income received from foreign sources and paid to foreigners by our industries. While it is impossible to obtain adequate data covering these quantities, such evidence as there is indicates that the two items are so small and so nearly equal in size that their net effect on the total income of the country is practically negligible.

The Index Numbers Used as Divisors in Converting Amounts to Dollars of 1913 Purchasing Power.

The necessity of reducing all values to dollars of constant purchasing power was emphasized in the preceding volumes on *Income in the United States*. For the most part this was accomplished by dividing the amounts in current dollars by the index numbers presented in Vol. II, Secs. 2b and 2c of the work just mentioned. The three index numbers there given have been recomputed by using revised weights based upon additional data and, in a few instances, price quotations, discovered since the date of the last publication and apparently more accurate than those formerly utilized, have been substituted. The base remains the average price for the year 1913 and the method of computation has not been changed. Since the prices of goods used by farmers and farm employees have not varied in harmony with city prices, an additional price index has been computed to cover the goods consumed by each of these classes. In this study, one of these five index numbers has been used as the divisor in every case in which income has been reduced to dollars of 1913 value. The weights are shown in Table D.

The index number for urban employees is the "cost of living" index computed by the United States Bureau of Labor Statistics. The others are original with the National Bureau of Economic Research. The "averages for the year" in the four original indexes

TABLE D.—WEIGHTS USED IN CONSTRUCTING INDEX NUMBERS[a]

Item	Weight				
	Families Spending $25,000 Annually	Families Spending $5,000 Annually	Urban Employees	Farmers	Farm Laborers
Automobiles and Repairs	919	738	232	450	900
Automobile Tires	287	230	106	240	480
Books	44	44	37	100	....
Clothing	765	1,200	1,662	....	1,800
College Room and Board	150	150	37	80	....
College Tuition	54	54	7	20	....
Diamonds	400	50	39	....	....
Food	1,332	2,680	3,824	....	....
Fuel and Light	297	359	530	....	....
Furs	300	117	165	....	....
Gasoline	287	230	106	360	720
House Furnishings	408	419	510	....	....
Housing	1,966	1,770	1,344	....	....
Hotel Bills	489	449	113	....	....
Magazines	32	32	28	....	....
Moving Picture Shows	40	110	130	....	600
Newspapers	14	54	124	100	....
Railway Passenger Fares	334	230	38	....	....
Servants' Wages	1,267	502	64	....	....
Street Car Fares	35	90	365	....	....
Telephones	60	76	68	....	....
Theatre Seats	285	116	96	....	....
Tobacco	120	144	279	....	1,000
Vaudeville Seats	45	56	96	....	....
Pianos	70	100	....	....	....
Average for Urban Employees	....	....	....	5,000	....
Food from the Farm	....	....	....	3,650[b]	....
Board and Lodging	....	....	....	....	4,500
Total	10,000	10,000	10,000	10,000	10,000

[a] Manifestly this list of the things quoted does not cover in every case all the articles consumed. A considerable proportion of the 10,000 units have been apportioned, in a more or less arbitrary manner, among the items quoted. For example, each particular article mentioned in the miscellaneous group is made to do service for many others. One must not, then, assume either that the corresponding weights in the different columns represent equal values, or that they show the percentage of the total expenditures going for the particular article named, — in other words, the columns are not comparable. In the case of farm employees, for instance, the quotations that can be used are so few that the loadings given to each item are far heavier than are the assignments in the more complete lists appearing in the first three columns.

[b] Based on farm values of a large number of foodstuffs.

have been computed by weighting the beginning of the year 1, the middle of the year 2, and the end of the year 1, and averaging. The resulting figures are given in Table E.

TABLE E.—INDEX NUMBERS — BASE 1913 = 1.00

Date	Families Spending $25,000 Annually	Families Spending $5,000 Annually	Urban Employees	Farmers	Farm Laborers
1919 Jan. 1	1.442	1.549	1.750	1.789	1.622
1919 July 1	1.497	1.611	1.785	1.800	1.733
1920 Jan. 1	1.654	1.790	2.003	1.988	1.926
1920 July 1	1.779	1.940	2.172	2.115	2.032
1921 Jan. 1	1.745	1.816	1.980	1.787	1.861
1921 July 1	1.655	1.657	1.766	1.457	1.522
1922 Jan. 1	1.611	1.593	1.733	1.528	1.432
Average for Year					
1919	1.522	1.640	1.831	1.845	1.754
1920	1.739	1.872	2.088	2.001	1.963
1921	1.667	1.681	1.799	1.557	1.584

The practice of using indexes of construction costs as divisors for reducing business savings to dollars having purchasing power equal to that of 1913 has been discontinued on two grounds:

1. The concept of national income as an aggregate of individual incomes is adhered to even more closely in the revised figures than in the original computation.
2. Increase in individual wealth has been substituted for business savings in all feasible cases.

Substitution for Business Savings of Changes in the Command Over Consumption Goods Given to Individuals by Variations in their Wealth.

The most important deviation from the method followed in the first income study of the Bureau is the substitution of an estimate of the change taking place in the purchasing power of the national wealth for the former figures supposed to represent the business savings of the various industries. The substitution was made because it is not strictly logical to add corporate income to individual income and also because of a suspicion that the corporate surplus, as reported for years when the price level changed rapidly, had

little more than a semblance of reality. There is grave doubt, for example, whether we are justified in crediting railway stockholders with an income of three billions of dollars because the railways have added to their corporate surplus three billions of dollars taken from earnings. To the stockholder who sees the value of his stock declining at the same time that the value of the corporate surplus is growing, his share in the three billions of dollars is likely to appear strangely unreal.

As a matter of fact, the ordinary stockholder is interested primarily in the value of his own holdings rather than in the accounts of the corporation. It follows, from the standpoint of individual income, that the correct way to attack the problem is to ascertain the changes that have occurred, during the period in question, in the wealth of individuals. This method treats individual income as composed of two parts: 1. *Current income,* and 2. *Gains or losses in the value of property owned.*

Current income, though a somewhat hazy concept, may be defined as the excess of cash receipts over business expenses, plus the money value of income received in the form of commodities. It is estimated here by summating (1) wages, salaries and pensions, (2) profits withdrawn from business, (3) dividends, interest, and rent received by individuals, (4) the rental value of homes occupied by their owners, (5) interest upon the sums invested in household furnishings, clothing, and the like, and (6) the value of commodities which families produce for their own consumption.

For many purposes, current income is a more useful concept than that of total income, which includes gains or losses in the value of property owned. Current income is the better gauge of the scale of living, and hence of apparent immediate prosperity or distress. Except among those mainly engaged in speculative activities, the term "good times" signifies a large current income, and "hard times" is another way of saying that current income is low. Moreover current income is a much more stable quantity than is inventory gain or loss, and, because of the character of the available data, can be measured with greater accuracy.

But there are good reasons for approximating as closely as possible gains or losses in the value of property owned, and for giving these approximations a place in the income account. The case is

most obvious with reference to readily saleable property held for gain, like securities. That such property is subject to continual and wide fluctuations in price, that any holder can and that many holders do shift their holdings from time to time, and that the gains or losses resulting from these transactions may be counted income, is clear. But just how these items are best treated in the income account is a difficult problem.

We know that investors differ widely in the management of their holdings. Some investors keep systematic accounts, watch market quotations, and endeavor to profit by them. Others pay no attention to current fluctuations, but hold securities once bought for long terms of years, and think only of the dividends or interest received. Still others, perhaps the majority, fall between these extremes. But that is the extent of our knowledge. What proportions of the property owned are treated in these various ways we do not know. Hence, it is impossible to devise a method of treating inventory losses and gains on the property of individuals which will reflect accurately the reckoning of all investors.

Under these circumstances, we face the necessity of choosing between two alternatives neither of which is unobjectionable. We must neglect entirely a very substantial source of loss and gain to individuals, or we must adopt some method of treatment which by its very uniformity of application will give artificial-seeming results. On the whole, the latter alternative seems preferable.

The one method which it is feasible to apply uniformly is to suppose that individuals take inventories of their property at the end of every year as do well-conducted business enterprises, and that they credit their incomes with net increases in money value, or debit their incomes with net decreases in money value, whether they sell the property or not. This procedure will give a correct accounting of net changes in the financial position of property holders from year's end to year's end, provided that the statistical data used are valid. Of course, the results must not be interpreted to mean that investors have actually realized in cash the gains or losses shown by such tables, or even that they could all have sold at the inventory prices had everyone tried to realize on the same day. Such tables merely bring out the net gain or loss on the market

value of property owned by individuals, as shown by inventories taken at intervals of one year.

By way of example, consider the following table, which gives estimates of the total inventory values of four great groups of industries at the beginning of the years 1919–22. The estimates were made from the prices of large samples of securities and real estate actually sold near the turn of the year.

TABLE F.—TOTAL NET VALUES OF SELECTED INDUSTRIES AT THE BEGINNING OF THE YEARS 1919–22

In Millions of Dollars

	Railways, Pullman Co., Telephone, and Telegraphs	Mines, Quarries, and Oil Wells	Factories	Agriculture
1919	$16,950	$10,819	$25,793	$72,573
1920	15,212	13,176	25,597	78,802
1921	14,971	10,222	26,587	73,060
1922	15,628	11,771	27,017	60,457

Once figures of this sort had been drawn up for all industries, it would be easy to compute the nominal loss or gain in dollars of current value to the owners as a group. But such figures would not represent the real changes in the economic position of the owners. For example, if the market value of my property rises 5 per cent while other prices rise 10 per cent, my economic position grows weaker. If next year other prices fall 10 per cent and my property falls only 5 per cent, I command larger purchasing power at the end of the year than at the beginning. To see where I really stand, I must take into account the change in my ability to get goods produced by the fluctuations in the prices both of my property and of the things I should buy if I parted with my holdings.

One seeming exception to this rule may be noted to show that the supposed exception does not count for present purposes. Return to the supposition that my property has risen 5 per cent in a year and that other prices have risen 10 per cent. Then if I sell my property at the end of the year to pay a debt, I gain by the 5 per cent rise in its money value; but I transfer the loss in purchasing power to my

creditor. Tables which sum up the position of all property holders as one body cannot show the distribution among individuals of the gains and losses in purchasing power; but they should show whether the aggregate net gains or losses of all property holders mean gains or losses in command over other goods. The way to show this is to divide the inventory values of property owned by individuals at the end of each year by an appropriate index number, and then compute the gains or losses.

What is the most appropriate index number to use? Probably the majority of investors who sell income-bearing property reinvest the proceeds in other income-bearing property. It may seem that, for the present purpose, we should use an index number of security prices, or security prices and real estate. But that conclusion is not valid. If our estimates of the aggregate value of individual holdings were perfect, and if the index numbers of the prices of property were also perfect, the fluctuations of the index would agree precisely with the fluctuations of the aggregate values. Then division of one series by the other would produce the same result in every year; in other words it would tell us nothing about changes in the fortunes of property owners. To each individual investor taken by himself, the most important price fluctuations are usually those of his securities in comparison with other securities. But in the whole body of investors the gains and losses from shifting ownership cancel each other. To show these gains or losses in terms that have significance, we must compare the fluctuations in the money values of securities and real estate with the fluctuations in the prices of some other class of goods, such as labor, or commodities, or labor and commodities taken together.

Among the available index numbers there are at least three which merit consideration for the present use. One is an index number of the prices of consumption goods at retail, made by combining the indexes quoted in a preceding table. The second is the "index of the general price level" compiled by Mr. Carl Snyder, made by combining commodity prices at wholesale, wage payments, retail prices of consumer's goods, and rents. The third is the familiar Bureau of Labor Statistics index of commodity prices at wholesale.

A comparison shows that these three indexes differ consider-

TABLE G.—NATIONAL INCOME IN MILLIONS OF DOLLARS[a]

Industry		Dollars of Given Year						Dollars Having Purchasing Power Equal to That of 1913		
		Income Estimate			Maximum Reasonable Error					
		Current Income	Inventory Gain[b]	Total	Current Income	Inventory Gain[b]	Total	Current Income	Inventory Gain[b]	Total
ALL INDUSTRIES	1919	$67,254	$ — 1,059	$66,196				$37,646	$ — 651	$36,995
	1920	74,158	— 1,778	72,380				36,337	— 1,053	35,284
	1921	62,736	21,691	84,427	$4,000	$9,000	$13,000	36,194	12,814	49,008
Agriculture	1919	12,327	— 1,702	10,626				6,723	— 923	5,800
	1920	10,264	2,475	12,739				5,141	1,235	6,376
	1921	6,622	— 2,027	4,595	1,100	600	1,700	4,277	— 1,317	2,960
Mines, Quarries, and Oil Wells	1919	2,141	503	2,644				1,210	302	1,513
	1920	2,729	— 3,850	— 1,121				1,351	— 2,027	— 676
	1921	1,907	2,583	4,490	280	520	800	1,079	1,507	2,586
Manufacturing	1919	16,508	— 667	15,841				9,349	— 422	8,927
	1920	20,387	— 7,563	12,824				10,080	— 4,189	5,890
	1921	13,732	2,635	16,368	400	1,400	1,800	7,797	1,577	9,375
Construction	1919	1,532	218	1,750				848	133	981
	1920	1,700	41	1,742				835	22	857
	1921	1,371	25	1,396	340	200	540	774	15	789
Transportation	1919	5,772	— 4,791	980				3,268	— 3,024	243
	1920	7,169	— 1,918	5,251				3,538	— 1,062	2,476
	1921	6,135	2,653	8,788	500	600	1,100	3,483	1,581	5,064

Banking	1919	646	336	982				359	213	571
	1920	775	221	996				379	122	502
	1921	848	123	971	80	20	100	477	73	551
Mercantile	1919	8,057	1,239	9,296				4,690	755	5,446
	1920	9,388	— 81	9,307				4,785	— 43	4,742
	1921	8,919	— 322	8,597	1,400	400	1,800	5,144	— 192	4,952
Government	1919	5,930	....	5,930				3,314	....	3,314
	1920	5,008	....	5,008				2,466	....	2,466
	1921	5,270	....	5,270	700	....	700	2,965	....	2,965
Unclassified	1919	6,783	1,659	8,442				3,797	956	4,752
	1920	9,085	858	9,942				4,459	433	4,892
	1921	10,906	206	11,112	1,600	400	2,000	6,147	118	6,266
Misc. Income[c]	1919	7,558	2,147	9,705				4,089	1,359	5,448
	1920	7,653	8,039	15,692				3,303	4,456	7,759
	1921	7,025	15,815	22,840	2,600	6,400	9,000	4,051	9,450	13,501

[a] Figures in which the percentage of error is believed to be large appear in light faced type.

[b] In the fields of construction, merchandising, and unclassified industries and in transportation by water and by street railways it has not been feasible to secure satisfactory inventory figures, hence the estimated changes in value are rough estimates only.

[c] Miscellaneous income includes net income from urban cows, poultry, and gardens, the rental value of owned homes, interest on the value of miscellaneous consumption goods on hand, net income from foreign investments, rent received from urban residence property leased to others, and changes in the value of realty leased to others for residential, mercantile, or miscellaneous purposes. In these three years, the last item is by far the largest. This item is much more inclusive than that entitled "Miscellaneous Incomes" in Tables XXXIX, XL, and XLI.

ably from each other in the years under review. When the estimated values of the property holdings are divided by the different indexes and the gains or losses in command over goods are computed, the results diverge widely. In several cases one index shows a gain while the other two show a loss, or one shows a loss and the other two a gain.

The question, then, as to which index shall be used in correcting the estimates of property values for changes in the price level is one of no little importance. On the whole the first index — that which shows changes in the prices of consumption goods — seems to possess more general significance than its rivals. It has, furthermore, the merit of fluctuating much less widely than the wholesale price index. Accordingly it is employed in Table G.

Final Results.

This table of the National Income gives estimates (1) of current income, (2) of the loss or gain of property holders in the power to purchase consumption goods, and (3) of the sum of these two items. The three sets of estimates are stated both in dollars current in the given year, and in dollars having purchasing power equivalent to that which they possessed in 1913.

The most striking feature of this table is the huge "Inventory Gain" of 1921 — upwards of 22 billion dollars. The chief factor in producing this result was the net increase in the value of securities and real estate between the first and the last day of that year. This increase, reaching some 12 billions according to our figures, is shown in Table H.

The upward trend in the total market value of the foregoing securities is well authenticated. While the extent of the movement in the value of real estate is based upon much less dependable evidence, there are, nevertheless, strong indications that the total rose rather than fell. Hence, it appears that, in these fields, individuals held property having a market worth of more dollars at the close than at the beginning of the year 1921.

But this is only part of the story. Between January 1 and December 31 of that year, the index of prices of goods consumed by the wealthier classes of the population fell from 1.78 to 1.60, or

approximately ten per cent. As a result, it is evident that, if the figures are correct, the value of the above classes of wealth, when measured in its command over consumption goods, increased distinctly more than the 12 billions of dollars arrived at by subtracting

TABLE H.—TYPICAL CHANGES IN PROPERTY VALUES DURING 1921

	Market Value of Property to Combined Individual Owners (Millions of Current Dollars)	
	Jan. 1, 1921	Dec. 31, 1921
Mining Securities		
Funded Debt	$ 800	$1,039
Preferred Stock	420	450
Common Stock	9,003	10,282
Manufacturing Securities		
Funded Debt	4,776	5,498
Preferred Stock	5,127	5,269
Common Stock	16,684	16,250
Railway Securities (Excluding value derived from non-railway property)		
Funded Debt	7,989	8,946
Stocks	5,530	4,771
Real Estate Used for Residential, Mercantile, and Office Purposes	67,150	76,900
Total of Above Items	$117,479	$129,405

the total for January 1 from that for December 31. If the inventory gain was reckoned in terms of command over articles in general, or over all goods at wholesale, an experimental test indicates that the result would be several billions lower than is here shown.

Now the figures showing how much the owners of the just mentioned classes of corporation securities gained or lost each year are based upon a mass of evidence believed to be sufficient to guarantee their approximate validity. It is decidedly otherwise with the estimated changes in the total values of the specified classes of real estate. Variations in this item, as calculated, may be much too large or much too small. Unfortunately, the amounts involved

are so great that it takes but a small percentage of error to run into billions of dollars.

To enable the reader to see at a glance which figures are worthy of confidence and which are to be viewed with suspicion, it has been deemed advisable to record the better grade of figures in black-faced type and also to enter opposite each item a rough guess as to the maximum error likely to be found in the estimate as given. A comparison of the estimated errors in *current* income with the similar figures in the *total* column shows how much the current income estimates outclass in accuracy the total figures. The former estimate for all industries is believed to be less than 5 per cent and perhaps not more than 1 or 2 per cent in error. The latter estimate may possibly contain an error of as much as 13 per cent and an error as large as 7 per cent is not at all unlikely.

This wide difference in the probability of error may account for the striking difference in the movements of the two sets of figures between 1919 and 1921. The figures on current income, when reduced to a basis of constant purchasing power, not only fail to rise in 1921 but show a slight falling off from the level of the two previous years, a result much more in accord with what most of us would expect.

This difference, however, by no means proves that either of the two sets of estimates is widely in error. There is no reason to assume that these fluctuations are similar. One may well rise while the other is falling. We can only say that we are more certain of the movement of current income than of the gain or loss on inventories. The striking difference in the behavior of the two quantities does, however, show how chary one must be of using figures on income without first knowing exactly what kind of income they represent. Unless this precaution is taken, the information is likely to prove grossly misleading.

Changes in property values are significant partly for the reason that they indicate changes in the relative strategic advantages of the classes deriving their incomes respectively from property and from labor. If property values, as measured in 1913 dollars, rise, while the share of employees remains constant, it means that the outlook for future property income has improved during the year. This helps only the property owner who sells part or all of his

holdings during the year — others have only rosy anticipations which may or may not be realized later in the form of higher dividends, interest payments, or rents. Likewise, the record of the comparative changes occurring in the property values in different industries reveals changes in the relative economic power of the owners of the respective industries. For example, if the value of agricultural property rises sharply while the value of manufacturing property falls, the strategic position of the farmer is improved as compared to that of the stockholder in the manufacturing corporation.

However, one must not lose sight of the fact that values fluctuate as frequently because of waves of optimism or pessimism as because of physical changes. Today, stock in a mining corporation may be high and farm land low, but if the stockholder does not take advantage of this situation at once and exchange his stock for land, he has no assurance that, within a year or two the value of his stock will not be halved while the price of the land may have risen, even though the physical characteristics of mine and farm have changed but little.

Because of the influence of psychological factors, it cannot be assumed that fluctuations in the total property value of the nation represent corresponding changes in physical wealth. Except as it is affected by variations in the ratio of total savings made by government to total savings made by individuals, there is, however, every reason to believe that the *trend* of the total values of private property, as measured in dollars of constant purchasing power, does represent the *trend* in the physical stock of wealth on hand, and hence that the *trend* of inventory gains measured in terms of 1913 dollars is equivalent to the *trend* of the savings of the people of the nation. The *cyclical* movements in gains in property values, however, in most cases presumably reflect psychological changes rather than variations in national saving.

Likewise, for the reasons just stated, a year to year comparison of the total income of the nation must not be used to measure changes in the economic welfare of the nation. The trend of the curve showing the total income, as measured in dollars of constant purchasing power, is, however, believed to be practically identical with the trend of production of goods and services; in other words,

the trend of the social income of the nation. The record of *total* income when carried over a period of years long enough to determine the trend furnishes, then, information of great significance.

Owing to the greater degree of precision attained, and to the fact that they can be used for year to year comparisons, the figures on current income will doubtless commend themselves to a wider circle of readers than will those showing total income. Current income represents consumption plus individual saving. Since the saving fraction is relatively small, we may expect current income, when measured in terms of 1913 dollars, to vary in much the same manner as does consumption, but as a rule to run materially above the consumption figures.

The reader should keep the above characteristics of the different kinds of income in mind when he uses the data presented in the following chapters.[1]

WILLFORD I. KING.

[1] DIRECTOR'S COMMENT. — It is difficult to imagine a case in which the total figures, including the "inventory gain," would be useful. Great care should be taken to avoid error or confusion in quoting them. They do not, in my opinion, represent the "national income" in the sense in which it is ordinarily understood and has been used in the past. The figures for "inventory gain" of course do not give any indication of goods and services acturlly received by property owners. On the other hand, they do not even approximate an accurate index of annual surplus production, in the form of capital goods. "Inventory" cannot be applied to them in the realistic sense in which it is applied by a merchant or manufacturer to stocks of goods on hand, which he expects before long to sell or to use in manufacture. The "inventory" figures in the above total are almost purely hypothetical. They represent gains or losses on the basis of the amounts of consumers' goods which the owners of securities would have received if they had all simultaneously exchanged all their securities for consumers' goods, provided there were enough surplus goods for the purpose, and provided the current market value of securities or of consumers' goods were not altered by the process. The significance of the result is further complicated by the highly speculative character of the market for securities, which is affected by many causes other than present or prospective markets for goods and services.

GEORGE SOULE.

INCOME IN THE VARIOUS STATES

ITS SOURCES AND DISTRIBUTION

1919, 1920, and 1921.

An Apportionment of the National Totals Among the States on the Basis of Numerous Indices

Devised by

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CHAPTER I

INTRODUCTION

Estimates for the Entire Country Not Applicable to Individual States.

The estimates of the national income of the American people published in the previous reports of the National Bureau of Economic Research enable us to compare the economic status of our population in the various years covered by the studies. These estimates also enable us to compare the economic position and scale of living of the American people with those of other nations, for which data are available. However, the national totals, important as they are, merely represent average conditions of a vast country composed of a great number of widely different parts. Like all averages, these figures have the defect of being representative of the whole, but not of its component parts. Totals and averages of necessity obscure and eliminate individual differences, no matter how great, in the data entering into their composition.

The great variety of climatic conditions and the differences in the distribution of natural resources, together with certain historic factors governing the distribution and the composition of the population, have caused the various sections of the United States to develop along distinctly different economic lines. The development is, of course, not yet at an end. The industrial East is gradually encroaching upon the agricultural West, and from Census to Census we can easily discern geographic changes of great economic and social significance. It is, however, safe to assume that the natural differences between the geographic units of the country will persist; and, as far as one can foresee, there will always be a dissimilarity in the type of industry and density of population among the various sections.

To what extent does income respond to the inherent differences of the various parts of the country? How do these differences

affect the changing economic conditions? What is the net effect of the interaction between the various forces upon the income of the people in each section of the country in different years? It is to help answer these and similar queries that the present volume is written. This work is an extension and amplification of a preliminary report published by the National Bureau of Economic Research for the year 1919.[1]

Dissimilarity of Conditions in States.

If conditions were uniform throughout the United States, it would be a very easy matter to determine the share of each State in the total national income. Uniform conditions, of course, imply an equal distribution of natural resources, an equal accessibility to markets, and also an equal density and composition of population and the like. Knowing the income for the entire United States, the land area or the population in each State would then well serve as an index of the amount received by the inhabitants of each State.

But such conditions are far from uniform in the several parts of the United States. It is apparent that no single known factor can be used with any degree of accuracy to determine the income of the inhabitants of each State. The sources of income in each State are different and, what complicates the problem still further, the income produced in each State does not correspond to the amount received by those living within the State.

The sources of income may be grouped roughly as income from wages and salaries, income from personal entrepreneurial efforts, and income from capital and land investments. In the case of wages and salaries, the income received follows, in the main, geographic boundaries which are the same for place of production and place of domicile of the producers, for it is not common for wage earners to live in one State and work in another.[2] The individual entrepreneurs also offer no difficulty in the matter of locating their income production. Ordinarily, the person depending for his living on a small individual business enterprise, resides where his business is located. However, when we come to income from in-

[1] *Distribution of Income by States*, by O. W. Knauth.

[2] Except where a large city is located near a state boundary — New York City, for instance.

vested capital, the place of production of the income is likely not to correspond with that where the recipients reside. The bulk of industry, with the exception of agriculture, is conducted by corporations whose securities have a wide distribution. The mines in Arizona may be owned by stockholders in New York, and, hence, of the total income of the Arizona mines, only about 60 or 70 per cent is probably disbursed to the residents of the State of Arizona, i.e., the part that goes to wage and salary earners. The same is true to a lesser degree of ownership of other property. About one-third of the farm land in the country is owned by non-farmers, and it is conceivable that the owners of farm land in Iowa reside in Illinois, and the owners of land located in Illinois reside in Iowa. Evidently, to trace the income from such land among the States would be next to impossible.

The Method of Estimating Income by States.

Even if the material necessary for the computation of the income of the people of each State were as plentiful and as reliable as that entering into the computation of the national income as a whole, it would be absolutely prohibitive, from the standpoint of expense, to follow out for each State individually the detailed and exhaustive process employed in the preparation of the national totals. That enormous task would then be multiplied forty-nine times. However, the problem is rendered less formidable by the very limitation of the data which are available for individual States.

Is there not a way of utilizing the reasonably authentic national estimates, computed with minute care, in connection with the general data that can be obtained for individual States, to arrive at reliable figures showing the income of the people in each State? The method used in this report is an attempt to accomplish this end. It consists of first apportioning separately the national totals of the various component parts of the income of the American people to the several States, in accordance with carefully computed indices, and then combining the estimates for the individual items into totals representing the income of the people in each State.

The national totals employed in this volume are those computed by W. I. King, of the National Bureau of Economic Research.

Wherever it has been possible to compute independent totals by States, they have, in the final form, been adjusted to correspond with Dr. King's estimates for the entire country. Unless otherwise stated, the terms used are as defined in *Income in the United States*, Vols. I and II.

The main divisions under which the various items of income have been studied are as follows:

Wages and Salaries
Agriculture
Entrepreneurial and Property Income
Miscellaneous Incomes.

Current Income vs. Total Net Income.

As explained by Dr. King in his Preliminary Statement, the final estimates of the total income in each State are treated in this report under two heads:

A. Current Income.
B. Total Net Income.

Since no hard and fast definition of income is possible, it will prove helpful to the reader to gain a clear idea of the items of income entering into the final estimates presented in this report, which may be summed up as follows:

A. Current Income.
   1. Wages and salaries
   2. Interest
   3. Dividends
   4. Rents
   5. Business profits of individuals, excluding changes in the value of inventories
   6. Income from the keeping of cows, gardens, and poultry by non-farmers
   7. Imputed rent of owned homes
   8. Imputed interest on the value of durable consumption goods in the hands of consumers.[1]

[1] The imputed interest on durable consumption goods is omitted from most of the analytical tables dealing with current income.

B. Total Net Income.

This comprises all the items listed under *current* income and, in addition, it includes surpluses and gains on inventories accruing to individuals.

To evaluate the merits of the two concepts of income, i.e., *current* income and *total net* income, is rather difficult. As indicated in the Preliminary Statement, there can be but little doubt that the second is more accurate from an accounting standpoint, provided it were possible to compute the changes in surpluses and inventory values with precision. Unfortunately, the computation of the latter item is subject to considerable error, so that its inclusion renders the final estimates somewhat less accurate, especially when the totals are not used as absolute measures but as relatives for purposes of comparing different geographic units where inventory values present a variable not at all proportionate to the income from all other sources. Consequently, for many purposes, estimates of *current* income may be considered as superior and more reliable.

Income as a Measure of Economic Welfare.

The chief reason for studying the geographic distribution of income is to find a measure or measures of the economic well-being of the people in the different parts of the country. Income is surely a good, if not the best, indicator of economic welfare, and to know the income and the distribution of income in a given section of the country is to be able to judge the approximate position in the scale of living of the bulk of its inhabitants. One should, however, be cautious in the use of these figures. As yet, income is not open to exact mathematical measurement, and, consequently, it may cover somewhat different things in different parts of the country. Although, in the present study, care has been taken to make the data for all States comparable, there still are a number of factors that could not be adjusted to make the figures entirely uniform.

The composition of the population in the different States seriously interferes with making accurate comparisons. The section of the country with a large farm population may show a smaller per capita income than urban States. Yet, is the economic well-being of the people in the former lower than in the latter? There are a great number of things a farmer gets which cannot be measured in

dollars and cents. His freedom of action, his abundance of fresh air, and his extensive space are undoubtedly worth a great deal to the farmer, but how much? The inhabitant of the large city, on the other hand, enjoys certain conveniences that the farmers and the dwellers in small cities do not have, and on which it would be impossible to place a money value. Again, the farmer's expenses for prime necessities are undoubtedly smaller than those of the resident of the city. Should we make allowance for this fact in computing his income? There is undoubtedly some merit in so doing. But there are also serious objections. It can with reason be argued that expenses and income are entirely different things; that if the farmer spends less, he also enjoys less. However that may be, it is obviously impossible to measure with accuracy the true value of the farmer's dollar as compared with that of the urban dweller.

An attempt made to measure at least partially the purchasing value of the dollar on the farm, as compared with that in the city, shows that, when adjusting merely for rent and food, the average consumer's dollar on the farm would purchase about one-third more than in the city. Using this rough estimate,[1] one would apparently have to raise the farmer's money income at least 33⅓ per cent in order to compare it with urban incomes. But even such an adjustment would be only problematic, and would fail to give the exact values.

The difficulty experienced in comparing farm incomes with city incomes presents only an extreme and clear-cut case. Similar problems are encountered in comparisons between incomes of those living in large cities and incomes of people living in small cities. The cost of living, particularly the cost of rent, is known to be higher in the larger cities, and consequently higher money incomes under those conditions may not really bring greater comfort than do lower incomes in places where the cost of necessities is not so

[1] The estimate is based on the following facts: (1) The part of the farm food supply, which is produced either on the home farm or in the locality where the farm is located, is estimated by the Department of Agriculture to be about 69 per cent of the total consumed. (2) The ratio of farm prices to city prices for food products is estimated to be 0.5. (3) The ratio of the cost of housing on the farm (as allowed in our estimates) to that in the city is estimated to be about 0.35. (4) According to a study made by the U. S. Bureau of Labor Statistics, food makes up about 38.2 per cent and housing about 18.7 per cent of the total family budget.

high. The gradation in the cost of necessities of life is very great between the smaller and larger places, and the distribution of the population living under the different economic conditions is certainly not the same in each state. (Hence, any comparisons between the economic welfare of the people in the various States, as indicated by income, can, at best, be only of a very general nature.)

Income Data as Applied to Marketing Problems.

Aside from being an aid in measuring the economic status of the people in the various States, the geographic distribution of income may be made to serve an important function in problems pertaining to the marketing of goods. Here, again, the figures on income must be used with great discretion. Not all the income received by the people is spent for consumption goods, and the portion so used, obviously, does not vary in exact proportion to the total income, particularly when we consider certain classes of consumption goods.

To measure the ability of the people to purchase commodities, the indices must be carefully selected to fit the special problems at hand. The needs of the investigators along this line have been given careful consideration in the preparation of this report. Not only in the final summaries and in the analytical tables, but also in the material presented in connection with the sectional estimates of income, data will be found that should prove of help in the solution of marketing problems.

Income and Taxation.

The view is widely held that, in a democratic country, good government requires that the burden of taxation be felt by all citizens, for there can be no healthy interest in government, unless the majority of the people feel that they contribute materially towards its support. However, it is also strongly contended that taxation should be graduated in accordance with the ability of the citizens to pay, and that, all things being considered, the best basis for the apportionment of taxes is income.

It often becomes necessary for a State to choose between the "pay as you go" policy and that involving the issuance of long-term bonds. Is it good policy to defray the expenses of a certain

public project through added taxation, or must the payment for it be deferred to some future date and generation? How does the burden of taxation in the given State compare with that of others? To answer these and many similar questions requires a knowledge of the income of the people.

The problems of the student of taxation have, therefore, also been considered in the various phases of this report. It is hoped that the analytical tables appearing in the last chapter will prove of particular value. In these tables, an attempt has been made to view the income of the people in each state from as many angles as is compatible with reasonable accuracy.

Factors Influencing Income in Different States.

It may be helpful in the utilization of the estimates presented in this report, as it was in their construction, to have a broad perspective of the factors determining the relative size of the income of the people in different sections of the country each year. There are apparently two sets of factors at work. The first of these determines the *secular* position, so to speak, of each State in the income scale. The natural resources, the composition of the population, the advantages gained by priority of settlement and development, the strategic position with respect to shipping and marketing, the accumulation of capital in older communities — all these and similar conditions have placed the various States in positions with respect to relative income which will probably be maintained over a long period of years. The relative position of the Northern States, when compared with those of the South, is an example of the advantage gained by the former States which will probably persist. It is reasonable to believe that, for many years to come, the average normal income of the people living in New York, for instance, will be greater than that of the people living in Alabama. The factors in the second set, which are intimately tied up with the first, center around the industrial composition of the various parts of the country, and are responsible for short-time changes in the total income. Each State may be characterized by one or more industries, or groups of industries, which form the chief support of the population. Fluctuations affecting individual industries may, therefore, exert great influence upon the income in dif-

ferent States. Such fluctuations may, in any year, bring the average income of the people of a State, normally belonging in a higher income level, down to, or even below, the average income of the States usually characterized by low incomes. This actually happened in 1921, when the average income in States like South Dakota fell below that of the people in Louisiana, Kentucky, and other Southern States. In that year, owing to the depression in certain manufacturing industries, the income of the people of Michigan and Ohio was reduced to a greater extent than that in other States in the same general class.

The Period Covered by this Report.

No year is a *normal* year for all industries, and, consequently, conditions obtaining in any one year can hardly be accepted as being fully descriptive of the position of any State with respect to income. A picture of *normal* conditions may only be had through a study of the data for a series of years. As only three years, — 1919, 1920, and 1921, — are covered in this volume, it is necessary that the data presented be considered in the light of the peculiar conditions existing in each of the three years. Willard Thorp, in his *Business Annals*, prepared for the National Bureau of Economic Research in connection with its forthcoming analyses of business cycles, briefly characterizes these three years as follows:

"1919 — Uncertainty. Extraordinary activity begins, late spring. Business revival. Enormous output of new securities. Speculation. Money tightens. Labor troubles. Moderate crops.

"1920 — Great activity. Prices high. Money tight. Rapid decline, beginning late spring, to stagnation and unemployment. Many failures. Moderate crops.

"1921 — Deep depression. Severe unemployment. Money eases. Rapid liquidation and revival begins at mid-year. Crops short and prices low."

We see that, for the country as a whole, the period presents almost a complete economic cycle with the peak around the latter part of 1919 and the beginning of 1920, and the trough at the end of 1920 and the beginning of 1921. The above description of the

three years may well serve as a background for the material developed in the coming chapters of this report.

The Presentation of the Material.

The present volume is intended to be chiefly a statistical presentation of the more salient factors pertaining to the income of the people of the United States, its sources, and geographic distribution. In view of the extent of the ground necessarily covered in a study of this kind, it is almost impossible to present all the data that went to make up the various estimates. Only the more important material has been selected for presentation, but, even in the selected material, the number of items is multiplied to such an extent by the forty-nine geographic units covered that it is obviously impracticable, in a volume of this size, to do justice to all the points of interest revealed by the data. The analytical discussion must, then, of necessity, be limited in scope; only what seem to be the more important items can be touched upon. Most of the material will consequently appear only in the form of tables, and it is left to the reader to glean from these tables the items that are of interest or use to him.

CHAPTER II

WAGES AND SALARIES[1] IN INDUSTRIES COVERED BY THE CENSUS

Importance of Wages and Salaries in the National Income.

Wages and salaries combined make up the most important item in our national income. In 1919 the estimated total payroll of the country was about $34,769,000,000, or nearly 54 per cent of the total current income received by the entire population. Owing to the unusual activity in manufacturing industries in 1920, and to the great decline in income from agriculture in 1921, the percentages of the total national income represented by wages and salaries were even greater in these two years than in 1919. In 1921 wages and salaries accounted for approximately 58 per cent and in 1920 for about 59 per cent of the total current income[2] in the respective years.

When we consider in connection with the above figures the fact that wages and salaries play a greater rôle as a source of income in some States than in others, we realize that accuracy in the apportionment between States of this part of the national income is of very great moment. Unfortunately, the data available to make such a distribution are not as plentiful as one would desire. The Census on which we must depend for the bulk of our data is taken intermittently, and does not cover all the industries. A great deal of estimating and piecing together must therefore be done.

Following the limitations of the available material, the entire field of wages and salaries has been divided into five parts which, as will be observed, are by no means of equal magnitude. These divisions are as follows:

1. Manufactures
2. Mines, Quarries, and Oil Wells

[1] Throughout this volume, the term "wages and salaries" is used to include pensions, compensation for injuries, etc., and hence is synonymous with "the total share of employees."

[2] In calculating this percentage, *current income* excludes, in addition to Gains in Inventory Values, Imputed Interest on the Value of Durable Consumption Goods in the Hands of Consumers.

3. Agriculture
4. Construction
5. Trade, Transportation, and Miscellaneous Industries.

In this chapter an attempt will be made to cover briefly the three industries namely, — Manufactures, Mining, and Agriculture, for which the United States Department of Commerce furnishes information in the form of periodic censuses covering the entire country.

MANUFACTURES

The Census of Manufactures.

Of all the five classes into which the income from wages and salaries has been divided for purposes of this study, the manufacturing field offers the most complete information with regard to the share of the national total received by employees in each State. The regular Census of Manufactures, which is now taken every two years, furnishes accurate and almost complete data for two years out of the three under consideration — 1919 and 1921. Hence, the problem encountered in estimating wages and salaries in this very important field was found to be comparatively simple, the only real difficulty lying in the distribution of the national total for 1920.

Cyclical Fluctuations Not Synchronous Throughout the Country.

Apart from the general upward trend due to the industrial expansion of the United States, the amount of wages and salaries disbursed to employees by manufacturing concerns varies considerably from year to year. Taking the three years covered by this study, we find that, for the entire United States, the totals fluctuated from about $13,624,000,000 in 1919 to $17,368,000,000 in 1920, and $11,050,000,000 in 1921. Have wages and salaries in manufacturing industries varied in the same proportion in each of the forty-eight States? If this were so, our problem would be still further simplified, as the distribution by States of the 1920 total could be made on the basis of the Census figures for either 1919 or 1921. However, it is found to be a fact that cyclical fluctuations are not synchronous in all industries and all sections of the country. It occasionally happens that, while one section of the

country is in the midst of an industrial depression, another section enjoys normal and sometimes even better than normal conditions in business activity and volume of employment. A glance at Table I will show why this is likely to be the case. In this table, we have twenty-four groups of manufacturing industries all reduced to

TABLE I. — INDICES OF EMPLOYMENT AND PRODUCTION FOR SPECIFIED MANUFACTURING INDUSTRIES IN THE CONTINENTAL UNITED STATES
1919—1920—1921
(Base 1919)

Type of Index and Industry	Year		
	1919	1920	1921
Employment Indices			
Automobiles[a]	100.0	105.5	58.9
Boots and Shoes[a]	100.0	93.7	87.0
Chemicals[a]	100.0	103.8	85.3
Clothing[a]	100.0	103.6	92.8
Cotton Manufactures[a]	100.0	104.9	104.0
Iron and Steel[a]	100.0	109.5	67.6
Knit Goods[b]	100.0	94.9	87.2
Leather[a]	100.0	93.0	73.1
Metals[a]	100.0	104.9	66.8
Paper[a]	100.0	103.8	91.6
Printing and Publishing[a]	100.0	108.0	95.3
Railroad Cars[a]	100.0	99.0	64.1
Tobacco[b]	100.0	101.4	98.7
Wood Work[a]	100.0	107.0	82.3
Woolen Manufactures[a]	100.0	87.3	92.8
Production Indices			
Canned Foods and Preserves[d]	100.0	92.0	109.0
Chocolate, Coffee, and Spices, etc.[d]	100.0	86.2	87.2
Copper and Zinc Smelting and Refining[c]	100.0	97.0	40.0
Flour[c]	100.0	83.0	91.0
Glass, Cement, and Clay Products[c]	100.0	116.0	85.0
Lumber and Timber Products[c]	100.0	100.0	85.0
Slaughtering and Meat Packing[c]	100.0	89.0	89.0
Shipbuilding, Steel[c]	100.0	67.0	33.0
Sugar[d]	100.0	117.0	124.0

[a] Computed from figures appearing in the *Review of Economic Statistics* (Harvard Economic Service), Supplement 1, June, 1923.
[b] Computed from employment statistics appearing in different issues of the *Monthly Labor Review*.
[c] Based on figures published in the *Survey of Current Business*.
[d] Based on figures compiled by Miss Elizabeth Putnam, National Bureau of Economic Research.

the same basis with respect to the volume of employment or production. Starting with the same relative number of 100 in 1919, no two industries have apparently fluctuated in the other two years in exactly the same manner. The variation in the fluctuations of the different industries is certainly very great. Considering only the employment indices for the fifteen industries listed at the head of the table, we find that in 1920 the spread was between 87.3 and 109.5, or 22.2 points, while in 1921 the difference between the highest and the lowest of these indices was even greater, giving a dispersion of over 45 points.

Fluctuations in Total Payrolls and Composition of Industries.

It is well known that the composition of industry is not uniform throughout the country. An examination of the figures presented in the *Census of Manufactures* will show that many of the more important industries are concentrated within narrow geographic areas, and, consequently, the situation in one or two industries may well determine the relative employment conditions of an entire State. Thus, we know that Michigan, where the automobile industry is so dominant, was hit harder than most of the other States by the depression of 1921. Ohio is another State where one group of industries — iron, steel, and other metals — was mainly responsible for pulling the total volume of employment down to a very low point in 1921.

Under such conditions, it is quite apparent that the relative yearly fluctuations in the total payroll in manufacturing industries in different States depend largely upon the industrial composition of the States.

Rate of Development of Manufacturing Not the Same in All Sections of the Country.

In addition to the differences in the cyclical swings, the proportion of the total payrolls in manufacturing industries accruing to the employees of each State will change from year to year on account of the difference in the rate of development of the several parts of the country. For instance, in the five years between the 1914 and 1919 censuses, the industrial development of the Middle West progressed at a more rapid pace than that of the New England States. In 1914 Massachusetts had an average of 606,698 factory

workers, which by 1919 had increased to 713,836, a growth of less than 18 per cent. During the same period, the number of factory workers in Ohio increased 43 per cent; in Indiana it increased 40 per cent, and in Wisconsin 36 per cent. The total amount of wages in each of the above States showed the same tendency. While in Massachusetts the total payroll increased 125 per cent, the increases in Ohio, Indiana, and Wisconsin were 197 per cent, 166 per cent, and 157 per cent, respectively.

From the above it follows that, to distribute the 1920 payrolls on the basis of the Census figures for either 1919 or 1921, would lead to serious errors. Some adjusting factor must apparently be introduced to bridge the gap between the Census years.

Yearly Index for Each State of Total Manufacturing Payrolls.

Obviously, if it were possible to obtain an index for each State of the total amount of pay received by employees in manufacturing industries in 1919, 1920, and 1921, the solution of the problem would be at hand. The total amount of wages and salaries in the manufacturing industries of each State in 1920 would then be estimated by applying these indices to the payroll figures as reported by the Census of Manufactures. Unfortunately, payroll data by States are rather scarce, and it has therefore been necessary to resort to a more or less round-about method to secure the desired results.

Assuming that, in general, a given industry is affected by cyclical fluctuations in very much the same manner throughout the country, the figures presented in Table I have been used to construct indices of employment in each State which, together with the Census data, serve as a basis for estimating the relative distribution of wages and salaries in 1920. In computing the indices of employment just mentioned, the indices representing each industry for the entire United States have been weighted in accordance with the relative importance of the industry in the given State, as indicated by the number of employees engaged therein in 1919. The unimportant industries, which presumably serve local consumers, were assumed to have remained the same during the three years, and, consequently, their index of employment was taken as 100 each year. An example will help to clarify the method employed.

Suppose a State has the following distribution of its employees in manufacturing industries in 1919:

Automobiles	10
Boots and Shoes	10
Clothing	5
Cotton Manufactures	10
Iron and Steel	20
Leather	10
All Other Industries	35
Total	100

Taking the index of employment for 1919 as 100, if changes in employment have been in accordance with the indices shown in Table I,[1] the above percentages will have changed in 1921 to:

Automobiles	5.9
Boots and Shoes	8.7
Clothing	4.6
Cotton Manufactures	10.4
Iron and Steel	13.5
Leather	7.3
All Other Industries	35.0
Total	85.4

As indicated above, "All Other Industries," which separately represent very small fractions of the total number of employees attached to manufacturing industries, are assumed not to have changed in volume of employment, and still represent in our example 35 per cent of the total number employed in 1919. The total of the transformed percentages representing the number of employees in the individual industries, or, in the above case, 85.4, is accepted as an approximation of employment in 1921. A figure may similarly be obtained for 1920, or any of the other years following 1921.

The approximate indices of employment in manufacturing industries for each State are presented in Table II. It should be stated emphatically that these indices are, at best, but very rough approximations, and are presented merely as an intermediary step in the estimating of the final index of the relative amount of wages and salaries received by manufacturing employees in each State. These indices cannot be recommended as being sufficiently accurate to be used independently without careful adjustment. The employment indices for each State shown in Table II have been

[1] See p. 51.

TABLE II. — APPROXIMATE INDICES OF EMPLOYMENT IN MANUFACTURING INDUSTRIES FOR EACH STATE[a]
1919—1920—1921 (Base 1919)

State and Geographic Division	Year		
	1919	1920	1921
New England			
Maine	100.0	97.6	88.7
New Hampshire	100.0	98.8	94.0
Vermont	100.0	99.9	94.1
Massachusetts	100.0	99.2	83.8
Rhode Island	100.0	99.2	95.6
Connecticut	100.0	101.9	86.7
Middle Atlantic			
New York	100.0	100.4	90.2
New Jersey	100.0	96.9	88.2
Pennsylvania	100.0	100.2	84.2
East North Central			
Ohio	100.0	101.9	84.9
Indiana	100.0	102.3	83.6
Illinois	100.0	100.1	89.5
Michigan	100.0	102.6	76.5
Wisconsin	100.0	100.2	90.3
West North Central			
Minnesota	100.0	98.6	89.6
Iowa	100.0	99.8	89.1
Missouri	100.0	100.2	89.5
North Dakota	100.0	98.8	85.5
South Dakota	100.0	98.2	90.5
Nebraska	100.0	96.7	90.3
Kansas	100.0	96.7	86.7
South Atlantic			
Delaware	100.0	99.2	89.6
Maryland	100.0	97.2	86.0
District of Columbia	100.0	100.3	96.0
Virginia	100.0	100.8	91.9
West Virginia	100.0	104.1	83.9
North Carolina	100.0	102.1	95.8
South Carolina	100.0	103.4	98.3
Georgia	100.0	100.9	89.9
Florida	100.0	96.9	85.5
East South Central			
Kentucky	100.0	101.2	87.6
Tennessee	100.0	99.9	90.9
Alabama	100.0	100.8	84.5
Mississippi	100.0	100.4	87.3
West South Central			
Arkansas	100.0	100.0	93.1
Louisiana	100.0	100.0	90.6
Oklahoma	100.0	101.1	90.1
Texas	100.0	100.5	88.1
Mountain			
Montana	100.0	99.5	85.1
Idaho	100.0	99.6	85.6
Wyoming	100.0	99.6	82.5
Colorado	100.0	99.5	90.6
New Mexico	100.0	99.7	77.4
Arizona	100.0	98.6	67.0
Utah	100.0	101.8	94.2
Nevada	100.0	98.8	79.4
Pacific			
Washington	100.0	93.0	75.1
Oregon	100.0	99.8	88.3
California	100.0	93.1	83.9

[a] These indices are only rough approximations of the relative changes in employment in the different States. Since in the computation of these indices only fluctuations in the more important industries in each State have been considered — it having been assumed that, on the average, employment in the less important and purely local industries remained unchanged through the three years — the amplitudes of the oscillations are undoubtedly underestimated. The indices cannot be recommended as being sufficiently accurate to be used in other investigations without very careful adjustments.

adjusted to correspond with indices of total payrolls in each State based on the figures of the Census of Manufactures for 1919 and 1921. In other words, by using the employment data presented in Table II (1919, 1920, and 1921) in conjunction with the payroll data recorded by the Census of Manufactures (1919 and 1921), indices of the total payrolls in manufacturing industries for the three years, 1919, 1920, and 1921, have been computed for each State. On the basis of these indices,[1] preliminary figures of the total wages and salaries in manufacturing industries in 1920 were computed. These figures then served as a basis for the distribution of the final total of wages and salaries in manufacturing industries of the entire Continental United States.

It should be noted that, in our method of estimating the total wages and salaries for 1920, only differences in the relative changes in employment in the different States have been taken into consideration. It has not been possible to make allowances for changes in average wage rates in the different parts of the country. However, it is quite improbable that any errors thus introduced were large enough to make any appreciable differences in the final totals.

Power Laundries.

The method described above applied to all manufacturing industries exclusive of power laundries. For power laundries the wages and salaries were distributed on the basis of the Census figures for 1919 in each of the three years, without making any adjustments for the intercensal years. It is believed that laundry service is not subject to as violent fluctuations as some of the other industries, and, consequently, the changes in the geographic distribution of wages and salaries in this industry within the period of one or two years can hardly be significant.

The Final Estimates.

The final estimates of the total wages and salaries received by employees in all manufacturing industries by States are presented in Table III. It will be noted that invariably 1920 is the highest

[1] No presentation is made of these indices for the reason that, as noted in the following paragraph, no adjustment could be made in 1920 for changes in the average wage level in the different States, and, consequently, the legitimate use of these indices for purposes of other investigations would be even more limited than that of the figures shown in Table II.

TABLE III. — TOTAL WAGES AND SALARIES PAID IN ALL MANUFACTURING INDUSTRIES IN EACH STATE

1919—1920—1921

State and Geographic Division	Dollars (000's Omitted) 1919	1920	1921	Per Cent of Total 1919	1920	1921
Continental United States	**13,624,401**	**17,368,540**	**11,050,617**	**100.000**	**100.000**	**100.000**
New England	**1,790,390**	**2,360,741**	**1,492,652**	**13.141**	**13.592**	**13.508**
Maine	113,071	144,809	99,914	.829	.834	.904
New Hampshire	93,493	116,451	80,355	.686	.671	.727
Vermont	41,863	52,039	35,177	.307	.300	.318
Massachusetts	961,310	1,327,483	828,597	7.057	7.643	7.498
Rhode Island	170,371	213,562	149,960	1.251	1.229	1.357
Connecticut	410,282	506,307	298,649	3.011	2.915	2.702
Middle Atlantic	**4,530,766**	**5,772,154**	**3,731,066**	**33.256**	**33.233**	**33.764**
New York	1,994,587	2,617,918	1,777,062	14.640	15.073	16.081
New Jersey	779,102	951,229	620,190	5.719	5.477	5.613
Pennsylvania	1,757,077	2,203,007	1,333,814	12.897	12.683	12.070
East North Central	**3,911,684**	**4,995,682**	**3,043,721**	**28.710**	**28.763**	**27.543**
Ohio	1,231,800	1,508,160	866,033	9.042	8.684	7.837
Indiana	407,264	545,540	337,717	2.989	3.141	3.056
Illinois	1,092,628	1,444,292	985,524	8.018	8.316	8.918
Michigan	797,884	1,025,060	551,862	5.856	5.902	4.994
Wisconsin	382,108	472,630	302,585	2.805	2.720	2.738
West North Central	**765,346**	**989,460**	**678,211**	**5.618**	**5.697**	**6.137**
Minnesota	176,906	222,851	150,630	1.299	1.283	1.362
Iowa	127,015	164,766	111,208	.932	.949	1.007
Missouri	282,918	378,118	263,150	2.077	2.177	2.381
North Dakota	7,277	9,522	6,504	.053	.055	.059
South Dakota	10,509	12,859	8,693	.077	.074	.079
Nebraska	63,771	78,168	53,949	.469	.450	.488
Kansas	96,950	123,180	84,077	.711	.709	.761
South Atlantic	**962,922**	**1,176,386**	**734,850**	**7.068**	**6.773**	**6.650**
Delaware	45,436	48,992	26,446	.334	.282	.239
Maryland	192,376	237,203	153,764	1.412	1.366	1.392
District of Columbia	20,404	27,255	20,706	.150	.157	.187
Virginia	148,483	176,918	109,117	1.089	1.019	.988
West Virginia	121,050	161,499	96,491	.889	.930	.873
North Carolina	152,528	185,935	119,284	1.119	1.069	1.079
South Carolina	74,009	93,751	62,189	.544	.540	.563
Georgia	129,282	154,382	93,347	.949	.889	.845
Florida	79,354	90,451	53,506	.582	.521	.484
East South Central	**377,884**	**474,924**	**300,144**	**2.774**	**2.734**	**2.716**
Kentucky	88,957	122,322	84,096	.653	.704	.761
Tennessee	109,361	136,822	90,652	.803	.788	.820
Alabama	119,614	147,739	87,742	.878	.851	.794
Mississippi	59,952	68,041	37,654	.439	.391	.341
West South Central	**379,619**	**484,294**	**325,218**	**2.786**	**2.788**	**2.943**
Arkansas	57,540	63,766	36,975	.422	.367	.335
Louisiana	119,126	152,181	101,860	.876	.876	.922
Oklahoma	49,238	61,320	43,982	.362	.353	.398
Texas	153,715	207,027	142,381	1.126	1.192	1.288
Mountain	**181,687**	**231,451**	**155,614**	**1.332**	**1.333**	**1.408**
Montana	30,746	37,022	22,459	.226	.213	.203
Idaho	21,950	25,169	18,669	.160	.145	.169
Wyoming	13,322	20,940	16,117	.098	.121	.146
Colorado	58,465	75,325	53,017	.429	.434	.480
New Mexico	7,936	10,272	6,084	.058	.059	.055
Arizona	15,795	19,182	9,584	.116	.110	.087
Utah	28,389	36,256	24,744	.208	.209	.224
Nevada	5,084	7,285	4,940	.037	.042	.044
Pacific	**724,103**	**883,448**	**589,141**	**5.315**	**5.087**	**5.331**
Washington	230,771	243,919	127,639	1.694	1.405	1.156
Oregon	97,745	111,657	64,797	.717	.643	.586
California	395,587	527,872	396,655	2.904	3.039	3.589

of the three years, and that, in all but three cases (California, Wyoming, and the District of Columbia), 1921 is the lowest.

An examination of the last three columns of Table III reveals some very interesting points regarding the relative effect on the different States of the violent changes in the industrial conditions of the country which have taken place in the three years. These three columns show the percentages of the total wages and salaries in manufacturing industries received by employees residing in each State. Without directly portraying changes in the absolute amounts, these percentages disclose the redistribution of the total wage bill of the manufacturing industries of the country among the several States. It is quite apparent that the East North Central division was hit hardest by the depression of 1921. Out of an already reduced total payroll, this division received 27.5 per cent in 1921 as compared with 28.8 per cent in 1919. Ohio and Michigan, where the metal and automobile industries are so heavily represented, seem to be chiefly responsible for the poor showing of the entire division in 1921. In 1919 manufacturing employees in Ohio received over 9 per cent of the total payrolls of the country; in 1921 they received only 7.8 per cent. Michigan's share also dropped about 1 per cent.

Distribution of Manufacturing Activities.

Table III also gives a very clear picture of the distribution of manufacturing activities. While it is true that average wages and earnings are not the same in each State, and consequently cannot be taken to show the volume of manufacturing, the figures shown in this table are very significant. Over 33 per cent of the total payrolls of manufacturing industries of the country is received by employees in the three States making up the Middle Atlantic division. The employees of New York and Pennsylvania alone receive over 27 per cent of the total payrolls. About 75 per cent of the total manufacturing payrolls of the country is concentrated in the eastern part of the United States.

MINES, QUARRIES, AND OIL WELLS

The Census Year.

As in the case of manufactures, the United States Census furnishes a very good background for estimating the amount of

income derived in each State from wages and salaries in the mining industries. The 1920 Census of Mines, Quarries, and Oil Wells furnishes complete figures by States of the share of employees in this industry for 1919. In the final estimates used in this report, no changes are made from the 1919 Census figures except in the case of coal mines where the figures have been adjusted by about $39,000,000 to take care of items duplicated under the title of manufactures.[1]

The Intercensal Years.

It is obvious that, in the apportioning by States of the total wages and salaries in the mining industry for 1920 and 1921, to use the 1919 Census figures, as reported, would not yield highly accurate results. This is particularly true on account of the fact that two-thirds of the total wages and salaries in mining industries are earned in coal mines. Coal mines are subject to frequent strikes which affect different areas in varying degrees. A local strike would naturally reduce the total mining payroll of the State containing the field affected. Furthermore, a strike in one coal area may stimulate production in other fields, thus materially changing the proportionate share of each State in the total national income from wages and salaries in coal mines. It would, therefore, appear that an adjustment of some sort is necessary if the Census year is to be made basic in computing wages and salaries in coal mines for the intercensal years. The adjustment of the Census figures for coal mines was made on the basis of the total value of coal mined each year in each State. About 70 per cent of the total value of the product in mining is paid out in wages and salaries, which fact makes the value of coal a good indicator of the total disbursements to employees. Accordingly, the wages and salaries paid to coal mine employees in each State in 1920 and 1921 were approximated by multiplying the corresponding figures for 1919, as recorded in the 1920 Census, by the ratio of the value of coal in 1920 (or 1921) to that in 1919. These estimates were then adjusted to correspond with the national totals computed by Dr. King.

It should be noted that this process was followed in all States with the exception of Pennsylvania. For this State the figures as reported by its Department of Internal Affairs were used. The

[1] This difference occurs chiefly in the figures for Pennsylvania.

TABLE IV. — TOTAL WAGES AND SALARIES IN MINING INDUSTRIES IN EACH STATE
1919—1920—1921
DOLLARS (000's Omitted)

STATE AND GEOGRAPHIC DIVISION	1919			1920			1921		
	Total	Coal Mines	Other Mines	Total	Coal Mines	Other Mines	Total	Coal Mines	Other Mines
Continental United States	**1,415,903**	**935,272**	**480,631**	**1,859,208**	**1,283,425**	**575,783**	**1,290,124**	**1,044,705**	**245,419**
New England	**9,248**	.....	**9,248**	**11,078**	.....	**11,078**	**4,722**	.....	**4,722**
Maine	1,170	.....	1,170	1,399	.....	1,399	597	.....	597
New Hampshire	922	.....	922	1,106	.....	1,106	471	.....	471
Vermont	3,490	.....	3,490	4,180	.....	4,180	1,782	.....	1,782
Massachusetts	2,393	.....	2,393	2,867	.....	2,867	1,222	.....	1,222
Rhode Island	482	.....	482	576	.....	576	246	.....	246
Connecticut	791	.....	791	950	.....	950	404	.....	404
Middle Atlantic	**456,343**	**413,624**	**42,719**	**608,767**	**557,585**	**51,182**	**528,025**	**506,212**	**21,813**
New York	8,928	.....	8,928	10,698	.....	10,698	4,559	.....	4,559
New Jersey	6,119	.....	6,119	7,330	.....	7,330	3,124	.....	3,124
Pennsylvania	441,296	413,624	27,672	590,739	557,585	33,154	520,342	506,212	14,130
East North Central	**265,588**	**182,666**	**82,922**	**375,310**	**275,964**	**99,346**	**253,199**	**210,859**	**42,340**
Ohio	66,376	52,856	13,520	102,414	86,217	16,197	59,743	52,840	6,903
Indiana	34,271	31,267	3,004	50,189	46,590	3,599	34,606	33,072	1,534
Illinois	104,302	96,350	7,952	149,608	140,079	9,529	126,103	122,043	4,060
Michigan	55,107	2,193	52,914	66,472	3,078	63,394	29,922	2,904	27,018
Wisconsin	5,532	.....	5,532	6,627	.....	6,627	2,825	.....	2,825
West North Central	**94,932**	**33,796**	**6 ,136**	**114,944**	**41,704**	**73,240**	**62,536**	**31,318**	**31,218**
Minnesota	32,925	.....	32,925	39,447	.....	39,447	16,813	.....	16,813
Iowa	13,810	12,890	920	18,345	17,245	1,100	12,585	12,115	470
Missouri	18,641	8,934	9,707	23,518	11,887	11,631	14,430	9,474	4,956
North Dakota	1,188	1,188	.....	1,192	1,192	.....	1,323	1,323	.....
South Dakota	2,819	11	2,808	3,370	7	3,363	1,440	6	1,434
Nebraska	193	.....	193	230	.....	230	99	.....	99
Kansas	25,356	10,773	14,583	28,842	11,373	17,469	15,846	8,400	7,446

South Atlantic	168,252	138,354	29,898	240,397	204,583	35,814	148,701	133,435	15,266
Delaware	156	.....	156	184	.....	184	80	.....	80
Maryland	6,941	6,065	876	11,219	10,171	1,048	4,947	4,500	447
District of Columbia	8	.....	8	11	.....	11	4	.....	4
Virginia	17,929	14,261	3,668	24,157	19,764	4,393	14,554	12,681	1,873
West Virginia	134,564	118,028	16,536	194,461	174,648	19,813	124,697	116,254	8,443
North Carolina	1,688	.....	1,688	2,021	.....	2,021	862	.....	862
South Carolina	820	.....	820	985	.....	985	419	.....	419
Georgia	2,372	.....	2,372	2,839	.....	2,839	1,211	.....	1,211
Florida	3,774	.....	3,774	4,520	.....	4,520	1,927	.....	1,927
East South Central	111,745	92,808	18,937	143,179	120,493	22,686	99,794	90,124	9,670
Kentucky	56,955	51,788	5,167	83,281	77,091	6,190	58,653	56,015	2,638
Tennessee	14,626	9,732	4,894	19,377	13,516	5,861	12,040	9,541	2,499
Alabama	40,164	31,288	8,876	40,521	29,886	10,635	29,101	24,568	4,533
Mississippi	.....	.....	.....	.....	.....	.....	.....	.....	.....
West South Central	110,296	16,701	93,595	131,893	19,770	112,123	62,703	14,912	47,791
Arkansas	5,175	3,859	1,316	6,604	5,026	1,578	4,270	3,598	672
Louisiana	9,073	.....	9,073	10,871	.....	10,871	4,633	.....	4,633
Oklahoma	59,452	9,722	49,730	71,084	11,513	59,571	35,004	9,611	25,393
Texas	36,596	3,120	33,476	43,334	3,231	40,103	18,796	1,703	17,093
Mountain	152,335	50,226	102,109	178,535	56,218	122,317	104,026	51,886	52,140
Montana	28,723	6,061	22,662	34,382	7,240	27,142	17,362	5,791	11,571
Idaho	5,385	.....	5,385	6,466	.....	6,466	2,750	.....	2,750
Wyoming	16,171	11,425	4,746	18,630	12,947	5,683	15,538	13,115	2,423
Colorado	28,999	18,410	10,589	33,235	20,551	12,684	24,762	19,354	5,408
New Mexico	11,912	6,160	5,752	13,126	6,234	6,892	8,427	5,489	2,938
Arizona	31,452	.....	31,452	37,673	.....	37,673	16,060	.....	16,060
Utah	19,758	8,170	11,588	23,122	9,246	13,876	14,054	8,137	5,917
Nevada	9,935	.....	9,935	11,901	.....	11,901	5,073	.....	5,073
Pacific	47,164	7,097	40,067	55,105	7,108	47,997	26,418	5,959	20,459
Washington	8,330	7,001	1,329	8,592	7,003	1,589	6,550	5,871	679
Oregon	1,191	96	1,095	1,418	105	1,313	647	88	559
California	37,643	.....	37,643	45,095	.....	45,095	19,221	.....	19,221

fact that reliable figures were available each year for the coal mines of Pennsylvania reduced the probable error in our final estimates, as Pennsylvania alone accounts for nearly 50 per cent of the total wages and salaries disbursed in the coal mining industry.

The changes in employment in mines other than coal are more uniform throughout the country, and yearly adjustments by States are not considered essential. The apportionment by States of the estimate of total wages paid in all other mines was therefore made on the basis of the 1919 payrolls.

The Final Estimates For All Mining Industries.

Table IV gives comparative figures for 1919, 1920, and 1921 of the total income derived in the form of wages and salaries from the mining industries. It will be noted that Pennsylvania, West Virginia, and Illinois get the lion's share of this income. Of the total of $1,416,000,000 in 1919, these three States received $680,000,000, or 48 per cent. In 1921, the share of Pennsylvania, West Virginia, and Illinois constituted almost 60 per cent of the total. This enormous change in the geographic distribution of wages and salaries in mining industries is explained by the fact that the depression of 1921 affected chiefly the employees in mining industries other than coal. While the total wage bill in coal mines was slightly higher in 1921 than in 1919, the 1921 payrolls in all other mines were only about 50 per cent of those in 1919.

AGRICULTURE

Farm Wages Form a Small Fraction of Total Payrolls for All Industries.

Although there are more persons engaged in agriculture than in any other single industry, the annual agricultural payroll of the country is not very large. It represents, on the average, only a little more than 4 per cent of the total payrolls of all industries. The comparatively small amount paid out in wages and salaries in agriculture is, of course, due to the fact that most of the work on the farm is done by the farmer himself and his family, and, consequently, hired labor does not play as important a rôle in this industry as it does in others. Another reason is that farm wages are, as a rule, considerably lower than wages in manufacturing, mining, and other industries.

Geographic Distribution of Farm Wages.

The total wage bill in agriculture for the Continental United States in 1919 was about $1,415,813,000. This amount did not include salaries of farm managers. For 1920 and 1921, the estimated total amounts of wages paid out to employees in agriculture were about $1,581,000,000, and $1,324,000,000, respectively. In 1919 the West North Central States disbursed over 25 per cent of the total amount of farm wages. The geographic division next highest in the amount of farm wages was the East North Central, with about 18 per cent of the total. The Pacific division follows with approximately 13 per cent. Individually, California leads all the other States in the amount it pays out annually for farm labor. In 1921 it disbursed about $118,000,000, or nearly 9 per cent of the total for the country. Texas takes second place with respect to farm wages. In 1921 it paid out about $83,000,000, making up 6.3 per cent of the total. Illinois, New York, Iowa, and Kansas follow California and Texas with payrolls comprising from about 6 per cent to 5 per cent each.

Method of Estimating.

The estimates of the total amount of farm wages disbursed in each State in 1919 are based on the records of the 1920 Census.[1] For 1920 and 1921 the totals for each State have been estimated on the basis of

1. Average monthly farm wages in each State,
2. Crop acreage, and
3. Total amount of wages in 1919.

The mode of calculation of these totals may be outlined as follows:

A = Crop acreage 1919
B = Crop acreage 1920
C = Crop acreage 1921
D = Farm wages per month 1919
E = Farm wages per month 1920
F = Farm wages per month 1921
G = Amount paid out in wages in 1919

[1] *Census of Agriculture*, 1920, Vol. VI, p. 48.

TABLE V. — TOTAL FARM WAGES RECEIVED BY EMPLOYEES IN EACH STATE

1919—1920—1921

State and Geographic Division	Dollars (000's Omitted)			Per Cent of Total		
	1919	1920	1921	1919	1920	1921
Continental United States	**1,415,813**	**1,580,767**	**1,324,466**	**100.000**	**100.000**	**100.000**
New England	**56,095**	**65,286**	**63,668**	**3.963**	**4.130**	**4.807**
Maine	10,066	11,540	10,662	.711	.730	.805
New Hampshire	4,714	5,517	5,192	.333	.349	.392
Vermont	8,041	8,931	8,424	.568	.565	.636
Massachusetts	17,291	20,692	20,370	1.222	1.309	1.538
Rhode Island	2,194	2,419	2,530	.155	.153	.191
Connecticut	13,789	16,187	16,490	.974	1.024	1.245
Middle Atlantic	**129,451**	**146,173**	**145,982**	**9.143**	**9.247**	**11.022**
New York	67,152	80,445	77,494	4.743	5.089	5.851
New Jersey	18,858	22,431	20,807	1.332	1.419	1.571
Pennsylvania	43,441	43,297	47,681	3.068	2.739	3.600
East North Central	**249,240**	**284,001**	**247,171**	**17.604**	**17.966**	**18.662**
Ohio	48,464	54,552	46,754	3.423	3.451	3.530
Indiana	34,305	36,168	32,595	2.423	2.288	2.461
Illinois	82,882	92,792	83,892	5.854	5.870	6.334
Michigan	33,342	39,503	33,190	2.355	2.499	2.506
Wisconsin	50,247	60,986	50,740	3.549	3.858	3.831
West North Central	**357,110**	**394,716**	**308,467**	**25.223**	**24.970**	**23.290**
Minnesota	52,004	57,350	43,548	3.673	3.628	3.288
Iowa	73,806	83,496	65,693	5.213	5.282	4.960
Missouri	41,879	44,467	40,966	2.958	2.813	3.093
North Dakota	38,694	43,850	33,257	2.733	2.774	2.511
South Dakota	33,144	36,974	25,218	2.341	2.339	1.904
Nebraska	46,736	49,035	35,323	3.301	3.102	2.667
Kansas	70,847	79,544	64,462	5.004	5.032	4.867
South Atlantic	**107,371**	**118,906**	**95,733**	**7.583**	**7.522**	**7.228**
Delaware	2,941	3,335	3,086	.207	.211	.233
Maryland	17,456	19,238	17,907	1.233	1.217	1.352
District of Columbia	.....	.....	.....	.....	.....	.....
Virginia	21,322	23,585	20,675	1.506	1.492	1.561
West Virginia	6,074	7,003	6,159	.429	.443	.465
North Carolina	12,558	14,559	10,755	.887	.921	.812
South Carolina	15,857	17,452	12,278	1.120	1.104	.927
Georgia	19,850	21,783	14,357	1.402	1.378	1.084
Florida	11,313	11,951	10,516	.799	.756	.927
East South Central	**46,071**	**48,278**	**39,880**	**3.254**	**3.054**	**3.011**
Kentucky	18,944	18,764	16,013	1.338	1.187	1.209
Tennessee	11,723	12,615	11,046	.828	.798	.834
Alabama	8,056	9,153	6,755	.569	.579	.510
Mississippi	7,348	7,746	6,066	.519	.490	.458
West South Central	**169,152**	**186,589**	**148,328**	**11.948**	**11.804**	**11.199**
Arkansas	13,790	16,377	12,053	.974	1.036	.910
Louisiana	22,356	27,094	19,523	1.579	1.714	1.474
Oklahoma	42,403	44,356	33,403	2.995	2.806	2.522
Texas	90,603	98,762	83,349	6.400	6.248	6.293
Mountain	**118,113**	**135,453**	**104,805**	**8.342**	**8.569**	**7.913**
Montana	22,285	23,095	14,993	1.574	1.461	1.132
Idaho	19,113	20,724	16,503	1.350	1.311	1.246
Wyoming	9,712	12,520	10,106	.686	.792	.763
Colorado	28,534	34,014	27,423	2.015	2.152	2.071
New Mexico	11,725	13,678	11,026	.828	.865	.832
Arizona	11,807	14,223	9,761	.834	.900	.737
Utah	8,863	10,512	8,980	.626	.665	.678
Nevada	6,074	6,687	6,013	.429	.423	.454
Pacific	**183,210**	**201,365**	**170,432**	**12.940**	**12.738**	**12.868**
Washington	35,622	39,456	32,542	2.516	2.496	2.457
Oregon	21,959	22,083	19,576	1.551	1.397	1.478
California	125,629	139,826	118,314	8.873	8.845	8.933

Using the above factors, the estimate of the amount paid out in wages in 1920 equals $\frac{B \times E \times G}{A \times D}$; the estimated amount paid out in wages in 1921 equals $\frac{C \times F \times G}{A \times D}$.

The preliminary totals obtained in the manner indicated above have been adjusted so as to agree with the estimates for the Continental United States previously calculated by Dr. King. Complete data for the three years are recorded in Table V.

Salaries of Farm Managers.

The figures presented in Table V do not cover the entire amount of wages and salaries paid out in agriculture. According to the 1920 Census,[1] over 68,000 farms in the Continental United States are operated by farm managers. It is obvious that the distribution of salaries of these managers does not necessarily follow the same geographic lines as that for farm wages, and, hence, the amount received by farm managers is not calculated on the basis of the 1920 Census figures. The distribution of this item has been made in accordance with an index based upon the total number of farms operated by managers in each State, as reported by the Census[1] and the estimated relative level of wages and salaries in each State.[2] The final totals are shown in Tables XXXI, XXXII, and XXXIII.

[1] *Census of Agriculture*, 1920, Vol. V, p. 132.

[2] The estimated average full-time earnings of employees in trade, transportation, and miscellaneous industries in 1919 were taken as the index of relative wages and salaries by States (see Table VIII, Column M).

CHAPTER III

CONSTRUCTION

The Occupation Statistics of the 1920 Census of Population indicate that there were about 21,300,000 male employees in the Continental United States in 1920. Of these, approximately 2,500,000, or more than 11 per cent, are listed under occupations usually associated with the construction industry. The number actually attached to this industry is, of course, much smaller.[1] It is also understood that many of those nominally attached to construction do not draw their income wholly from this industry. The seasonal nature of the industry makes it necessary for son to seek employment at other occupations for a considerable part of the year. However, it is apparent that the wages and salaries in construction play an important rôle in the income of the American people. Unfortunately, there are no reliable statistics to enable us to measure accurately the amount of wages and salaries paid out annually in this industry, and to determine the share of the total received by employees in each State is even more difficult.

Construction is subject to fluctuations to a greater extent than any other industry, and it is probably foremost in the amount of unemployment among its workers. The earnings of employees in building construction vary greatly from time to time, and from place to place. Union scales of wages, which may be obtained for the building trades in the principal cities,[2] fail to indicate average yearly earnings, and apparently should be used with great caution in making estimates. It is known to be a fact that in times of depression union men manage to work for less than the regular scales, and, during periods of high building activity, the quoted scales exist only on paper.

Local conditions have a very great influence on the volume of construction and thereby affect the total earnings of those engaged

[1] See p. 23.

[2] Made available by the U. S. Bureau of Labor Statistics in its Bulletins *Union Scales of Wages and Hours of Labor* published annually, within recent years, as of May 15.

in the industry within a given area. Thus, increased building activity may start in one section of the country and not reach other localities until a year or so later. For example, according to figures published by the F. W. Dodge Corporation, the combined value of construction, in millions of dollars, in Ohio, Illinois, and Wisconsin was 696 in 1919, 598 in 1920, and 512 in 1921,[1] showing 1919 to be the highest year in building activity. During the same period, New York and New Jersey had a combined value of construction, in millions of dollars, of 577 in 1919, 639 in 1920, and 674 in 1921, which puts 1919 at the bottom. Similar differences are found in other sections of the country; hence, even if it were possible to obtain accurate rates of pay and accurate figures as to the number of persons attached to the construction industry in each State, the index constructed from these two factors would in itself be of doubtful value. Such an index would be only representative of normal full-time earnings which, in the construction industry, are only imaginary quantities. How, then, can we apportion the total wage and salary bill of the construction industry among the several States? It would appear that the volume of construction, if satisfactory figures can be obtained for each State, should afford an index which would be very helpful in estimating the actual amounts paid out in wages and salaries in this industry, especially if used in conjunction with an index based upon the total number of employees attached to the industry.

Index of the Volume of Construction by States.

There are two main sources for data pertaining to the volume of construction in the United States — first, the value of building permits, which may be obtained for over one hundred representative cities; second, the figures on construction contracts awarded, published by the F. W. Dodge Corporation.

Neither of these two sets of data is complete in itself. The former takes in all the building construction within certain cities, and takes no cognizance of other types of construction or buildings outside of city jurisdiction. Thus, industrial buildings located outside of city limits, which in some sections of the country are very important, are not reported under permit statistics. On the

[1] Adjusted to a 1913 basis, these figures, in millions of dollars, were 355, 238, and 283, respectively.

other hand, the F. W. Dodge Corporation figures, though representing the bulk of construction in the territory of that organization, cover, for the period under consideration, only about twenty-seven States in the East and Middle West.

An attempt has therefore been made to combine the data from the two sources in order to build up a percentage index of the volume [1] of construction to include all the States in the Union. In computing this index, it has been assumed that the F. W. Dodge figures are, if not complete, at least proportionately representative for all States reported, i.e., that the per cent of under-reporting, if such existed, was the same for all States under consideration. The States for which the F. W. Dodge reports are admittedly incomplete have been eliminated, so that approximations may be built up for them on the same basis as for States outside of the Dodge Corporation territory.

To facilitate discussion, we shall designate the two groups of data A and B, as follows:

A. Estimates based chiefly on building permits.
B. Figures reported by the F. W. Dodge Corporation.

The volume of construction in the States falling in group A has been estimated for 1920 according to the empirical formula given below, in which

V is the volume of construction in the State (comparable with the Dodge figures).
P is the amount of permits in specified cities.
C is the 1920 population in these cities.
S is the adjusted population for the State.
q is the correction added for industrial buildings, etc., for which permits are ordinarily not required.

$$\text{Formula: } V = \frac{P}{C} S + q.$$

It has been assumed that per capita building is considerably lower in rural than in urban communities, and in computing "S"

[1] Since this index refers to the proportion of the total construction of the country credited to each State each year, it may be taken to represent either *volume* or *value* of construction, i.e., in this case, the two are practically identical. We are here dealing with each year separately, and we are consequently not concerned about changes in the cost of construction from year to year, which generally differentiate indices of *physical volume* from those of *value*.

in the foregoing formula, rural population is given a weight of 1, as compared with 4 for urban population. In order to allow for such construction as is not included in building permits, the correcting factor "q" has been introduced, "q" being an estimate of the value of industrial building based on the amount of such building taking place in the territory covered by the F. W. Dodge Corporation, and apportioned to each State in accordance with the capital invested in manufacturing, as reported by the 1914 Census.

The estimates for the States in the South and West (group A), have been combined with the figures for the twenty-seven States covered by the Dodge Corporation (group B). The combined total then served as a basis for calculating percentage indices of the volume of construction in each State.

As can be seen, the estimates of the relative volumes of construction thus computed, are, at best, only rough approximations, and, in the aggregate, may carry a considerable error. However, for the purpose at hand we are not interested in aggregates. What we want is the fraction or percentage of the total volume of construction which may be ascribed to each State, and it is believed that the values calculated for States in group A are fairly representative of the *relative* volumes of construction in these States, and are sufficiently comparable with figures recorded by the F. W. Dodge Corporation to warrant the use of the two sets of data in the computation of a percentage index of construction by States.

A rough check as to the accuracy of the estimated indices of the volume of construction by States is presented in the last three columns of Table VI. It is obvious that all communities with a stationary population require comparatively little new construction, their needs being confined chiefly to replacements of existing buildings. Hence, one would expect the volume of construction to be affected principally by the rate of increase in population. In this connection, it should also be observed that, in most of the States of the Union, the growth in rural population in recent years has been negligible, and, consequently, urban population would be virtually the determining factor in the volume of construction required in each State. In Column D of the table, we have averages of the 1919, 1920, and 1921 percentages of the total estimated volume of construction in each State. Column E gives the per-

TABLE VI. — PER CENT IN EACH STATE OF THE TOTAL VOLUME OF CONSTRUCTION, THE TOTAL URBAN POPULATION, AND THE GROWTH IN URBAN POPULATION

State and Geographic Division	A	B	C	D	E	F
	Per Cent of Total					
	Volume of Construction				Urban Population 1920	Growth in Urban Population 1910–1920
	1919	1920	1921	Average for 3 yrs.		
Continental United States	100.000	100.000	100.000	100.000	100.000	100.000
New England	7.032	8.638	6.380	7.350	10.800	7.137
Maine	.336	.447	.283	.355	.552	.313
New Hampshire	.215	.411	.221	.282	.515	.206
Vermont	.188	.214	.174	.192	.203	.090
Massachusetts	3.646	4.498	3.666	3.937	6.721	4.322
Rhode Island	.556	.532	.513	.534	1.085	.527
Connecticut	2.091	2.536	1.523	2.050	1.724	1.679
Middle Atlantic	25.367	24.717	28.049	26.045	30.702	24.333
New York	12.807	13.752	16.311	14.290	15.818	11.557
New Jersey	4.202	4.247	4.633	4.361	4.558	4.733
Pennsylvania	8.358	6.718	7.105	7.394	10.326	8.043
East North Central	28.936	24.709	22.856	25.500	24.030	28.284
Ohio	9.266	7.954	7.674	8.298	6.772	8.331
Indiana	2.619	2.997	2.624	2.747	2.730	2.790
Illinois	8.764	6.257	6.181	7.067	8.108	7.647
Michigan	5.831	4.886	4.316	5.011	4.128	7.532
Wisconsin	2.456	2.615	2.061	2.377	2.292	1.984
West North Central	8.865	9.057	8.146	8.689	8.705	7.022
Minnesota	1.920	2.122	2.220	2.087	1.937	1.663
Iowa	2.200	2.108	1.499	1.932	1.612	1.605
Missouri	2.501	2.238	1.751	2.163	2.922	1.547
North Dakota	.121	.208	.034	.121	.162	.206
South Dakota	.177	.273	.280	.244	.188	.206
Nebraska	.927	1.224	1.057	1.069	.746	.774
Kansas	1.019	.884	1.315	1.073	1.138	1.021
South Atlantic	10.130	10.124	9.860	10.038	7.990	10.265
Delaware	.286	.163	.280	.243	.222	.197
Maryland	1.317	1.697	1.396	1.470	1.601	1.737
District of Columbia	1.190	.763	1.163	1.039	.806	.881
Virginia	2.111	1.025	1.402	1.513	1.241	1.622
West Virginia	1.054	.999	1.079	1.044	.630	1.160
North Carolina	1.045	1.393	1.083	1.174	.903	1.416
South Carolina	.680	1.188	.833	.900	.541	.568
Georgia	1.708	2.032	1.620	1.786	1.341	1.556
Florida	.739	.864	1.004	.869	.655	1.128
East South Central	3.258	3.555	4.166	3.660	3.672	3.466
Kentucky	.622	.839	.805	.755	1.166	.650
Tennessee	1.355	1.334	1.583	1.424	1.126	1.400
Alabama	.807	.870	1.172	.950	.938	1.144
Mississippi	.474	.512	.606	.531	.442	.272
West South Central	8.194	8.128	8.261	8.194	5.471	8.331
Arkansas	.842	1.114	1.216	1.057	.535	.716
Louisiana	.760	1.337	.852	.983	1.157	1.079
Oklahoma	1.808	1.542	1.567	1.639	.993	1.803
Texas	4.784	4.135	4.626	4.515	2.786	4.733
Mountain	2.533	2.924	2.279	2.579	2.237	2.198
Montana	.639	.436	.224	.433	.317	.321
Idaho	.439	.338	.323	.367	.219	.403
Wyoming	.109	.250	.140	.166	.105	.115
Colorado	.542	.963	.696	.734	.835	.395
New Mexico	.121	.177	.258	.185	.120	.148
Arizona	.292	.484	.326	.367	.218	.445
Utah	.356	.236	.274	.289	.397	.354
Nevada	.035	.040	.038	.038	.028	.017
Pacific	5.685	8.148	10.003	7.945	6.393	8.964
Washington	1.232	1.095	1.066	1.131	1.379	1.177
Oregon	.636	.735	1.052	.808	.720	.691
California	3.817	6.318	7.885	6.006	4.294	7.096

centages of the total urban population in each State as recorded in the Census of 1920. Column F shows the percentage of the total increase in urban population in each State during the decade 1910 to 1920. Evidently, the requirements for building construction should lie somewhere between the figures recorded in Column E and Column F.

Considering the fact that the population figures in our table represent a period of ten years and that construction figures cover a period of only three years, the correlation between the columns showing volume of construction and the columns representing urban population and growth in urban population should be considered as very good. Taking the figures by geographic division, we find that during the three-year period, 1919 to 1921, the New England States had 7.3 per cent of the total volume of construction of the country. The growth in urban population in these States during the decade 1910 to 1920 was 7.1 per cent of the national total. In the Middle Atlantic States we have a percentage of total construction of 26, as compared with a percentage of total growth in urban population of over 24. In the East North Central States, the total construction and the total urban population seem to be closer together than the total construction and the growth in urban population. However, an average of the percentages representing urban population and the growth of urban population gives a little over 26, comparing favorably with the percentage of total construction, which is 25.5. In other sections of the country the percentages of the total construction seem to run close to those representing respectively the total urban population in 1920 and the total growth in population during the decade.

The first three columns of Table VI, giving the percentages of the total volume of construction by States in each of the three years, also contain features that may prove of interest. It will be seen from these figures that, as previously observed, construction activities do not fluctuate uniformly throughout the country. Depressions and revivals do not seem to visit all sections of the country at the same time — so that while one State may be at the bottom of the "building cycle," another may have already reached the crest of the wave. In 1919 the Middle Atlantic States accounted for about 25⅓ per cent of the total volume of building in

the country. In 1921 this section had to its credit 28 per cent of the total volume. In the same years, the East North Central States dropped from nearly 29 per cent of the total to less than 23 per cent. In these two groups, the greatest rise took place in New York — from 12.8 per cent to 16.3 per cent — and the greatest drop in Illinois and Ohio. Considering the country as a whole, California shows the greatest change in its share of the total volume of construction between 1919 and 1921. In 1919 California's share was only 3.8 per cent, while in 1921 it rose to 7.9 per cent.

The changes in the volume of construction from year to year are, of course, not entirely due to actual gains or losses in any given States. The changes are more or less relative, depending in a large measure upon the changes in the volume of construction in the entire country. Thus, the increase in California from 3.8 per cent to 7.9 per cent was due in part to the actual increase in volume, and in part to the fact that in 1921 the total amount of construction in the entire country was lower than in 1919.

Index for the Apportionment of Wages and Salaries by States in the Construction Industry.

If it were true that labor receives relatively the same portion of the total value of construction in each section of the country, the index of the volume of construction would in itself serve as an index of the amount of wages and salaries paid out in the building industry in each State. However, this can hardly be the case. It is only reasonable to believe that the differences in the level of wages would influence the proportion of the total value of construction being disbursed in the form of wages and salaries. It is, therefore, necessary to give some weight in our index to differences in the wage level in the various States. To accomplish this, hypothetical totals of wages and salaries in the construction industry in each State have been computed on the basis of union scales of wages in the building trades and the estimated total number of workers attached to the industry in each State. Percentages of the total wages and salaries for each State estimated in this manner were then combined with the percentages of the total volume of construction (Table VI) in the ratio of 1 to 4, and the results were

used as the corrected percentage indices by States of wages and salaries in construction. (See Table VII.)

The union scales of wages used in computing the hypothetical amounts of wages in building trades are based on figures furnished by the United States Bureau of Labor Statistics. These wage indicators were computed from the union scales of the following thirteen building trades: Bricklayers, Carpenters, Steam Fitters, Hod-carriers, Inside Wiremen, Painters, Plasterers, Plumbers and Gas Fitters, Sheet Metal Workers, Cement Finishers, Stone Masons, Structural Iron Workers, and Tile Layers. No attempt has been made to weight these wage scales, the indicators for each State being the sums of the weekly rates of pay of the thirteen trades. Though these indicators cannot be recommended as being exact, they would seem to be accurate enough for our purposes. The validity of these indicators is somewhat substantiated by the comparison of these rates of pay with annual earnings of male wage earners in manufacturing in 1919, which is discussed in Chapter IV, page 78. The Union Scales of Wages in the thirteen building trades listed above are given on an annual basis in Table VIII (Column F), pages 100, 102.

Estimated Income from Wages and Salaries in the Construction Industry.

Table VII summarizes for the three years the estimated income from wages and salaries in construction received by employees in each State. It will be seen that, on the whole, the construction industry followed the general business and industrial conditions of the country, showing the results of a distinct depression in 1921. In this year, the wage bill for the entire country dropped more than 20 per cent below the 1919 or 1920 totals. However, not all sections of the country seem to have been affected to the same extent. Some show distinct improvements in 1921 over either 1919 or 1920, and it would seem that in some States 1921 was actually the highest of the three years, particularly if we take into consideration the fact that the cost of living in 1921 was considerably lower than in either of the two other years. The geographic redistribution of the national total in the three years, as indicated by the last three columns of Table VII, is also worthy of note. Some sections of the

TABLE VII. — TOTAL WAGES AND SALARIES PAID OUT IN THE CONSTRUCTION INDUSTRY IN EACH STATE

1919—1920—1921

State and Geographic Division	Dollars (000's Omitted)			Per Cent of Total		
	1910	1920	1921	1919	1920	1921
Continental United States	1,349,580	1,326,102	1,054,848	100.000	100.000	100.000
New England	96,522	111,684	69,820	7.152	8.422	6.619
Maine	6,046	6,796	4,188	.448	.512	.397
New Hampshire	3,549	5,583	2,785	.263	.421	.264
Vermont	2,767	2,997	2,046	.205	.226	.194
Massachusetts	49,988	58,269	39,293	3.704	4.394	3.725
Rhode Island	7,626	7,267	5,622	.565	.548	.533
Connecticut	26,546	30,778	15,886	1.967	2.321	1.506
Middle Atlantic	339,379	329,404	290,231	25.147	24.840	27.514
New York	169,022	178,427	162,921	12.524	13.455	15.445
New Jersey	56,817	57,102	48,734	4.210	4.306	4.620
Pennsylvania	113,540	93,875	78,576	8.413	7.079	7.449
East North Central	372,875	324,789	241,306	27.629	24.492	22.876
Ohio	117,521	102,189	78,755	8.708	7.706	7.468
Indiana	35,521	39,584	28,164	2.632	2.985	2.670
Illinois	113,108	86,423	67,668	8.381	6.517	6.415
Michigan	74,267	63,109	44,683	5.503	4.759	4.236
Wisconsin	32,458	33,484	22,036	2.405	2.525	2.089
West North Central	126,753	126,457	92,964	9.392	9.536	8.813
Minnesota	27,005	28,869	23,734	2.001	2.177	2.250
Iowa	29,988	28,445	17,447	2.222	2.145	1.654
Missouri	35,548	31,853	21,318	2.634	2.402	2.021
North Dakota	2,254	3,024	1,044	.167	.228	.099
South Dakota	3,199	3,991	3,376	.237	.301	.320
Nebraska	13,266	16,430	11,551	.983	1.239	1.095
Kansas	15,493	13,845	14,494	1.148	1.044	1.374
South Atlantic	135,889	131,960	102,584	10.069	9.951	9.725
Delaware	3,873	2,520	2,996	.287	.190	.284
Maryland	19,110	22,703	15,601	1.416	1.712	1.479
District of Columbia	14,212	9,269	10,844	1.053	.699	1.028
Virginia	27,828	15,621	15,327	2.062	1.178	1.453
West Virginia	14,360	13,420	11,224	1.064	1.012	1.064
North Carolina	14,494	17,597	11,392	1.074	1.327	1.080
South Carolina	9,393	14,415	8,470	.696	1.087	.803
Georgia	21,809	24,745	16,234	1.616	1.866	1.539
Florida	10,810	11,670	10,496	.801	.880	.995
East South Central	46,102	48,045	43,597	3.416	3.623	4.133
Kentucky	9,852	11,842	9,399	.730	.893	.891
Tennessee	17,976	17,425	15,865	1.332	1.314	1.504
Alabama	11,512	11,869	12,036	.853	.895	1.141
Mississippi	6,763	6,909	6,297	.501	.521	.597
West South Central	108,911	105,001	85,856	8.070	7.918	8.139
Arkansas	11,282	13,831	11,825	.836	1.043	1.121
Louisiana	11,498	17,333	9,821	.852	1.307	.931
Oklahoma	24,131	20,448	16,783	1.788	1.542	1.591
Texas	62,000	53,389	47,427	4.594	4.026	4.496
Mountain	37,046	39,690	25,991	2.745	2.993	2.464
Montana	8,637	6,180	3,070	.640	.466	.291
Idaho	5,938	4,641	3,555	.440	.350	.337
Wyoming	1,930	3,302	1,698	.143	.249	.161
Colorado	8,368	12,585	7,753	.620	.949	.735
New Mexico	2,024	2,492	2,679	.150	.188	.254
Arizona	4,251	6,087	3,523	.315	.459	.334
Utah	5,210	3,713	3,186	.386	.280	.302
Nevada	688	690	527	.051	.052	.050
Pacific	86,103	109,072	102,499	6.380	8.225	9.717
Washington	19,272	17,014	13,122	1.428	1.283	1.244
Oregon	10,041	10,635	11,023	.744	.802	1.045
California	56,790	81,423	78,354	4.208	6.140	7.428

country, including the New England States, have undoubtedly "lost out" in 1921, both in actual amounts, and in the relative share of the total to which they would seem to be entitled under more favorable conditions. The Middle Atlantic States, on the other hand, especially New York and New Jersey, show a decided gain in 1921 in the relative share their employees received of the total wage bill from construction. However, the greatest relative gain in construction payrolls appears to have taken place in the Pacific States, where California alone jumped from 4.2 per cent of the total in 1919 to 7.4 per cent of the total in 1921. In absolute figures, the payrolls in the construction industry in California increased from about 57 millions in 1919 to about 78 millions in 1921, a rise of about 38 per cent. Oregon also shows a slight increase in 1921 over the 1919 payrolls.

CHAPTER IV

INTERRELATIONSHIP OF EARNINGS OF EMPLOYEES

The problems encountered in the apportionment by States of the total wages and salaries paid out in manufactures, mining, and agriculture were comparatively simple. The presence of reliable Census data in 1919 offered firm ground from which to extend our estimates into the years for which Census data were not available. The task was merely one of accounting for changes and departures from the base year. Construction offered a somewhat more difficult problem, but there again we had certain basic facts regarding the value of construction in each State for each year which, together with the estimated number of workers in the building trades, as recorded in the Occupation Statistics of the Census, and the union scales of wages compiled by the Bureau of Labor Statistics, greatly facilitated the apportionment by States. However, in disposing of the matter involving the distribution by States of wages and salaries in manufactures, mining, agriculture, and construction, we have solved only half the problem of apportioning the income of employees by States. The four industries covered in the preceding chapters, important as they are both from the standpoint of the value of the product and the number of individuals dependent upon them for a living, contribute only about 50 per cent of the total income from wages and salaries. Even in 1920, when the manufacturing and mining industries were at the height of their activity, only $22,217,000,000, out of a total of $41,560,000,000 was disbursed in wages and salaries in these four principal industries.[1] The other $19,343,000,000 constituted the share of employees in trade, transportation, public, professional, and domestic services, and miscellaneous trades and industries. In 1921 the relative position of the two groups of industries with regard to the total payrolls was changed completely. In this year

[1] (1) Manufactures; (2) Mines, Quarries, and Oil Wells; (3) Agriculture; and (4) Construction.

the total payrolls in agriculture, mining, manufactures, and construction, combined, dropped to $14,803,000,000, while the payrolls in trade, transportation, and miscellaneous industries increased to $19,898,000,000.

Although it would be highly desirable to segregate the individual industries included under the main heading of *Trade, Transportation, and Miscellaneous Industries*, so that each might be studied separately, the absence of a sufficient amount of reliable data by States for any of these industries makes it necessary to devise a method of handling the entire group as a unit. The problem, then, is to construct an index showing the proportional share of the total payrolls from all the industries included in the group going to the employees in each State. It is obvious that, before constructing an index which is designed to cover such a great number of dissimilar industries and services, the question of the interdependence and interrelation of earnings of employees engaged in different types of work must be given careful consideration. The necessity of a thorough investigation and analysis of the factors controlling relative earnings in different industries is emphasized by the fact that practically all the published data relative to the distribution of total wages and salaries by States pertain to the four industries already covered — namely, manufacturing, mining, agriculture, and construction — very little data being available for the greater portion of all the other industries. Can we with safety utilize the available wage data for one industry to determine conditions in another industry? In the pages that follow an attempt will be made to arrive at an answer to this question.

Males and Females in Industry.

To measure the relative wage level in each State, it is essential that the sample data be similar in nature, and that they represent the same thing in each case. Thus, the average salaries in any occupational group should, as nearly as possible, represent the same composition of personnel in all States. To be more specific, we should not, for example, compare hod-carriers in one State with bricklayers in another, or men's wages in the East with women's wages in the West. While it is impossible to find sufficient data that are exactly comparable, it is possible in a great number of

cases to adjust the available figures so as, at least, to approach uniform samples.

One of the chief factors interfering with the comparability of average earnings in different States is the difference in the proportion of women gainfully employed in the various States. Women, as a rule, do not earn as much as men. A relatively large number of women in industry in a State would naturally lower the average earnings of all employees in that State. Two States with entirely different wage levels may show average earnings almost identically the same, if the State with the higher wage level has a comparatively larger number of females gainfully employed. A concrete example will serve to emphasize the importance of this consideration in the measurement of the level of wages in different States. Using the data recorded in the *Census of Manufactures*, 1919, we find that the average earnings of wage earners in manufacturing industries in Massachusetts were $1,073; in Connecticut they were $1,170. Shall we infer from these figures that, in general, wages were about 9 per cent higher in Connecticut than in Massachusetts? Even off-hand, we would be inclined to question such a conclusion. A further study of the data presented in the Census reveals the fact that the average number of wage earners in the two States was as follows:

Massachusetts	
Males	478,449
Females	211,951
Connecticut	
Males	217,457
Females	68,330

In other words, for every hundred males employed in manufacturing industries in Massachusetts, there were 44.3 females. In Connecticut, however, there were only 31.4 females to every hundred males. The greater number of females among Massachusetts factory workers consequently pulls the average wage down, giving us an erroneous impression of the rates of pay prevalent in that State as compared with other States. As a matter of fact, taking male factory workers alone, the average earnings in Massachusetts were slightly higher than in Connecticut.[1]

[1] See Table VIII.

The variation in the number of males and females gainfully employed in different States is brought out clearly in the *Occupation Statistics* of the 1920 Census of Population. The first eight States listed in the report show the following ratios of men to women in all occupations:

Alabama	3.0
Arizona	6.1
Arkansas	4.5
California	4.3
Colorado	4.8
Connecticut	3.0
Delaware	4.0
District of Columbia	1.5

Taking the two extremes in the above example, we find a variation of 400 per cent, the proportionate number of women gainfully employed in the District of Columbia being four times as great as in Arizona.

Ratio of Average Earnings of Males to Average Earnings of Females.

How do earnings of females compare with those of males? In connection with the 1905 Census of Manufactures, the Bureau of the Census made a special study of weekly earnings covering a total of over 3,000,000 wage earners in manufacturing industries. The results, in so far as the earnings of males and females are concerned, may be summed up as follows:[1]

Weekly earnings of males 16 years of age and over	$11.16
Weekly earnings of females 16 years of age and over	$6.17
The ratio of earnings of males to those of females	1.81

A survey of a number of industries for which data are available for more recent years indicates that the ratio of the earnings of males to those of females, in the case of wage earners at least, has not changed materially since 1905. It is, however, found that for salaried employees the ratio between earnings of males and females tends to run higher than in the case of wage earners. This may, of course, be explained by the fact that salaries offer room for greater variation, and that the number of women in technical and executive positions is comparatively small, women still occupying chiefly the less remunerative salaried positions.

[1] Special report of the U. S. Census Office, *Manufactures*, 1905, Part IV, p. 65.

The following are a few examples of the way in which the earnings of males compare with the earnings of females:

Description of Data	*Ratio of Earnings of Males to those of Females*
Michigan Figures for 1919 [1]	
Factories (covering 566,000 males and 96,000 females)	1.95
Hotels	1.75
Restaurants	2.03
Stores	1.80
Pennsylvania Figures for 1920 [2]	
All Industries	
Wages	2.30
Salaries	2.67
Laundries, etc.	
Wages	2.16
Salaries	2.93
Public Service	
Wages	1.60
Salaries	1.95
Miscellaneous Data	
Farm Labor U. S., 1920 to 1922 [3]	
By the Month	1.32
By the Day	1.91
Boots and Shoes Factories in 1914 [4]	1.70

On the basis of the above and other similar data, it is estimated that, on the average, men earn about 1.9 as much as women when working for wages or salaries. Hence, in studying the relationship between wages in different industries and the relative level of wages in different States, the ratio of 1.9 has been used as an adjusting factor for the differences in the proportion of males to females.

Wages in Manufacturing and Agriculture.

Is there any connection between the earnings of employees in the different occupations? Do high wages in one occupational group indicate high wages in others? To be more concrete, if, on the average, the tailors in New York earn higher wages than the tailors in Chicago, does it follow that the earnings of carpenters in New York are also higher than those of carpenters in Chicago? To

[1] *Thirty-seventh Annual Report*, Dept. of Labor, 1920.
[2] Dept. of Internal Affairs, 1920.
[3] W. I. King, *Employment, Hours, and Earnings in Prosperity and Depression*, National Bureau of Economic Research, Tables LXII and LXVII.
[4] *Bulletin 178*, U. S. Bureau of Labor Statistics.

answer these questions, and to throw light in general upon the interrelationship between earnings in different occupations, a series of scatter diagrams, a few of which are shown here, have been constructed, each graph representing a study of earnings of the employees in two specified industrial or occupational groups in the several States. In order to be able to identify the data by principal geographic divisions, a code of symbols has been devised for the plotting of points on the graphs. These symbols are shown in the legend of each of the charts presented, and represent the divisions used by the Census as follows: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific.

Chart 1 represents for each State the average unadjusted annual earnings of wage earners in manufacturing industries as compared with estimated annual earnings of farm laborers. From this graph, it would appear that the country divides itself roughly into four areas: first, the West; second, New England; third, Middle Atlantic and East North Central; fourth, the South. Within each of the four sections there seems to be little or no correlation between manufacturing and farm wages. The only sign of correlation within any group appears in the case of the six agricultural States making up the West North Central division. However, this apparent correlation may be only a play of chance, and it would probably be safest not to accept the evidence contained in this chart as indicating any relationship between farm and manufacturing wages within groups.

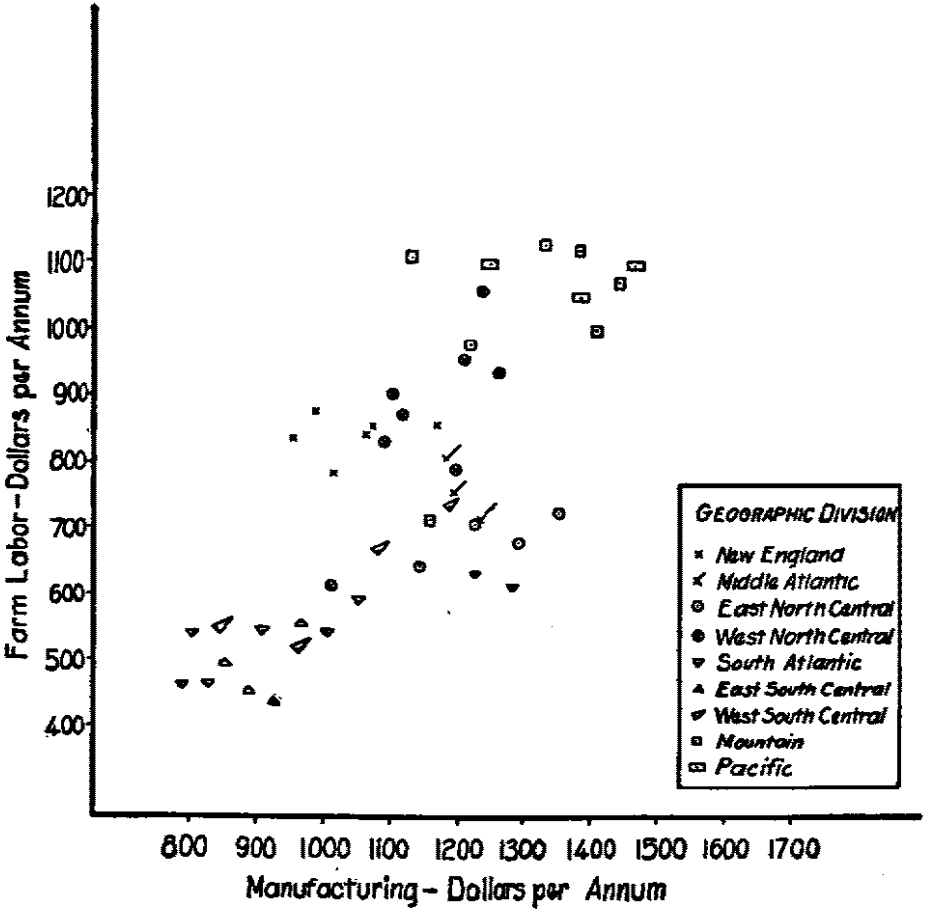
The points on Chart 1 lend themselves to another possible grouping of States: first, the Western States and New England; second, the Middle Atlantic and East North Central States and the South. It would appear that the States align themselves along two axes drawn at two different levels with respect to farm wages and almost parallel to each other. Still another grouping of the points on Chart 1 is that for the United States as a whole. From this standpoint one would be led to conclude that, in general, taking all the States into consideration without reference to geographic location, there is a marked tendency for farm wages and manufacturing wages to be interdependent.

Before going further into the discussion, and drawing con-

clusions as to the manner in which farm wages and manufacturing wages react upon each other, it should be noted that there is a

CHART 1

RELATIONSHIP BETWEEN FARM WAGES AND WAGES IN MANUFACTURING INDUSTRIES 1919



deficiency in the figures used in Chart 1. The earnings in manufacturing industries plotted in this chart were obtained by dividing the total amount paid out in wages by the total number of wage

earners as reported by the Census of Manufactures. If the workers in manufacturing industries were homogeneous throughout the United States, the averages thus obtained would be representative and could be considered fit for comparison with earnings in other industries. This, however, is not the case. As pointed out in a previous section of this chapter, the number of males and females in this industry are not proportionately the same in all States, which fact has a tendency to distort to a considerable extent the comparative wage level obtained in each State.

This discrepancy has been adjusted in Chart 2 which presents the same study as Chart 1 with manufacturing wages adjusted for sex. It will be noticed that the points in this chart are drawn more closely together laterally and, on the whole, cover a smaller area than in Chart 1. It will also be observed that we now have more decided groupings, and while in the first graph the points representing the New England States are scattered haphazardly, they are now arranged more in line with, and closer to, the axis of the main grouping into which they fall. The same is true of points representing States in other geographic divisions. The tendency of double grouping along two almost parallel axes drawn one above the other, indicated in Chart 1, is confirmed in Chart 2.

It is rather curious to note that New England falls in the same group as the Western States, while New York, New Jersey, and Pennsylvania line themselves up with the South and the East North Central States.

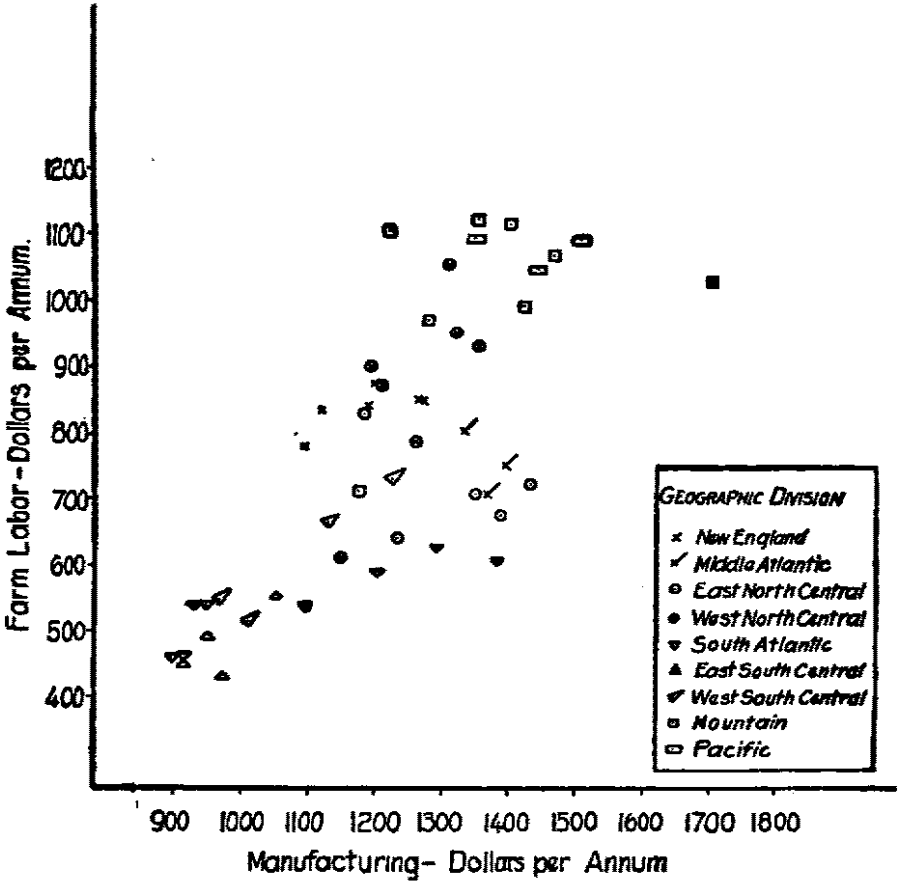
Let us now note the position of individual States, which, for one reason or another, are not true to their usual more or less artificial geographic grouping. Wisconsin, ordinarily classed with the East North Central States, seems to resemble more the States further west and, at least in the case of agricultural wages, joins with Minnesota and Iowa rather than with Illinois and Indiana. Missouri abandons the other States in the West North Central division and falls in line with the South. New Mexico also joins the South, and shows a decided difference from the other States in the Mountain division with which it is ordinarily grouped.

With the possible exception of the Mountain and Pacific States, Chart 2 shows a marked degree of correlation between wages in

manufacturing and wages in agriculture. The South Atlantic, East South Central, and the West South Central States, together

CHART 2

RELATIONSHIP BETWEEN FARM WAGES AND WAGES OF MALES IN MANUFACTURING INDUSTRIES
1919



with the Middle Atlantic and the East North Central States, arrange themselves along an axis making an angle of about 30 degrees with the base line. The New England States arrange

themselves roughly along the same axis with the West North Central division.

As observed above, while there is correlation between manufacturing and farm wages in practically all other geographic divisions, the Mountain and Pacific divisions fail to conform to this rule. The reason for this is not difficult to trace. Assuming a free flow of labor from one group of industries to the other, it might be supposed that the price of labor would be the same in both. This price would naturally be determined by the combined demand for labor of the two groups of industries and the general supply of labor within the given place. Should one of the two groups of industries be more important, i.e., should its demand for labor be greater than that of the other, the rates would probably be set by the larger. The farm has its attractions, and it might be said that, at any given time, there are a number of people who from preference would be willing to work on the farm for a smaller wage than anywhere else. It is also reasonable to believe that, at any given time, there are some people who by training, or rather lack of other training, and because of certain natural limitations, are compelled to seek employment on the farm rather than anywhere else, and naturally would consent to work at a comparatively low wage. However, when the demand for farm labor is greater than this *natural* supply, agriculture enters into competition with other industries in its demand for labor. In that case, the wages paid in industries employing labor of a somewhat similar type as in agriculture would, to a great extent, determine the price of agricultural labor. In the Eastern States, where manufacturing is the most important employer of labor, farm wages are apparently influenced by manufacturing wages. In the West, however, manufacturing plays a secondary rôle in so far as the employment of labor is concerned, and its influence is apparently not sufficiently great to affect the labor market. Farm wages would consequently vary, to a certain degree, with some other factor.

At least in some of the Western States, mining is very important, and is possibly more to the taste of the type of men from which the western farm hands are recruited than manufacturing or any other inside work. Mining, therefore, it would appear, has a share in influencing farm wages in the West. There are undoubtedly

several factors besides mining and manufacturing which have their bearing upon agricultural wages, but these two are probably the most important. Of course, mining also exercises an influence upon the wage level in some of the States east of the Mississippi, but, on account of the predominant strength of manufacturing industries, the effect of mining is more or less obscured. It follows that better results might be obtained by comparing farm wages with wages in manufacturing and mining combined rather than with wages in either of the two industries separately.

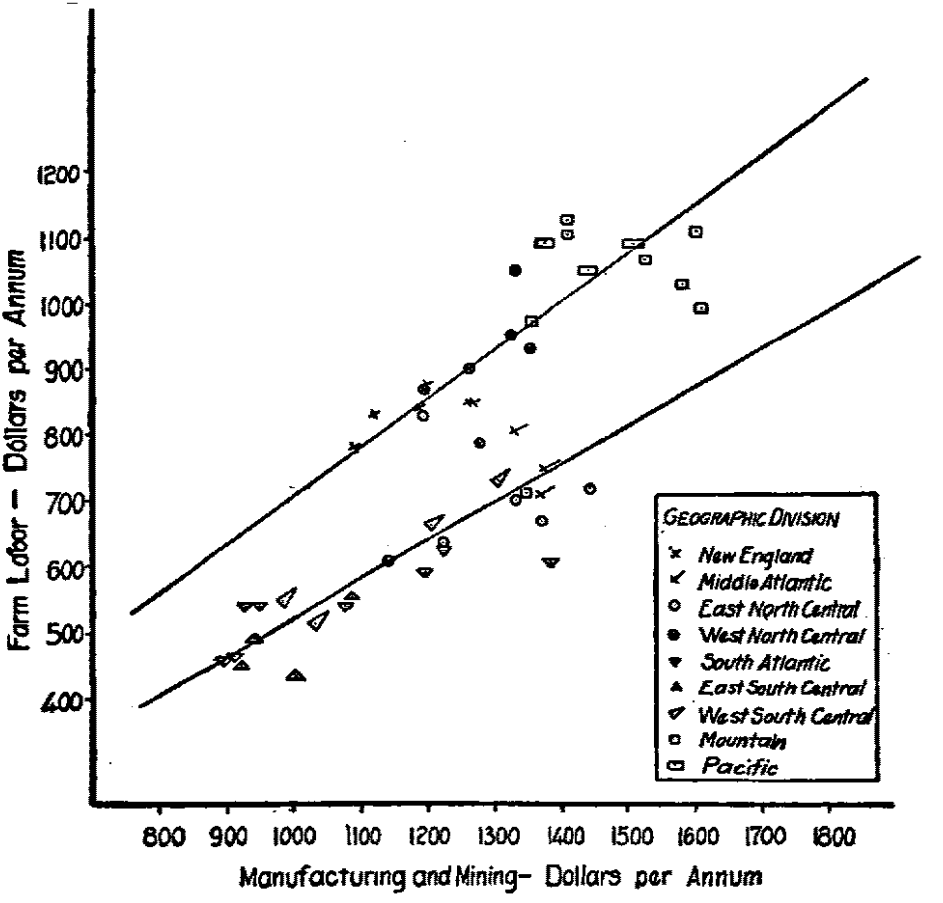
Chart 3 shows such a comparison. The result of combining mining and manufacturing wages is apparent at a glance. The two distinct wage levels in agriculture indicated in Charts 1 and 2 are more clearly defined in the new graph. In addition to the general improvement in the alignment of States within groups where correlation has already been indicated, in Chart 3 we find that even the Mountain and Pacific States follow the general principles which seem to fix the wage levels in separate industries.

There are several questions that will probably come to the mind of the reader at this juncture. One of them is: What is the reason for the two almost parallel wage levels, which, though following the same tendency in correlation between farm wages and manufacturing and mining wages, show that in some sections of the country farm labor is at a higher level than in other localities? The interaction of supply and demand is, of course, the underlying cause, though the way in which supply and demand produce this phenomenon is open to speculation. The conditions balancing the supply and demand in the case of farm labor are undoubtedly different in the several sections of the country. Why are farm wages found to be on a higher level in New England than in the other States along the Atlantic seaboard? In New England agriculture is not a very important industry, and its demand for labor cannot be sufficiently great to cause higher wages than in the States further south. The cause for a comparatively higher wage level for farming in these States must, therefore, be ascribed to a deficient supply rather than a high demand for labor. What is the supply of labor in New England? The educational facilities and the opportunities in the cities in that section of the country have undoubtedly depleted the supply of native whites who are willing to remain on the farm

and particularly those content to hire out as farm laborers. Immigration apparently did not help this matter. The tide of recent

CHART 3

RELATIONSHIP BETWEEN FARM WAGES AND WAGES OF MALES IN MANUFACTURING AND MINING INDUSTRIES 1919



immigration has been to the cities rather than to the country, and immigrants who are inclined towards farming activities do not ordinarily stop east, but look for opportunities further west. It is,

therefore, not surprising that farm labor in New England should be more or less at a premium.

The comparatively high level in farm wages in the West North Central States is probably due to the fact that agriculture is the principal industry, and the demand for labor in agriculture is quite important. This section has to compete for labor with manufacturing industries in other sections of the country, and there naturally must be a premium on its labor supply. The Mountain and Pacific States have a great deal of specialized agriculture such as stock raising and fruit growing. This, together with the fact that opportunities in mining in these States are considerable, probably accounts for the fact that farm wages are on a higher level in this part of the country than anywhere else. It will be noticed that New Mexico with a great supply of cheap Mexican labor falls within the other grouping of States, where the ratio of farm wages to wages in manufacturing and mining is smaller than in the Mountain States. Missouri, with a large negro population, also has an abundant supply of cheap labor. This is chiefly responsible for the fact that Missouri does not conform to the other States in the West North Central division, with which it is ordinarily classed.

Wages in Mining and Agriculture.

Mining is geographically more concentrated than manufacturing and, except in a very few States, can in itself have very little influence on wages in other industries. Nevertheless, when farm wages are plotted against mining wages in a scatter diagram in a similar manner as shown in Charts 1, 2, and 3, it appears that, although the *spread* of the individual points is considerable, there is a marked tendency toward correlation between the two industries. The two levels in farm wages brought out in Charts 1, 2, and 3, are also discernible in this case, but not very clearly.

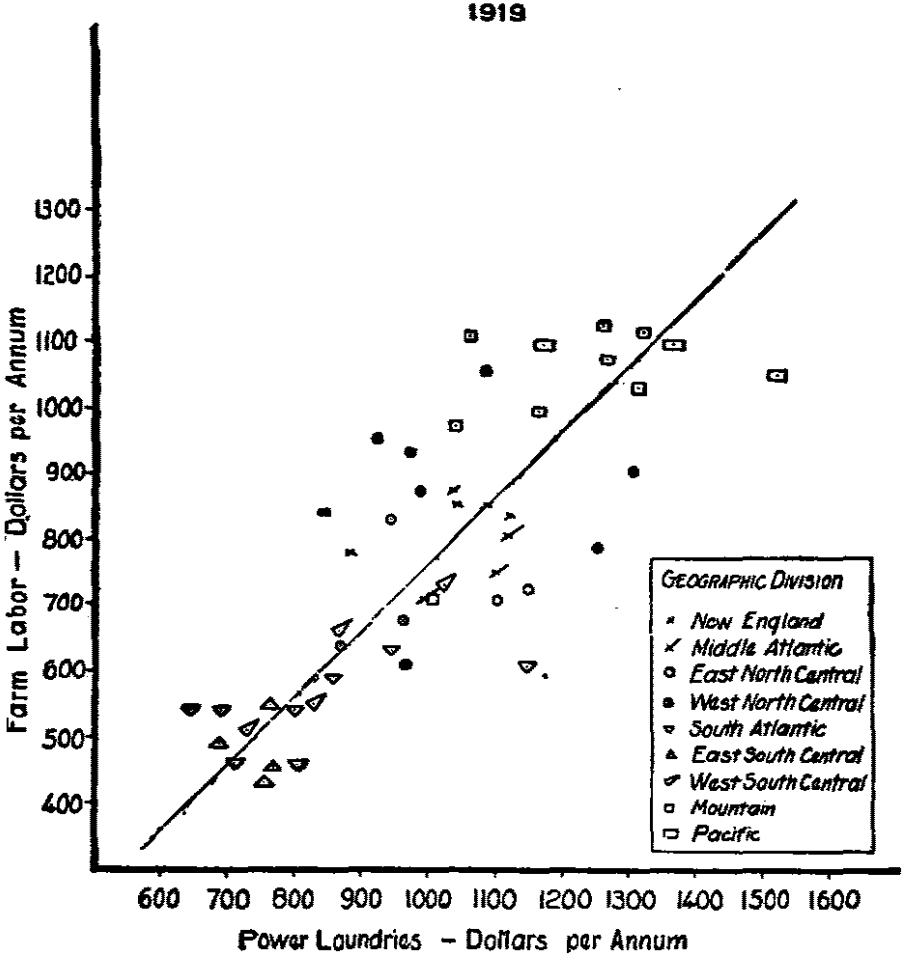
Wages in Agriculture and Power Laundries.

The interrelation of wages in different industries is well shown in a comparison between wages in power laundries and those in agriculture. Off-hand, one would be led to believe that wage earners in power laundries, as well as domestics and other individuals with similar occupations, are recruited from the same general

class as farm labor and, consequently, that wages in power laundries would be governed to a great extent by the prices commanded

CHART 4

RELATIONSHIP BETWEEN FARM WAGES AND WAGES OF MALES IN POWER LAUNDRIES 1919



by agricultural labor. Adjusted wages in power laundries [1] have been plotted against farm wages in Chart 4. It will be noted that our hypothesis is in the main verified. The existence of correlation

[1] Adjusted to basis of males.

between wages in agriculture and wages in power laundries is unmistakable. It is also interesting to note that a straight line fitting the points representing the different States forms an angle of about 45 degrees with the base line. This means that, in general, a rise in farm wages is accompanied by an equal rise in the wages of power laundry employees. It appears that in 1919 wage earners in power laundries received, on the average, about $240 per year more than farm laborers. This amount probably covered the difference in the cost of living between the city and the country.

Wages in Mining and Manufacturing.

Another point of interest in our investigation of the relationship between earnings in different industries is to see whether or not mining wages are at all governed by manufacturing wages, or vice versa. The annual earnings in these two industries have been plotted in a scatter diagram similar to those described in the preceding pages. This graph again shows the country to be divided into two major sections. In this case, the South acts more like the West than the rest of the country. Viewing the graph as a whole, correlation between mining and manufacturing wages does not appear to be of high degree. However, if we leave out of consideration the South and the West, the points for the remaining States assume a definite alignment indicating high correlation. Apparently, where manufacturing activities are important, they exert considerable influence on mining wages and draw them into line with manufacturing wages. In the few manufacturing centers where there is considerable mining, as in Pennsylvania, the two industries seem to interact very definitely, and tend to equalize wages. In Pennsylvania, for instance, the average wage in mining is approximately the same as that in manufacturing.

To venture an explanation of the fact that in the West and the South mining wages bear no relationship to manufacturing wages, it might be said that in these States there is still comparatively little manufacturing, and that the limited amount of manufacturing that is carried on there is apparently of a kind that does not enter into competition for labor with mining, and, also, that it is not of the kind to be influenced by conditions in the mining industries.

Wages in Building Trades and Manufacturing.

A graph has also been constructed to show union scales of wages in the building trades plotted against earnings of male wage earners in manufacturing industries. Here we find practically the same condition of affairs as that shown in the graph comparing mining with manufacturing. A satisfactory grouping is obtained for all sections of the country with the exception of the South and the far West. It may be stated that Missouri again lines up with the South. This probably offers a clue as to why in the Southern States wages in building trades are not correlated with wages in manufacturing as in the Northern States. The influence of cheap negro labor is apparently felt more in industries employing common labor requiring little specialization or intelligence than in the higher grades of occupations such as building trades. Thus, in the building trades, wages in the South are as high as, if not higher, than in the Northern States. This theory is also borne out by the fact that salaries of clerical employees in the South are, on the average, not different from those in the Middle West. (See Table VIII.)

Salaries of Teachers as Compared with Salaries of Clergymen.

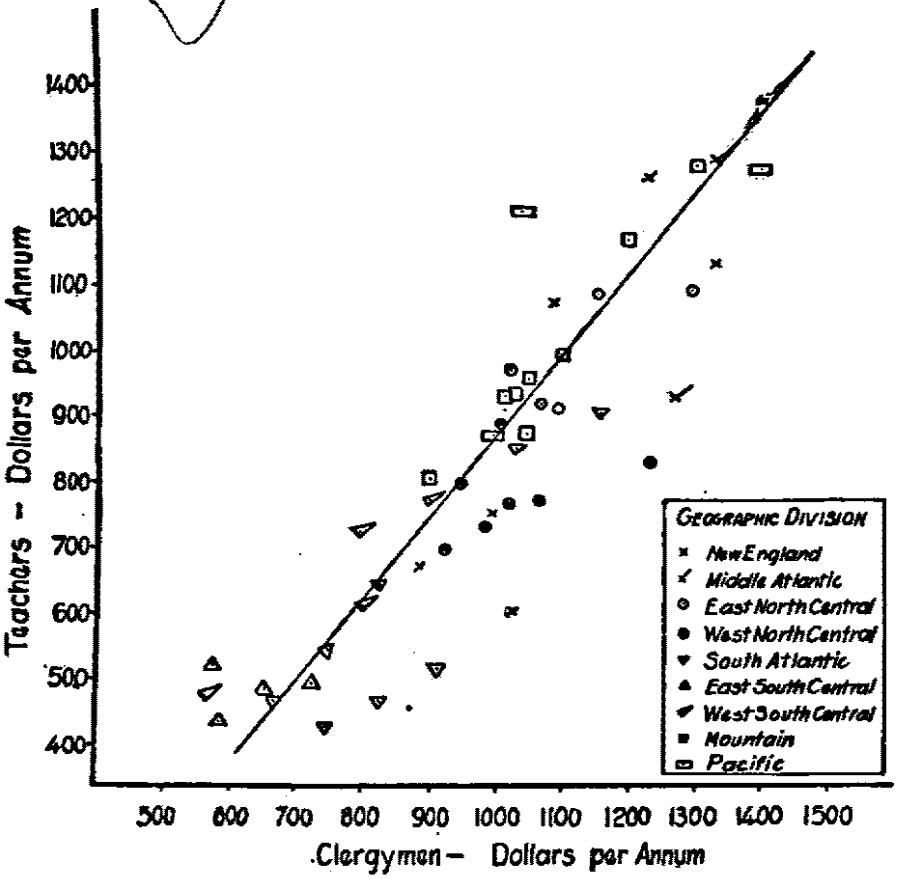
Another interesting comparison is that between the salaries paid to teachers and those paid to ministers. Education and religion have always been closely related spiritually, and it is, therefore, interesting to see how well they compare in a material way with respect to the economic welfare of their personnel. To what extent is the lot of the teacher related to that of the minister? Is it true that a community that pays its teachers well will also treat its ministers with liberality?

Chart 5 throws some light upon these queries. It should be pointed out that the figures plotted in this graph are not entirely comparable. The clergy is composed chiefly of males, while the majority of teachers are females. No attempt has been made to adjust the data for the difference in the sex, and the reader should bear this in mind while studying our graph. As can be seen, there is very good correlation between salaries paid to clergymen and those paid to teachers. This means that, on the whole, the economic condition of the minister is reflected in that of the teacher,

or vice versa, and that the average salary of the clergy would prove to be a fairly good indicator of the earnings of teachers in a given locality.

CHART 5

RELATIONSHIP BETWEEN SALARIES OF TEACHERS AND SALARIES OF MINISTERS 1919



Having established that correlation exists between salaries of teachers and those of clergymen, we may attempt to measure mathematically the relationship existing between the salaries in

the two professions. Fitting a straight line to the points plotted, we find that the ratio of variation of clergymen's salaries as compared with teachers' salaries is about .84. That is, if our original data are correct, we would infer that for every change of $10 in teachers' salaries, there is a change of only $8.40 in ministers' salaries. We, therefore, note that clergymen's salaries are at first somewhat higher than those of teachers. However, in view of the fact that changes in ministerial salaries are at a lower rate than those in teachers' salaries, the latter tend to approach those of ministers as they go up. Thus, at the point where teachers' salaries are $700 per annum, ministerial salaries are about $900, a difference of $200; but, with an average salary for teachers of $1,300, clergymen receive only an average of $1,400 per annum, a difference of only $100.

In comparing the salaries of teachers with those of ministers, we should, as mentioned above, bear in mind that in one case we deal with the earnings of women, while in the other we have to do with the earnings of men and, in most cases, heads of families. In this light, we might be led to conclude that, on the average, to be a clergyman in the United States is somewhat less profitable than to be a teacher. This conclusion is probably not far from the truth. There is, however, one aspect of the situation that may modify somewhat our conclusion. The salaries of clergymen as plotted in our graph are estimated averages of the amounts of money paid annually to clergymen in the form of salaries. These amounts are, of course, materially less than the actual receipts, for, in addition to regular salaries, ministers ordinarily receive a considerable supplementary income, both in money and in kind. The additional income including the use of parsonages, which are provided by many congregations, would probably add on an average about 25 per cent to the total salaries. This is particularly true in the case of lower salaried ministers, and it is quite possible that, were data available to make the proper correction in ministers' incomes, the line fitting the points in our graph would be shifted so as to make an angle of about 45 degrees with the base line. In this case, the ratio of variation between the clergymen's and teachers' salaries would be 1 instead of .84.

Union Wages.

As pointed out in a previous paragraph, wages in the building trades are not correlated in all sections of the country with wages in mining and manufacturing. They apparently follow a law of their own determined largely by the supply of specialized types of labor and union restrictions. The building trades are highly unionized, and one might surmise that their influence would be reflected to some extent at least in the wage scales of other unions. The data showing union wage scales in other trades are not as plentiful as in the case of building trades, and the extent of the influence of building trade wages on wage scales of other local unions has been studied to only a limited degree.

The United States Bureau of Labor Statistics gives union scales for motormen and conductors on street railways in specified cities. From these, sample scales of full-time earnings of motormen and conductors in twenty-one States were estimated. These data were first plotted against manufacturing and mining wages. However, the "scatter" of the points was so wide that no correlation could be deduced. The same data were then plotted against the estimated average full-time earnings in the building trades for the corresponding States. A study of the resulting graph shows that, on the whole, we would be justified in concluding that union wages of motormen and conductors vary with wages in the building trades. At any rate, the wages of motormen and conductors bear a closer relationship to union wages in the building trades than to any other class of wages. The union scales for chauffeurs have also been found to vary with building trades rather than with other wages. However, the number of States for which data of union scales of chauffeurs are available is so small that no definite conclusions can be drawn.

Summary.

The facts learned from the investigation described in this chapter may be summed up as follows:

1. In general, wages in different industries are interdependent. This is particularly true in the case of occupational groups drawing employees from the same general class of society.

2. Wages in agriculture vary in much the same way as wages in manufacturing and mining industries.

3. In the case of agricultural labor, the country falls into several districts which follow two distinct wage levels. In 1919 the difference between the two wage levels in agriculture, which are almost parallel when plotted, was approximately $200 per annum.

4. Following the above line of cleavage, the New England States line themselves up with the West North Central, Mountain and Pacific States, while the Middle Atlantic States and the East North Central States go with the South. Wisconsin joins Minnesota and the New England and Western groups, while Missouri and New Mexico demonstrate, at least in this respect, that they are more akin to the South than to the North and West.

5. There is apparent correlation between farm wages and manufacturing wages as well as between farm wages and mining wages. However, when we combine mining wages with manufacturing wages, the correlation between the combined average and the average farm wages is greatly improved.

6. Except for certain sections of the South and far West, there is a high degree of correlation between mining wages and manufacturing wages.

7. Somewhat the same tendency as is shown to exist between mining and manufacturing wages appears also in the case of the relationship between manufacturing wages and the union scales of pay in building trades, — that is, fairly good correlation exists between the two sets of scales with the exception of the South and the far West.

8. Teachers' salaries vary closely with ministers' salaries in different parts of the country.

9. Union scales in one industry are more likely to vary with union scales in another industry than with ordinary non-union rates.

10. Though the data available are not sufficient to make it possible to draw positive conclusions, there is, at least, an indication that the salaries of clerks in stores and the salaries of clerks in manufacturing industries are interdependent and vary with one another.

CHAPTER V

WAGES AND SALARIES IN TRADE, TRANSPORTATION, AND MISCELLANEOUS INDUSTRIES

The chief purpose of the investigation described in Chapter IV was to establish the extent to which we can depend upon available data in the approximation of earnings in trade, transportation, and other miscellaneous industries for which no published material can be found.

It may be stated at this point that, for purposes of this study, the estimated average earnings in the unrecorded industries in which we are interested need not be numerically correct; for what we are particularly interested in is a means of apportioning the total wages and salaries in these industries to the several States, and the requirement of an index for such apportionment is merely that its values be proportional to the actual amounts of wages and salaries received by the employees in each State. In other words, if the amounts for the different States representing our index are twice as great as the actual amounts, our index would still answer the purpose.

The principal conclusions drawn from the investigation of the relationship between wages and salaries in different industries or occupations which are important at this point are as follows:

1. In general, wages seem to be maintained at different levels in different sections of the country.
2. With few exceptions, high or low wages in one occupation are indicative of correspondingly high or low wages in other occupations in the same district.
3. In any given place there is a tendency for the same type of labor to command the same rate of pay irrespective of the industry. It follows, then, that, in general, wages and salaries fall into several groups, each of which maintains a definite relationship to the general wage level. Consequently, data

by States covering part of an occupational group should indicate the variation from State to State in the rates of pay or total earnings for the entire group. To go a step further, it would seem that, given a sufficient amount of sample data, it should be possible to determine the relative differences in the general wage level from State to State.

In line with the above conclusions, estimates of the relative average earnings of employees in trade, transportation, and miscellaneous industries have been computed. The basic data entering into the computation of these estimates are as follows:

1. Wages in manufacturing.
2. Salaries of clerks in manufacturing industries.
3. Salaries of officials, superintendents, etc., in manufacturing.
4. Wages and salaries in mining.
5. Wages in agriculture.
6. Union scales in the building trades.
7. Wages in power laundries.
8. Wages in private electric light and power plants.
9. Wages in steam railways.
10. Salaries of clergymen.
11. Salaries of teachers.

Table VIII presents the computed average annual earnings for specified industries and occupations, as well as the estimated average annual earnings of employees in combined groups, — averages which presumably disclose the relative level of wages in each State.

Following is a brief outline of the sources and methods employed in computing the average annual earnings recorded in the several columns of Table VIII.

Column A: *Wages in Manufacturing.*

The average earnings recorded in this column were obtained by dividing the total payroll for each State as shown by the Census of Manufactures, 1919, by the adjusted average number of employees in manufacturing industries in each State. The number of employees was adjusted to the basis of males by means of the formula: $M + \frac{F}{1.9}$, where M equals the number of male employees and F the number of female employees. This adjustment is made on

the assumption that on the average the earnings of male employees are about 1.9 as great as those of female employees.[1]

Column B: *Wages in Mines and Quarries.*

The wages for mines and quarries were obtained by dividing the total wages by the average number of wage earners, as reported by the Census of Mines, Quarries, and Oil Wells, 1919. No adjustment for sex was necessary in this case, as most of the miners are males.

Column C: *Wages in Manufacturing and Mining Combined.*

The figures for wages in mining and manufacturing were obtained by adding the payrolls of wages in manufacturing to those of wages in mining for each State. These figures were taken as reported by the Bureau of the Census. The total amount of the payrolls was divided by the adjusted number of wage earners in the two industries.

Column D: *Wages in Agriculture.*

These estimated annual earnings are based on the figures of monthly farm wages without board, as reported by the Department of Agriculture.

Column E: *Wages in Power Laundries.*

The figures in this column are based on the 1919 Census. The number of employees used in computing the average earnings was adjusted in the same manner as in the case of wage earners in manufacturing.

Column F: *Wages in Building Trades.*

The average annual earnings in the building trades were estimated from union scales in thirteen building trades reported by the United States Bureau of Labor Statistics. The amounts recorded represent full-time earnings on the basis of a fifty week year. The actual average earnings of wage earners in the building trades are probably smaller than the figures given in this table, as very rarely do these wage earners have full-time employment for an entire year.

Column G: *Wages in Electric Light and Power Plants.*

The figures in this column are based on the total payrolls and the average number of wage earners in private electric light and

[1] For more detailed discussion of this weight see Chapter IV, pp. 79–80.

TABLE VIII. — AVERAGE ANNUAL FULL TIME EARNINGS

State and Geographic Division	A	B	C	D	E	F	G
	Males						
	Wages						
	Mfg. [a]	Mines and Quarries [b]	Mfg. and Mining Combined [c]	Agriculture [d]	Power Laundries [e]	Building Trades [f]	Electric Light and Power Plants [f]
Continental United States							
New England							
Maine	1,192	1,074	1,191	840	847	1,723	1,128
New Hampshire	1,120	1,210	1,121	836	1,127	1,688	1,138
Vermont	1,094	1,036	1,089	780	887	1,627	1,122
Massachusetts	1,273	1,214	1,272	852	1,091	1,642	1,063
Rhode Island	1,198	1,083	1,198	876	1,042	1,631	1,199
Connecticut	1,265	1,190	1,265	852	1,051	1,681	1,259
Middle Atlantic							
New York	1,387	1,209	1,375	750	1,105	1,719	1,266
New Jersey	1,336	1,178	1,332	804	1,123	1,769	1,267
Pennsylvania	1,370	1,377	1,371	708	998	1,719	1,212
East North Central							
Ohio	1,390	1,179	1,376	674	965	1,742	1,231
Indiana	1,235	1,129	1,225	640	874	1,681	1,090
Illinois	1,355	1,190	1,335	702	1,109	1,781	1,183
Michigan	1,435	1,611	1,447	720	1,154	1,765	1,554
Wisconsin	1,186	1,339	1,196	828	948	1,638	1,337
West North Central							
Minnesota	1,195	1,702	1,264	900	1,315	1,673	1,048
Iowa	1,211	1,106	1,197	869	986	1,754	1,101
Missouri	1,150	1,129	1,142	611	969	1,888	1,034
North Dakota	1,322	1,330	1,323	951	930	1,727	1,095
South Dakota	1,311	1,399	1,331	1,056	1,088	1,727	1,254
Nebraska	1,357	1,026	1,355	930	978	1,754	1,045
Kansas	1,260	1,360	1,281	786	1,261	1,815	1,122
South Atlantic							
Delaware	1,383	1,168	1,382	606	1,151	1,688	1,293
Maryland	1,202	1,093	1,197	588	861	1,769	1,293
District of Columbia	1,338	....	1,338	....	990	1,831	1,293
Virginia	1,096	1,107	1,097	540	694	1,758	1,063
West Virginia	1,290	1,186	1,232	624	953	1,681	1,198

IN SPECIFIED INDUSTRIAL OR OCCUPATIONAL GROUPS, 1919

H	I	J	K	L	M	N	O	P	Q
ONLY						MALES AND FEMALES			
		Salaries			Wages and Salaries in Miscellaneous Industries	Salaries		Wages	
Steam Railroads	Domestic and Personal Service	Mfg. and Mining Combined		Clergymen		Teachers	Mfg. (all Salaried Classes)	Mfg.	Power Laundries
		Clerks	Officials, Supts., and Mgrs.						
g	h	i	k	l	j	h	i	j	l
1,528	914	1,697	3,573	1,025	1,553	603	2,218	1,062	611
1,528	1,038	2,021	3,499	997	1,638	759	2,265	955	790
1,528	895	1,569	3,309	885	1,463	667	2,069	1,017	553
1,528	1,055	1,698	4,028	1,401	1,716	1,376	2,055	1,073	775
1,528	1,023	1,635	4,263	1,088	1,671	1,070	2,180	984	778
1,528	1,034	1,641	3,790	1,331	1,655	1,124	1,973	1,170	757
1,528	1,052	1,775	4,062	1,229	1,750	1,256	2,075	1,196	864
1,528	1,069	1,571	4,125	1,332	1,713	1,282	2,033	1,181	800
1,528	986	1,755	3,451	1,271	1,636	920	2,087	1,237	666
1,528	960	1,740	3,771	1,299	1,686	1,088	1,963	1,292	668
1,528	874	1,560	3,253	1,021	1,513	964	1,858	1,142	591
1,468	1,032	1,711	3,842	1,154	1,677	1,081	2,013	1,226	746
1,528	1,082	1,675	3,951	1,093	1,705	911	2,097	1,357	771
1,468	962	1,585	3,333	1,067	1,534	915	1,893	1,092	626
1,468	1,180	1,465	3,147	1,012	1,505	882	1,684	1,101	890
1,468	993	1,599	2,846	1,235	1,486	827	1,746	1,119	662
1,468	896	1,629	3,226	950	1,504	797	1,872	1,010	652
1,468	1,015	1,348	2,320	986	1,369	728	1,590	1,208	651
1,468	1,127	1,696	2,605	922	1,503	696	1,671	1,238	742
1,468	1,039	1,461	3,027	1,066	1,490	765	1,633	1,261	666
1,468	1,122	1,518	2,868	1,019	1,485	761	1,758	1,198	654
1,528	1,033	1,797	3,947	1,033	1,690	848	2,305	1,283	778
1,528	846	1,675	3,717	1,160	1,599	902	2,059	1,053	598
1,528	1,094	1,655	3,493	2,287	1,758	1,359	1,825	1,258	634
1,366	728	1,557	2,518	750	1,331	546	1,860	1,006	469
1,366	910	1,515	2,798	826	1,407	639	2,175	1,226	670

TABLE VIII. — AVERAGE ANNUAL FULL TIME EARNINGS IN

STATE AND GEOGRAPHIC DIVISION	A	B	C	D	E	F	G
	MALES						
	Wages						
	Mfg. [a]	Mines and Quarries [b]	Mfg. and Mining Combined [c]	Agriculture [d]	Power Laundries [e]	Building Trades [e]	Electric Light and Power Plants [f]
South Atlantic—*Cont.*							
North Carolina	927	788	925	540	803	1,681	832
South Carolina	897	729	895	461	713	1,692	892
Georgia	916	842	908	462	805	1,554	831
Florida	944	922	942	540	651	1,685	908
East South Central							
Kentucky	1,050	1,137	1,085	557	765	1,600	989
Tennessee	948	898	940	497	686	1,708	953
Alabama	970	1,112	1,004	438	758	1,785	1,008
Mississippi	915	....	915	456	762	1,785	829
West South Central							
Arkansas	965	1,260	985	547	830	1,888	1,037
Louisiana	1,012	1,435	1,034	517	730	1,631	1,098
Oklahoma	1,226	1,380	1,310	727	1,031	1,831	1,108
Texas	1,131	1,627	1,206	662	871	1,892	1,060
Mountain							
Montana	1,467	1,595	1,529	1,067	1,276	2,315	1,725
Idaho	1,357	1,711	1,411	1,123	1,273	2,058	1,218
Wyoming	1,702	1,503	1,583	1,033	1,319	2,058	1,430
Colorado	1,279	1,513	1,357	972	1,046	1,873	1,378
New Mexico	1,177	1,478	1,344	710	1,015	2,008	1,298
Arizona	1,422	1,715	1,611	996	1,170	1,992	1,402
Utah	1,220	1,746	1,409	1,104	1,072	2,038	889
Nevada	1,403	1,749	1,604	1,116	1,330	2,008	1,027
Pacific							
Washington	1,508	1,478	1,507	1,092	1,373	1,954	1,417
Oregon	1,442	1,342	1,441	1,044	1,533	2,011	1,146
California	1,349	1,641	1,375	1,094	1,176	1,938	1,531

[a] Based on *Census of Manufactures*, 1919; for method of computation, see text, pp. 50–58, 98.
[b] Based on *Census of Mines & Quarries*, 1919.
[c] Average earnings of males in Mining and Manufacturing; for details of computation, see text, pp. 77–99.
[d] Based on monthly farm wages without board. Figures published by U. S. Dept. of Agriculture.
[e] Union scales of wages. See text, pp. 94, 99.
[f] Based on 1917 Census; figures adjusted for change in wage level between 1917 and 1919.
[g] See text, p. 104.

SPECIFIED INDUSTRIAL OR OCCUPATIONAL GROUPS, 1919—*Continued*

H	I	J	K	L	M	N	O	P	Q
ONLY						MALES AND FEMALES			
		Salaries			Wages and Salaries in Miscellaneous Industries	Salaries		Wages	
Steam Railroads	Domestic and Personal Service	Mfg. and Mining Combined		Clergymen		Teachers	Mfg. (all Salaried Classes)	Mfg.	Power Laundries
		Clerks	Officials, Supts., and Mgrs.						
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*k*
1,366	748	1,648	2,669	667	1,314	464	2,035	804	527
1,366	674	1,445	2,834	830	1,277	464	2,047	787	507
1,366	723	1,588	2,810	746	1,296	426	1,993	826	549
1,366	676	1,474	2,407	917	1,257	518	1,819	907	497
1,366	767	1,473	2,755	578	1,313	523	1,854	967	516
1,366	680	1,488	2,973	724	1,320	494	1,908	854	480
1,366	711	1,452	2,748	654	1,300	484	1,891	924	528
1,366	701	1,634	2,444	585	1,281	439	1,942	890	505
1,366	776	1,526	2,750	565	1,329	477	2,043	845	586
1,366	724	1,477	2,861	800	1,348	723	1,878	961	491
1,468	996	1,698	2,898	900	1,521	768	1,843	1,187	667
1,468	875	1,404	2,680	805	1,376	612	1,751	1,082	622
1,468	1,264	1,932	3,086	1,049	1,765	958	2,033	1,442	865
1,468	1,256	1,526	2,694	1,027	1,553	932	1,801	1,333	854
1,468	1,286	1,605	3,237	1,046	1,668	869	1,904	1,686	843
1,468	1,086	1,525	2,950	1,018	1,542	929	1,802	1,219	689
1,468	989	1,775	2,679	900	1,548	803	1,789	1,161	595
1,468	1,206	1,895	3,274	1,300	1,785	1,279	2,218	1,409	799
1,468	1,149	1,546	2,788	1,100	1,551	992	1,803	1,137	738
1,468	1,321	1,385	2,765	1,200	1,585	1,163	1,909	1,384	961
1,468	1,315	1,724	3,610	1,038	1,756	1,229	2,274	1,467	957
1,468	1,368	1,640	3,312	1,000	1,651	870	2,027	1,385	875
1,468	1,191	1,565	3,352	1,400	1,674	1,272	1,855	1,248	826

[a] Weighted average of wages in Manufacturing and Mining, Agriculture, and Power Laundries. See text, p. 104.
[e] *Year Books* of Methodist Episcopal and Congregational Churches; also, *World Survey*, Inter-church Movement, 1920.
[f] Trade, Transportation, Public and Professional Services, etc.; weighted average. See text, p. 105.
[g] U. S. Bureau of Education.
[i] *Census of Manufactures*, 1919.

power plants as reported by the 1917 Census. The 1917 figures were adjusted to a 1919 basis by multiplying them by 1.45 to allow roughly for the rise in the wage level between 1917 and 1919.

Column H: *Wages in Steam Railways.*

This column shows average wages of employees of steam railroads for three divisions of the country. No data are available from which to make estimates by individual States. However, in the case of railroads the wage scales for a considerable portion of the employees are standardized and consequently variations in average earnings within the divisions are minimized. The annual earnings for the three divisions of the country were estimated from figures furnished by the Interstate Commerce Commission in its report on *Statistics of Railways in the United States.*

Column I: *Wages in Domestic and Personal Services.*

No original data have ever been published showing the comparative earnings in the different States of wage earners belonging to the large class of individuals rendering domestic or personal services, such as waiters, cooks, barbers, etc. The figures furnished in this table are based on wages in manufacturing, mining, agriculture, and power laundries. They represent weighted averages in which wages in manufacturing and mining have been given a weight of 2, farm wages a weight of 3, and wages in power laundries a weight of 5. In selecting the weights, it was assumed that the wage earners in the domestic and personal services are as a rule recruited from the same general type of individuals as found in power laundries and in agriculture.

Column J: *Salaries of Clerks in Manufacturing and Mining.*

The salaries of clerks in manufacturing and mining were computed in the same manner as wages in manufacturing and mining, as described above.

Column K: *Salaries of Officials, Superintendents, and Managers in Mining and Manufacturing.*

These average earnings were also computed in a manner similar to that used for wages in mining and manufacturing.

Column L: *Salaries of Clergymen.*

Data pertaining to salaries of clergymen were obtained from the following three sources: the *Year Book* of the Methodist Episcopal

Church; the *Year Book* of the Congregational Church, and the *World Survey of the Interchurch Movement*, 1920. The figures presented in the table presumably cover only regular salaries, and do not include the miscellaneous supplementary incomes usually received by ministers from their congregations. It, therefore, follows that if complete figures were available we would find that the average salaries of clergymen were actually somewhat higher than those recorded. It would, however, appear that our figures are fairly representative of the relative salaries in the different States.

Column M: *Wages and Salaries in Miscellaneous Industries.*

The estimated annual earnings presented in this column presumably represent the relative earnings in trade, transportation, and other industries outside of agriculture, mining, manufactures, construction, and domestic and personal service. The estimates are composites of wage or salary rates in ten industrial or occupational groups weighted as follows:

Wages in Manufacturing and Mining	20
Wages in Agriculture	5
Wages in Power Laundries	5
Wages in Building Trades	8
Wages in Electric Light and Power Plants	4
Wages in Steam Railroads	8
Salaries of Clerks in Manufacturing and Mining	25
Salaries of Officials and Managers in Manufacturing and Mining	11
Salaries of Clergymen	4
Salaries of Teachers	10

The weights were estimated from the *Occupation Statistics* of the 1920 Census of Population. The total number of persons receiving wages and salaries in the groups of industries and occupations included in trade, transportation, and miscellaneous industries was divided, with the aid of the Census data, into ten classes of such type and composition that they corresponded as nearly as possible to the classes of employees for which annual earnings had been computed from recorded data, as shown in Columns A to H and J to L of Table VIII.

Column N:

The salaries of teachers presented in this column are based on data published by the U. S. Bureau of Education.

Columns O, P, and Q:

The figures in the last three columns of Table VIII are unadjusted annual earnings based on the Census of Manufactures and obtained by dividing the total amount of the payrolls by the total number of employees irrespective of sex.

Total Wages and Salaries of Employees in Trade, Transportation, and Miscellaneous Industries in 1919.

The estimates by States of the total amounts disbursed in 1919 to employees in trade, transportation, and miscellaneous industries have been computed by applying the estimated average full-time earnings shown in Table VIII to estimates of the total number of employees attached to all the industries and services included in the group. The *Occupation Statistics* of the 1920 Census of Population served as the basis for estimating the total number of employees. Since the average earnings recorded in Table VIII are on the basis of males, the number of employees has also been converted to a male basis, i.e., the number of female workers in each State has been reduced by the ratio of $\frac{1}{1.9}$.[1] The figures as well as the method of computation are shown in Table IX. It will be seen that, for purposes of calculation, the employees in domestic and personal service have been segregated and treated separately from the other employees in the group. This was found necessary on account of the great difference in the proportion of domestics in the various sections of the country. For instance, in Florida, out of the 95,000 employees covered by the data in Table IX, over 29,000, or nearly 31 per cent fall into the domestic and personal service class. In Kansas, however, the number of such employees is about 23,600, or scarcely 13 per cent of the State total for the entire group. The average earnings of employees in the domestic and personal service class being considerably below those of employees in other industries under consideration, it is obvious that to have given the domestic service class the same numerical weight in each State would have introduced serious errors in our final estimates.

The figures shown in Table IX occupy a very prominent place in the entire report. These figures form the basis of accounting

[1] For a discussion of this ratio, see Chapter IV, pp. 79–80.

for about 25 per cent of the entire income of the people of the Continental United States, and it is, therefore, quite important that they command our confidence. There is, of course, no sure way of checking the correctness of the general method employed in arriving at our estimates. However, that the figures are reasonably correct is shown by the fact that the United States total obtained by adding the individual estimates for the several States checks very closely with the total arrived at by W. I. King by an entirely different method in which geographic distribution had no part.[1] Dr. King's estimate, comprising the addition of twelve separately computed national totals, is $16,888,767,000, only $137,164,000 less than the total for all the States recorded in Column G of Table IX. It is gratifying to note that the two independent estimates are within less than 1 per cent of each other.

Total Wages and Salaries in Trade, Transportation, and Miscellaneous Industries in 1920 and 1921.

It is presumed, and apparently with reason, that trade, transportation, and miscellaneous industries are not unlike manufacturing and the other three major industries covered in previous chapters in the matter of employment and earnings. The various industries are so closely interwoven and interdependent that it can hardly be conceived that a material change in one will not affect, temporarily at least, other industries or occupations as well. We have seen that, in the case of manufacturing, for instance, the fluctuations in employment and earnings of employees are not by any means synchronous in the various States, and that the proportional

[1] Dr. King computed separate national totals for each of the major industries included in the group as follows:

1. Steam railways, switching and terminal companies.
2. Pullman car transportation.
3. Street and electric railways.
4. Private electric light and power companies.
5. Telegraphs.
6. Telephones.
7. Express companies.
8. Transportation by water.
9. Banking.
10. Mercantile industry.
11. Government.
12. Unclassified industries.

TABLE IX. — PRELIMINARY ESTIMATE OF TOTAL WAGES AND SALARIES OF EMPLOYEES IN TRADE, TRANSPORTATION, AND MISCELLANEOUS INDUSTRIES OR OCCUPATIONS, IN 1919

State and Geographic Division	A	B	C	D	E	F	G
	Trade, Transportation, Public and Professional Services, and Industries Not Previously Covered			Domestic and Personal Services			Estimated Total Pay in Entire Group of Industries or Occupations (Thousands) C + F
	Estimated Number of Employees (In terms of Males)	Estimated Average Yearly Earnings of Males in These Industries	Estimated Total Pay (Thousands) A × B	Estimated Number of Employees (In terms of Males)	Estimated Average Yearly Earnings of Males in the Services	Estimated Total Pay (Thousands) D × E	
Continental United States	9,483,690	....	15,066,375	2,022,570	....	1,959,556	17,025,931
New England	718,500	....	1,206,944	154,850	....	159,312	1,366,256
Maine	59,310	1,553	92,108	13,810	914	12,622	104,730
New Hampshire	32,570	1,638	53,350	7,810	1,038	8,107	61,457
Vermont	22,280	1,463	32,596	6,416	895	5,742	38,338
Massachusetts	455,470	1,716	781,586	89,870	1,055	94,813	876,399
Rhode Island	57,810	1,671	96,600	11,450	1,023	11,713	108,313
Connecticut	91,060	1,655	150,704	25,450	1,034	26,315	177,019
Middle Atlantic	2,447,150	....	4,188,983	517,230	....	535,218	4,724,201
New York	1,413,890	1,750	2,474,308	302,860	1,052	318,609	2,792,917
New Jersey	315,090	1,713	539,749	63,130	1,069	67,486	607,235
Pennsylvania	718,170	1,636	1,174,926	151,240	986	149,123	1,324,049
East North Central	1,897,890	....	3,133,966	362,950	....	361,063	3,495,029
Ohio	493,840	1,686	832,614	95,480	960	91,661	924,275
Indiana	232,020	1,513	351,046	42,860	874	37,460	388,506
Illinois	723,530	1,677	1,213,360	131,020	1,032	135,213	1,348,573
Michigan	286,240	1,705	488,039	55,790	1,082	60,365	548,404
Wisconsin	162,260	1,534	248,907	37,800	962	36,364	285,271
West North Central	1,134,320	....	1,692,415	199,670	....	204,344	1,896,759
Minnesota	216,390	1,505	325,667	41,140	1,180	48,545	374,212
Iowa	211,640	1,486	314,497	34,260	993	34,020	348,517
Missouri	353,000	1,504	530,912	68,220	896	61,125	592,037
North Dakota	40,030	1,369	54,801	7,060	1,015	7,166	61,967
South Dakota	43,290	1,503	65,065	7,140	1,127	8,047	73,112
Nebraska	113,480	1,490	169,085	18,250	1,039	18,962	188,047
Kansas	156,490	1,485	232,388	23,600	1,122	26,479	258,867

South Atlantic	1,004,890	....	1,432,910	285,040	....	223,133	1,656,043
Delaware	16,560	1,690	27,986	5,030	1,033	5,196	33,182
Maryland	171,260	1,599	273,845	39,890	846	33,747	307,592
District of Columbia	127,740	1,758	224,567	25,370	1,094	27,755	252,322
Virginia	189,750	1,331	252,557	49,450	728	36,000	288,557
West Virginia	76,340	1,407	107,410	15,040	910	13,686	121,096
North Carolina	110,600	1,314	145,328	32,760	748	24,504	169,832
South Carolina	73,700	1,277	94,115	26,980	674	18,185	112,300
Georgia	173,190	1,296	224,454	61,040	723	44,132	268,586
Florida	65,750	1,257	82,648	29,480	676	19,928	102,576
East South Central	496,960	....	650,052	143,690	....	102,556	752,108
Kentucky	175,240	1,313	230,090	35,240	767	27,029	257,819
Tennessee	146,110	1,320	192,865	42,630	680	28,988	221,853
Alabama	112,670	1,300	146,471	39,920	711	28,383	174,754
Mississippi	62,940	1,281	80,626	25,900	701	18,156	98,682
West South Central	770,870	....	1,075,218	167,110	....	140,741	1,215,959
Arkansas	78,880	1,329	104,832	19,720	776	15,303	120,135
Louisiana	124,740	1,348	168,150	42,700	724	30,915	199,065
Oklahoma	149,650	1,521	227,618	24,130	996	24,033	251,651
Texas	417,600	1,376	574,618	80,560	875	70,490	645,108
Mountain	323,280	....	521,516	54,970	....	63,946	585,462
Montana	45,260	1,765	79,884	8,620	1,264	10,896	90,780
Idaho	30,650	1,553	47,599	5,300	1,256	6,657	54,256
Wyoming	19,080	1,668	31,825	3,390	1,286	4,360	36,185
Colorado	111,000	1,542	171,162	18,750	1,086	20,363	191,525
New Mexico	30,260	1,548	46,842	4,850	989	4,797	51,639
Arizona	37,740	1,785	67,366	5,860	1,206	7,067	74,433
Utah	37,840	1,551	58,690	5,970	1,149	6,860	65,550
Nevada	11,450	1,585	18,148	2,230	1,321	2,946	21,094
Pacific	689,830	....	1,164,371	137,060	....	169,243	1,333,614
Washington	139,080	1,756	244,224	27,690	1,315	36,412	280,636
Oregon	78,640	1,651	129,835	14,530	1,368	19,877	149,712
California	472,110	1,674	790,312	94,840	1,191	112,954	903,266

variations from year to year are entirely different in different parts of the country. In other words, we have seen that not only do the actual amounts of wages and salaries in the different States fluctuate from year to year, but the relative share of the national total received by employees in each State also undergoes considerable change. For example, in 1919 the employees of New York received 14.6 per cent of the total payrolls of the manufacturing industries of the country. In 1921, however, the share of the employees residing in the State of New York amounted to 16.1 per cent of the total. For the same years the share received by Michigan employees changed from 5.9 per cent to only 5 per cent. Similarly, practically all the other States were affected one way or another by the changing conditions in manufacturing industries, so that in 1921 we have an entirely different geographic distribution of total payrolls from that in either 1919 or 1920. The same situation, it will be recalled, obtained also in the case of mining, agriculture, and construction.

It is, then, apparent that if employment and earnings of employees in trade, transportation, and miscellaneous industries have reacted in somewhat the same fashion as in manufacturing and the other basic industries, the 1919 distribution, as computed in Table IX, is surely not representative of conditions in 1920 and 1921.

From the fact that even for 1919 the material bearing directly upon earnings of employees in trade, transportation, and miscellaneous industries was found to be very scarce, it can be implied that it would be out of the question to attempt to build up independent estimates of total wages and salaries by States for each succeeding year. Manifestly, the only feasible method of attack, under the circumstances, is to utilize in so far as possible the data computed for 1919 by adjusting them to fit in with the changes in employment and earnings in the specified industries that have taken place in the different sections of the country in subsequent years. For this purpose, indices have been computed aiming to show the relative departure from 1919 conditions obtaining in each State in 1920 and 1921. These indices have been calculated on the basis of the following factors:

1. Total wages and salaries received by employees in agriculture, mining, manufactures, and construction.

TABLE X. — TOTAL WAGES AND SALARIES IN TRADE, TRANSPORTATION, AND MISCELLANEOUS INDUSTRIES

1919—1920—1921

State and Geographic Division	Dollars (000's Omitted)			Per Cent of Total		
	1919	1920	1921	1919	1920	1921
Continental United States	**16,888,767**	**19,343,070**	**19,897,712**	**100.000**	**100.000**	**100.000**
New England	**1,355,493**	**1,580,074**	**1,594,675**	**8.026**	**8.169**	**8.014**
Maine	103,868	120,069	122,682	.615	.621	.616
New Hampshire	60,968	69,304	71,206	.361	.358	.358
Vermont	38,000	42,832	44,285	.225	.221	.222
Massachusetts	869,603	1,030,362	1,035,801	5.149	5.327	5.206
Rhode Island	107,413	121,578	126,502	.636	.629	.636
Connecticut	175,643	195,929	194,199	1.040	1.013	.976
Middle Atlantic	**4,686,633**	**5,389,096**	**5,544,420**	**27.750**	**27.861**	**27.865**
New York	2,771,109	3,231,125	3,359,337	16.408	16.705	16.883
New Jersey	602,253	675,904	689,454	3.566	3.494	3.465
Pennsylvania	1,313,271	1,482,067	1,495,629	7.776	7.662	7.517
East North Central	**3,466,926**	**4,000,140**	**4,038,045**	**20.528**	**20.680**	**20.294**
Ohio	916,722	1,027,833	1,010,752	5.428	5.314	5.080
Indiana	385,402	462,431	452,524	2.282	2.391	2.274
Illinois	1,337,759	1,562,977	1,642,440	7.921	8.080	8.254
Michigan	543,987	627,583	605,449	3.221	3.244	3.043
Wisconsin	283,056	319,316	326,880	1.676	1.651	1.643
West North Central	**1,881,070**	**2,141,402**	**2,225,627**	**11.138**	**11.071**	**11.185**
Minnesota	371,215	416,538	434,882	2.198	2.153	2.185
Iowa	345,544	401,745	409,881	2.046	2.077	2.060
Missouri	587,222	679,368	712,103	3.477	3.512	3.579
North Dakota	61,475	67,875	71,149	.364	.351	.357
South Dakota	72,453	79,625	81,312	.429	.412	.409
Nebraska	186,452	208,920	215,463	1.104	1.080	1.083
Kansas	256,709	287,331	300,837	1.520	1.486	1.512
South Atlantic	**1,642,602**	**1,820,816**	**1,867,640**	**9.726**	**9.413**	**9.386**
Delaware	32,933	33,991	34,859	.195	.176	.175
Maryland	305,011	344,301	352,456	1.806	1.780	1.771
District of Columbia	250,292	280,855	278,862	1.482	1.452	1.401
Virginia	286,265	306,739	319,914	1.695	1.586	1.608
West Virginia	120,079	146,412	144,809	.711	.757	.728
North Carolina	168,381	184,607	192,432	.997	.954	.967
South Carolina	111,297	122,539	124,895	.659	.634	.628
Georgia	266,505	290,834	301,519	1.578	1.503	1.515
Florida	101,839	110,538	117,894	.603	.571	.596
East South Central	**746,484**	**837,795**	**867,629**	**4.420**	**4.331**	**4.360**
Kentucky	255,020	301,484	311,952	1.510	1.559	1.568
Tennessee	220,061	246,478	257,048	1.303	1.274	1.292
Alabama	173,448	186,784	193,246	1.027	.966	.971
Mississippi	97,955	103,049	105,383	.580	.532	.529
West South Central	**1,206,196**	**1,378,634**	**1,447,935**	**7.142**	**7.127**	**7.277**
Arkansas	119,235	127,079	134,586	.706	.657	.676
Louisiana	197,430	226,353	232,727	1.169	1.170	1.170
Oklahoma	249,016	280,896	288,941	1.478	1.452	1.452
Texas	639,915	744,306	791,681	3.789	3.848	3.979
Mountain	**580,636**	**657,876**	**680,232**	**3.438**	**3.401**	**3.419**
Montana	90,017	97,637	98,429	.533	.505	.495
Idaho	53,875	58,976	63,178	.319	.305	.318
Wyoming	35,804	42,693	45,962	.212	.221	.231
Colorado	189,999	218,778	231,034	1.125	1.131	1.161
New Mexico	51,173	57,909	60,131	.303	.299	.302
Arizona	73,804	84,015	81,483	.437	.434	.410
Utah	65,022	74,125	76,482	.385	.383	.384
Nevada	20,942	23,743	23,533	.124	.123	.118
Pacific	**1,322,727**	**1,537,237**	**1,631,509**	**7.832**	**7.947**	**8.200**
Washington	278,327	292,757	295,478	1.648	1.514	1.485
Oregon	148,452	161,800	170,853	.879	.836	.859
California	895,948	1,082,680	1,165,178	5.305	5.597	5.856

2. Total wages and salaries reported to the U. S. Bureau of Internal Revenue on income tax returns.
3. Total payrolls of steam railroads, estimated for eight regions from the railway statistics of the Interstate Commerce Commission.
4. Estimated total population in each State at the middle of each year.

As a first step in the construction of the desired indices, the data of the first three factors mentioned above, which are in dollars, have been deflated by dividing the yearly figures for each State by an index of relative prices of consumption goods. This presumably has put them on a comparable basis with the fourth item entering into the computation of our indices, namely, population. In order to allow an independent assignment of weights to the several factors, the data were converted to percentages in terms of 1919, so that each factor comprised a series of forty-nine indices, one for each State, with 1919 as a base. The relative weights used in combining the four sets of indices into one were as follows:

Wages and salaries in manufacturing, mining, agriculture, and construction, together with the income tax figures on wages and salaries	4
Wages and salaries of steam railways	2
Population	4

In Table X are presented the final estimates of the total income derived by the employees in each State from wages and salaries in trade, transportation, and miscellaneous industries. In accordance with the practice followed throughout this report, the State estimates have been adjusted so that their totals for each year correspond with the national totals estimated by W. I. King, of the National Bureau of Economic Research.

CHAPTER VI

INCOME FROM WAGES AND SALARIES SUMMARIZED

Tables XI, XII, and XIII are summaries of the estimates of the total wages and salaries received by all employees in the Continental United States in 1919, 1920, and 1921. The scope of the material presented in these tables is so large that, with the limited amount of space here available, it would be hardly possible to select with appropriate discrimination the points that would be of greatest interest to the general reader. The presentation of these tables is made merely with the hope that they may prove of assistance in other investigations of a more particular character than the present study.

A limited analysis of the data pertaining to the total income from wages and salaries is found in Table XIV. 1919 is perhaps the most representative of the three years under observation (though not highly representative at that) and, hence, the analysis is made for that year, and is based on the figures shown in Table XI.

The first column of Table XIV shows the percentage of the national total of wages from all sources received by employees in each State. The concentration of population and industrial activity in the eastern part of the United States is here reflected with particular emphasis. The fourteen States comprising the New England, Middle Atlantic, and East North Central divisions account for over 62 per cent of the total payrolls of the country, 29 per cent going to employees in New York, New Jersey, and Pennsylvania alone. The South Atlantic division, with over 13 per cent of the total population, receives 8.7 per cent of the total payrolls, while the two South Central divisions, whose population makes up about 18 per cent of the total, receive only 9.5 per cent of the total wages and salaries disbursed in the Continental United States. What we might call a perfect balance between total wages and salaries and total population is found in the Mountain States. In 1919 the employees in these States received about 3.09 per cent

TABLE XI. — TOTAL SHARE OF EMPLOYEES IN THE INCOME DERIVED FROM ALL INDUSTRIES, 1919

DOLLARS (000's Omitted)

State and Geographic Division	All Industries	Agriculture	Mining	Manufacturing	Construction	Trade, Transportation, and Miscellaneous Industries
Continental United States	**34,769,362**	**1,490,711**	**1,415,903**	**13,624,401**	**1,349,580**	**16,888,767**
New England	**3,313,256**	**61,603**	**9,248**	**1,790,390**	**96,522**	**1,355,493**
Maine	235,075	10,922	1,170	113,071	6,046	103,866
New Hampshire	164,273	5,341	922	93,493	3,549	60,968
Vermont	94,744	8,624	3,490	41,863	2,767	38,000
Massachusetts	1,002,544	19,250	2,393	961,310	49,988	869,603
Rhode Island	288,326	2,434	482	170,371	7,626	107,413
Connecticut	628,294	15,032	791	410,282	26,546	175,643
Middle Atlantic	**10,154,284**	**141,163**	**456,343**	**4,530,766**	**339,379**	**4,686,633**
New York	5,016,170	72,524	8,928	1,994,587	169,022	2,771,109
New Jersey	1,464,335	20,044	6,119	779,102	56,817	602,253
Pennsylvania	3,673,779	48,595	441,296	1,757,077	113,540	1,313,271
East North Central	**8,281,806**	**264,733**	**265,588**	**3,911,684**	**372,875**	**3,466,926**
Ohio	2,384,568	52,089	66,376	1,231,800	117,521	916,722
Indiana	899,235	36,777	34,271	407,264	35,521	385,402
Illinois	2,734,692	86,895	104,302	1,092,628	113,108	1,337,759
Michigan	1,507,358	36,113	55,107	797,884	74,267	543,987
Wisconsin	756,013	52,859	5,532	382,108	32,458	283,056
West North Central	**3,236,437**	**368,336**	**94,932**	**765,346**	**126,753**	**1,881,070**
Minnesota	661,740	53,689	32,925	176,906	27,005	371,215
Iowa	592,756	76,399	13,810	127,015	29,988	345,544
Missouri	968,579	44,250	18,641	282,918	35,548	587,222
North Dakota	111,709	39,515	1,188	7,277	2,254	61,475
South Dakota	122,948	33,968	2,819	10,509	3,199	72,453
Nebraska	311,792	48,110	193	63,771	13,266	186,452
Kansas	466,913	72,405	25,356	96,950	15,493	256,709
South Atlantic	**3,026,348**	**116,683**	**168,252**	**962,922**	**135,889**	**1,642,602**
Delaware	85,509	3,111	156	45,436	3,873	32,933
Maryland	542,310	18,872	6,941	192,376	19,110	305,011
District of Columbia	284,939	23	8	20,404	14,212	250,292
Virginia	503,820	23,315	17,929	148,483	27,828	286,265
West Virginia	397,203	7,150	134,564	121,050	14,360	120,079
North Carolina	350,504	13,413	1,688	152,528	14,494	168,381
South Carolina	212,037	16,518	820	74,009	9,393	111,297
Georgia	441,323	21,355	2,372	129,282	21,809	266,505
Florida	208,703	12,926	3,774	79,354	10,810	101,839
East South Central	**1,331,490**	**49,275**	**111,745**	**377,884**	**46,102**	**746,484**
Kentucky	430,620	19,836	56,955	88,957	9,852	255,020
Tennessee	374,494	12,470	14,626	109,361	17,976	220,061
Alabama	353,470	8,732	40,164	119,614	11,512	173,448
Mississippi	172,906	8,237	....	59,952	6,762	97,955
West South Central	**1,980,618**	**175,596**	**110,296**	**379,619**	**108,911**	**1,206,196**
Arkansas	208,258	15,026	5,175	57,540	11,282	119,235
Louisiana	360,266	23,139	9,073	119,126	11,498	197,430
Oklahoma	425,838	43,401	59,452	49,238	24,131	249,616
Texas	985,256	93,030	36,596	153,715	62,000	639,915
Mountain	**1,074,510**	**122,806**	**152,335**	**181,687**	**37,046**	**580,636**
Montana	181,521	23,398	28,723	30,746	8,637	90,017
Idaho	107,087	19,939	5,385	21,950	5,938	53,875
Wyoming	77,380	10,153	16,171	13,322	1,930	35,804
Colorado	315,317	29,486	28,999	58,465	8,368	189,999
New Mexico	85,240	12,195	11,912	7,936	2,024	51,173
Arizona	137,491	12,189	31,452	15,795	4,251	73,804
Utah	127,584	9,185	19,758	28,339	5,210	65,022
Nevada	42,910	6,261	9,936	5,064	688	20,942
Pacific	**2,371,613**	**191,516**	**47,164**	**724,103**	**86,103**	**1,322,727**
Washington	573,761	37,061	8,330	230,771	19,272	278,327
Oregon	280,449	23,020	1,191	97,745	10,041	148,452
California	1,517,403	131,435	37,643	395,587	56,790	895,948

TABLE XII.— TOTAL SHARE OF EMPLOYEES IN THE INCOME DERIVED FROM ALL INDUSTRIES, 1920

DOLLARS (000's Omitted)

State and Geographic Division	All Industries	Agri-culture	Mining	Manu-facturing	Con-struction	Trade, Transportation and Miscellaneous Industries
Continental United States	**41,560,157**	**1,663,237**	**1,859,208**	**17,368,540**	**1,326,102**	**19,343,070**
New England	**4,134,927**	**71,350**	**11,078**	**2,360,741**	**111,684**	**1,580,074**
Maine	285,639	12,482	1,399	144,899	6,790	120,069
New Hampshire	198,652	6,208	1,106	116,451	5,583	69,304
Vermont	111,621	9,573	4,180	52,039	2,997	42,832
Massachusetts	2,441,830	22,849	2,867	1,327,483	58,269	1,030,362
Rhode Island	345,666	2,683	576	213,562	7,267	121,578
Connecticut	751,519	17,555	950	506,307	30,778	195,929
Middle Atlantic	**12,258,491**	**159,070**	**608,767**	**5,772,154**	**329,404**	**5,389,096**
New York	6,124,529	86,361	10,098	2,617,918	178,427	3,231,125
New Jersey	1,715,302	23,737	7,330	951,229	57,102	675,904
Pennsylvania	4,418,660	48,972	590,739	2,203,007	93,875	1,482,067
East North Central	**9,996,982**	**301,061**	**375,310**	**4,995,682**	**324,789**	**4,000,140**
Ohio	2,799,140	58,544	102,414	1,508,160	102,189	1,027,833
Indiana	1,136,634	38,890	50,189	545,540	39,584	462,431
Illinois	3,340,511	97,211	149,608	1,444,292	86,423	1,562,977
Michigan	1,824,778	42,554	66,472	1,025,060	63,109	627,583
Wisconsin	895,919	63,662	6,627	472,630	33,484	319,316
West North Central	**3,779,339**	**407,076**	**114,944**	**989,460**	**126,457**	**2,141,402**
Minnesota	766,911	59,206	39,447	222,851	28,869	416,538
Iowa	699,652	86,351	18,345	164,766	28,445	401,745
Missouri	1,159,932	47,077	23,518	378,116	31,853	679,368
North Dakota	126,367	44,754	1,192	9,522	3,024	67,875
South Dakota	137,726	37,881	3,370	12,859	3,991	79,625
Nebraska	354,294	50,548	230	78,166	16,430	208,920
Kansas	534,457	81,259	28,842	123,180	13,845	287,331
South Atlantic	**3,498,719**	**129,160**	**240,397**	**1,176,386**	**131,960**	**1,820,816**
Delaware	89,210	3,523	184	48,992	2,520	33,991
Maryland	636,223	20,797	11,219	237,203	22,703	344,301
District of Columbia	317,415	25	11	27,255	9,269	280,855
Virginia	519,214	25,779	24,157	176,918	15,621	306,739
West Virginia	523,980	8,188	194,461	161,499	13,420	146,412
North Carolina	405,661	15,501	2,021	185,935	17,597	184,607
South Carolina	249,870	18,180	985	93,751	14,415	122,539
Georgia	496,240	23,440	2,839	154,382	24,745	290,834
Florida	230,906	13,727	4,520	90,451	11,670	110,538
East South Central	**1,555,750**	**51,807**	**143,179**	**474,924**	**48,045**	**837,795**
Kentucky	538,676	19,747	83,281	122,322	11,842	301,484
Tennessee	433,540	13,438	19,377	136,822	17,425	246,478
Alabama	396,810	9,897	40,521	147,739	11,869	186,784
Mississippi	186,724	8,725	....	68,041	6,909	103,049
West South Central	**2,292,405**	**192,583**	**131,893**	**484,294**	**105,001**	**1,378,634**
Arkansas	229,018	17,738	6,604	63,766	13,831	127,079
Louisiana	434,694	27,956	10,871	152,181	17,333	226,353
Oklahoma	479,203	45,455	71,084	61,320	20,448	280,896
Texas	1,149,490	101,434	43,334	207,027	53,389	744,306
Mountain	**1,248,172**	**140,620**	**178,535**	**231,451**	**39,690**	**657,876**
Montana	199,542	24,321	34,382	37,022	6,180	97,637
Idaho	116,885	21,633	6,466	25,169	4,641	58,976
Wyoming	98,571	13,006	18,630	20,940	3,302	42,693
Colorado	374,985	35,062	33,235	75,325	12,585	218,778
New Mexico	97,995	14,196	13,126	10,272	2,492	57,909
Arizona	161,600	14,643	37,673	19,182	6,087	84,015
Utah	148,083	10,867	23,122	36,256	3,713	74,125
Nevada	50,511	6,892	11,901	7,285	690	23,743
Pacific	**2,795,372**	**210,510**	**55,105**	**883,448**	**109,072**	**1,537,237**
Washington	603,322	41,040	8,692	243,919	17,014	292,757
Oregon	308,761	23,251	1,418	111,657	10,635	161,800
California	1,883,289	146,219	45,095	527,872	81,423	1,082,680

TABLE XIII.— TOTAL SHARE OF EMPLOYEES IN THE INCOME DERIVED FROM ALL INDUSTRIES, 1921

Dollars (000's Omitted)

State and Geographic Division	All Industries	Agriculture	Mining	Manufacturing	Construction	Trade, Transportation and Miscellaneous Industries
Continental United States	**34,700,877**	**1,407,576**	**1,290,124**	**11,050,617**	**1,054,848**	**19,897,712**
New England	**3,231,649**	**69,780**	**4,722**	**1,492,652**	**69,820**	**1,594,675**
Maine	238,993	11,612	597	99,914	4,188	122,682
New Hampshire	160,705	5,888	471	80,355	2,785	71,206
Vermont	92,361	9,071	1,782	35,177	2,046	44,285
Massachusetts	1,927,457	22,544	1,222	828,597	39,293	1,035,801
Rhode Island	285,126	2,796	246	149,960	5,622	126,502
Connecticut	527,007	17,869	404	298,649	15,886	194,199
Middle Atlantic	**10,252,722**	**158,980**	**528,025**	**3,731,066**	**290,231**	**5,544,420**
New York	5,387,336	83,457	4,559	1,777,062	162,921	3,359,337
New Jersey	1,383,625	22,123	3,124	620,190	48,734	689,454
Pennsylvania	3,481,761	53,400	520,342	1,333,814	78,576	1,495,629
East North Central	**7,840,634**	**264,363**	**253,199**	**3,043,721**	**241,306**	**4,038,045**
Ohio	2,066,060	50,777	59,743	866,033	78,755	1,010,752
Indiana	888,349	35,338	34,606	337,717	28,164	452,524
Illinois	2,910,080	88,345	126,103	985,524	67,668	1,642,440
Michigan	1,268,181	36,265	29,922	551,862	44,683	605,449
Wisconsin	707,964	53,638	2,825	302,585	22,036	326,880
West North Central	**3,380,261**	**320,923**	**62,536**	**678,211**	**92,964**	**2,225,627**
Minnesota	671,477	45,418	16,813	150,630	23,734	434,882
Iowa	619,691	68,570	12,585	111,208	17,447	409,881
Missouri	1,054,598	43,597	14,430	263,150	21,318	712,103
North Dakota	114,188	34,168	1,323	6,504	1,044	71,149
South Dakota	120,953	26,132	1,440	8,693	3,376	81,312
Nebraska	317,910	36,848	99	53,949	11,551	215,463
Kansas	481,444	66,190	15,846	84,077	14,494	300,837
South Atlantic	**2,959,841**	**106,066**	**148,701**	**734,850**	**102,584**	**1,867,640**
Delaware	67,656	3,275	80	26,446	2,996	34,859
Maryland	546,246	19,478	4,947	153,764	15,601	352,456
District of Columbia	310,442	26	4	20,706	10,844	278,862
Virginia	481,798	22,886	14,554	100,117	15,327	319,914
West Virginia	384,574	7,353	124,697	96,491	11,224	144,809
North Carolina	335,674	11,704	862	119,284	11,392	192,432
South Carolina	208,984	13,011	419	62,189	8,470	124,895
Georgia	428,338	16,027	1,211	93,347	16,234	301,519
Florida	196,129	12,306	1,927	53,506	10,496	117,894
East South Central	**1,354,599**	**43,435**	**99,794**	**300,144**	**43,597**	**867,629**
Kentucky	481,103	17,003	58,653	81,096	9,399	311,952
Tennessee	387,480	11,875	12,040	90,652	15,865	257,048
Alabama	329,030	7,505	29,101	87,742	12,036	193,246
Mississippi	156,386	7,052	....	37,654	6,297	105,383
West South Central	**2,076,081**	**154,369**	**62,703**	**325,218**	**85,856**	**1,447,935**
Arkansas	201,081	13,425	4,270	36,975	11,825	134,586
Louisiana	369,453	20,392	4,633	101,880	9,821	232,727
Oklahoma	419,220	34,510	35,004	43,932	16,783	288,941
Texas	1,086,327	86,042	18,796	142,381	47,427	791,681
Mountain	**1,075,875**	**110,012**	**104,026**	**155,614**	**25,991**	**680,232**
Montana	157,548	16,228	17,362	22,450	3,070	98,420
Idaho	105,571	17,419	2,750	18,669	3,555	63,178
Wyoming	89,911	10,596	15,538	16,117	1,698	45,962
Colorado	345,045	28,479	24,762	53,017	7,753	231,034
New Mexico	88,869	11,548	8,427	6,094	2,679	60,131
Arizona	120,835	10,185	16,060	9,584	3,523	81,483
Utah	127,803	9,337	14,054	24,744	3,186	76,482
Nevada	40,293	6,220	5,073	4,940	527	23,533
Pacific	**2,529,215**	**179,648**	**26,418**	**589,141**	**102,499**	**1,631,509**
Washington	476,978	34,139	6,550	127,689	13,122	295,478
Oregon	268,073	20,753	647	64,797	11,023	170,853
California	1,784,164	124,756	19,221	396,655	78,354	1,165,178

of the total payrolls of the country, a percentage very similar to that representing the total population in this division, which on January 1, 1920, was about 3.16 per cent of the total of the Continental United States.

As might be expected, New York leads all the other States in the amount of total payrolls. In 1919 the employees residing in New York received over 14.4 per cent of the total wages and salaries disbursed in the country. This percentage is particularly striking when we consider that New York had only about 9.8 per cent of the total population.

In 1919 about 39 per cent of the total wages and salaries in the Continental United States was derived from manufactures. Agriculture, which is probably the most important basic industry of the country, furnished only a little over 4 per cent of the total, surpassing the mining and construction industries by only a very small amount.

Was the distribution of the total payrolls in the different States somewhat the same as for the entire country? Let us again refer to Table XIV. Glancing down the third column from the right, we find that for geographic divisions, the range in the percentages of the total payrolls received by employees in manufacturing is between about 17 per cent in the Mountain States and 54 per cent in New England. For individual States the range is between 6.5 per cent and 65.3 per cent.

From the standpoint of the relative importance of manufacturing, Connecticut seems to be the leading State. The next highest State in this respect is Rhode Island, which is followed by another New England State, — New Hampshire. Probably the most striking fact brought out by Table XIV is the insignificant rôle played by farm wages in the total payrolls of the country. Even in the most highly agricultural States, such as the Dakotas, farm wages constitute only about one-third of the total amount received by all employees in these States.

The relative position of mining, from the standpoint of total payrolls, seems to be most important in West Virginia, where this industry contributes about 34 per cent of the total wages and salaries in the State. This, of course, does not mean that the total payroll in mining is greater in West Virginia than in any other

TABLE XIV.—PERCENTAGE DISTRIBUTION OF TOTAL INCOME FROM WAGES AND SALARIES, 1919

Per Cent of U. S. Total in State (Wages and Salaries From All Sources)	State and Geographic Division	Per Cent of Total Wages and Salaries in State Due to					
		All Industries	Agriculture	Mining	Manufacturing	Construction	Trade, Transportation, and Miscellaneous Industries
100.000	**Continental United States**	100.000	4.287	4.072	39.185	3.882	48.574
9.529	**New England**	100.000	1.859	.279	54.037	2.913	40.912
.676	Maine	100.000	4.646	.498	48.100	2.572	44.184
.473	New Hampshire	100.000	3.251	.561	56.913	2.161	37.114
.272	Vermont	100.000	9.102	3.684	44.185	2.920	40.109
5.472	Massachusetts	100.000	1.012	.126	50.528	2.627	45.707
.829	Rhode Island	100.000	.844	.167	59.090	2.645	37.254
1.807	Connecticut	100.000	2.393	.126	65.301	4.225	27.955
29.205	**Middle Atlantic**	100.000	1.390	4.494	44.619	3.343	46.154
14.427	New York	100.000	1.446	.178	39.763	3.370	55.243
4.212	New Jersey	100.000	1.369	.418	53.205	3.880	41.128
10.566	Pennsylvania	100.000	1.323	12.012	47.827	3.091	35.747
23.818	**East North Central**	100.000	3.197	3.207	47.232	4.502	41.862
6.858	Ohio	100.000	2.184	2.784	51.658	4.929	38.445
2.586	Indiana	100.000	4.090	3.811	45.290	3.950	42.859
7.865	Illinois	100.000	3.178	3.814	39.954	4.136	48.918
4.335	Michigan	100.000	2.395	3.656	52.933	4.927	36.089
2.174	Wisconsin	100.000	6.992	.732	50.542	4.293	37.441
9.309	**West North Central**	100.000	11.381	2.933	23.648	3.916	58.122
1.903	Minnesota	100.000	8.113	4.975	26.734	4.081	56.097
1.705	Iowa	100.000	12.889	2.330	21.428	5.059	58.294
2.786	Missouri	100.000	4.569	1.924	29.210	3.670	60.627
.321	North Dakota	100.000	35.373	1.064	6.514	2.018	55.031
.354	South Dakota	100.000	27.628	2.293	8.547	2.602	58.930
.897	Nebraska	100.000	15.430	.062	20.453	4.255	59.800
1.343	Kansas	100.000	15.507	5.431	20.764	3.318	54.980

8.704	**South Atlantic**	100.000	3.856	5.560	31.818	4.490	54.276
.246	Delaware	100.000	3.638	.183	53.136	4.529	38.514
1.560	Maryland	100.000	3.480	1.280	35.473	3.524	56.243
.820	District of Columbia	100.000	.008	.003	7.161	4.988	87.840
1.449	Virginia	100.000	4.628	3.559	29.471	5.523	56.819
1.142	West Virginia	100.000	1.800	33.878	30.476	3.615	30.231
1.008	North Carolina	100.000	3.827	.482	43.517	4.135	48.039
.610	South Carolina	100.000	7.790	.387	34.904	4.430	52.489
1.269	Georgia	100.000	4.839	.537	29.294	4.942	60.388
.600	Florida	100.000	6.193	1.808	38.023	5.180	48.796
3.830	**East South Central**	100.000	3.701	8.392	28.381	3.462	56.064
1.239	Kentucky	100.000	4.606	13.226	20.658	2.288	59.222
1.077	Tennessee	100.000	3.330	3.906	29.202	4.800	58.762
1.017	Alabama	100.000	2.470	11.363	33.840	3.257	49.070
.497	Mississippi	100.000	4.764	.....	34.673	3.911	56.652
5.694	**West South Central**	100.000	8.866	5.569	19.167	5.498	60.900
.599	Arkansas	100.000	7.215	2.485	27.629	5.417	57.254
1.036	Louisiana	100.000	6.423	2.518	33.066	3.192	54.801
1.225	Oklahoma	100.000	10.192	13.961	11.563	5.667	58.617
2.834	Texas	100.000	9.442	3.714	15.602	6.293	64.949
3.090	**Mountain**	100.000	11.429	14.177	16.909	3.448	54.037
.522	Montana	100.000	12.890	15.824	16.938	4.758	49.590
.308	Idaho	100.000	18.620	5.029	20.497	5.545	50.309
.223	Wyoming	100.000	13.121	20.898	17.217	2.494	46.270
.907	Colorado	100.000	9.351	9.197	18.542	2.654	60.256
.245	New Mexico	100.000	14.307	13.975	9.310	2.374	60.034
.395	Arizona	100.000	8.865	22.876	11.488	3.092	53.679
.367	Utah	100.000	7.200	15.489	22.255	4.084	50.972
.123	Nevada	100.000	14.591	23.153	11.848	1.604	48.804
6.821	**Pacific**	100.000	8.075	1.989	30.532	3.631	55.773
1.650	Washington	100.000	6.459	1.452	40.221	3.359	48.509
.807	Oregon	100.000	8.208	.425	34.853	3.580	52.934
4.364	California	100.000	8.662	2.481	26.070	3.743	59.044

State. A glance at Table XI will show that Pennsylvania mining payrolls are over three times as great as those of West Virginia. However, in an intra-State comparison of the several industrial groups, we find that in Pennsylvania the wages and salaries derived from mining constitute only 12 per cent of the total payrolls of the State. We see, then, that, as in the case of agriculture, wages and salaries in mining play only a secondary part even in the leading mining States.

It may be suggested at this point that a study of the relative composition of the total payrolls may prove very useful in analyzing the economic stability of a given section of the country. Even from the limited classification of wages and salaries given in Table XIV, one can readily understand why the income of some sections of the country is likely to be subject to greater cyclical fluctuations than that of others. For example, the strong position of New York in this respect is clearly revealed when we consider the apparent diversity of its industrial activities. Unlike some of the other highly industrialized States, the sources of the income of its inhabitants, and particularly of those dependent upon wages or salaries, are greatly varied in character. In New Jersey, over 53 per cent of the total payrolls comes from manufacturing. Approximately the same condition is found to exist in Ohio and Massachusetts, while in Connecticut, as we have already observed, manufacturing industries contribute over 65 per cent of the total wages and salaries disbursed. The situation in New York, however, is entirely different. In spite of the fact that the manufacturing payrolls in that State are the highest in the country, they represent less than 40 per cent of the total wages and salaries in the State, the bulk of the payroll being due to miscellaneous industries, of which commerce and the allied activities form a very important part. It can readily be conceived that the community or State not leaning too heavily on one type of industry can weather depressions in the most satisfactory manner.

In this connection, the State of Michigan furnishes a good example of excessive concentration along specialized lines. In 1919 about 53 per cent of the total payrolls in that State came from manufacturing industries. Of these manufacturing payrolls, about 43 per cent was received by employees in the automobile indus-

tries; in other words, the automobile industries in the State of Michigan contributed roughly 23 per cent of the total wages and salaries disbursed in the State. What are the results of such concentration in times of depression? Putting the total payrolls in Michigan for the three years under observation on a percentage basis, with 1919 as 100, we have the following relative numbers:

1919	100
1920	121
1921	84

This gives us a spread of thirty-seven in the total annual earnings of employees between 1920 and 1921. The corresponding figures for New York, however, were:

1919	100
1920	122
1921	107

or a difference between 1920 and 1921 of only fifteen. While in Michigan the total amount of the payrolls in all industries for 1921 was 16 per cent below 1919, in New York it amounted to 7 per cent above the 1919 mark.

The same principle seems to have worked in most of the other States. Ohio, for instance, with nearly 52 per cent of its payrolls coming from manufacturing, which is heavily weighted with the metal industries, suffered heavy losses in its 1921 payrolls, these aggregating only 87 per cent of the 1919 total. In Iowa, on the other hand, the 1921 payrolls were 4 per cent higher than those of 1919.

Average Earnings of Employees.

Thus far, we have discussed the distribution of wages and salaries by States from a rather general standpoint. Our comparisons were made between States as units, and only in an indirect manner did we touch the individuals residing therein. The study of geographic units from the standpoint of the total amount of income received in each is undoubtedly interesting and quite useful, but, after all, we are chiefly interested in the more intimate social units,—the individual or the family. To say that the wage earners in a certain State received 10 per cent of the total amount disbursed in the entire country does not tell us anything about the individual

income of the wage earners. The State with the greatest share of the country's income may well be the poorest from the standpoint of the population residing therein, if there are too many to share in that income. To judge the comparative economic position of individuals in the different States, we must have averages rather than totals.

How do average earnings of employees compare in the different parts of the country? Are the States with the highest absolute payrolls also those where individual earnings are highest? Table XV and Chart 6 are intended to throw light upon this subject. The averages presented in this table and chart are based on estimates of total wages and salaries disbursed in all industries in each State during 1919, 1920, and 1921, and estimates of the total number of employees attached to all industries in each State at the middle of each year. It therefore follows that the figures shown are not hypothetical full-time earnings, but, presumably, are the averages of the amounts actually received by all employees, irrespective of the length of time employed in each year. The figures appearing in Chart 6 are the same as those shown in the last three columns of Table XV, only instead of the geographic arrangement, they follow an array according to the 1919 averages. 1919 is again chosen as the representative of the three years studied.

It is interesting to note that the list is headed by three Western States, and that all the States included in the Mountain and Pacific divisions, with the exception of New Mexico, fall in the first half of the array. It is also interesting and quite characteristic that the Southern States are practically all included in the lowest quarter, with Mississippi bringing up the rear. The industrial States are all to be found in the upper part of the array, while the agricultural States of the Middle West occupy the center.

A very interesting condition is disclosed by a study of the outline made by the ends of the solid black bars in Chart 6. It will be seen that the gradation in average annual earnings is quite regular until we reach within two or three States of the lower quartile.[1] At this point, we see a sharp change in the angle of the outline. This fact is also shown when we study the range of the average earnings of employees in the different States as represented

[1] The quartile is the item marking the first fourth or the third fourth of the array.

CHART 6

AVERAGE EARNINGS PER EMPLOYEE IN EACH STATE
1919-1920-1921
STATES ARRAYED ACCORDING TO AVERAGE EARNINGS IN 1919

Rank of State 1919	Average Earnings per Employee (Dollars) 1919	1920	1921	State
1	1,363	1,496	1,120	Montana
2	1,344	1,647	1,313	Nevada
3	1,325	1,699	1,479	Wyoming
4	1,305	1,595	1,061	Michigan
5	1,290	1,609	1,380	New York
6	1,286	1,529	1,095	Ohio
7	1,272	1,479	1,044	Arizona
8	1,261	1,572	1,341	Illinois
9	1,258	1,499	1,525	Dist. of Columbia
10	1,256	1,490	1,156	New Jersey
11	1,239	1,532	1,383	California
12	1,236	1,323	1,013	Washington
13	1,234	1,517	1,162	Pennsylvania
14	1,192	1,402	1,246	Kansas
15	1,192	1,561	1,203	Massachusetts
16	1,192	1,443	977	Connecticut
17	1,187	1,431	1,284	Colorado
18	1,185	1,397	1,165	Utah
19	1,157	1,236	920	Delaware
20	1,156	1,295	1,095	Oregon
21	1,135	1,246	1,079	Idaho
22	1,126	1,378	1,116	Rhode Island
23	1,121	1,310	1,153	Nebraska
24	1,118	1,292	1,138	North Dakota
25	1,109	1,271	1,096	South Dakota
26	1,105	1,262	1,068	Oklahoma
27	1,104	1,477	1,041	West Virginia
28	1,101	1,423	1,095	Indiana
29	1,085	1,311	1,140	Iowa
30	1,071	1,264	1,080	Minnesota
31	1,071	1,281	999	Wisconsin
32	1,069	1,284	1,077	Maryland
33	1,053	1,296	1,167	Missouri
34	1,031	1,213	1,077	New Mexico
35	1,012	1,257	1,006	New Hampshire
36	979	1,224	1,015	Maine
37	978	1,160	1,864	Texas
38	951	1,157	953	Vermont
39	900	1,157	1,017	Kentucky
40	890	991	851	Virginia
41	829	987	867	Tennessee
42	796	916	748	Alabama
43	793	891	767	Arkansas
44	782	968	808	Louisiana
45	757	894	721	North Carolina
46	743	852	721	Georgia
47	716	807	672	Florida
48	676	813	667	South Carolina
49	660	737	613	Mississippi

Average Earnings per Employee-1919 and 1921

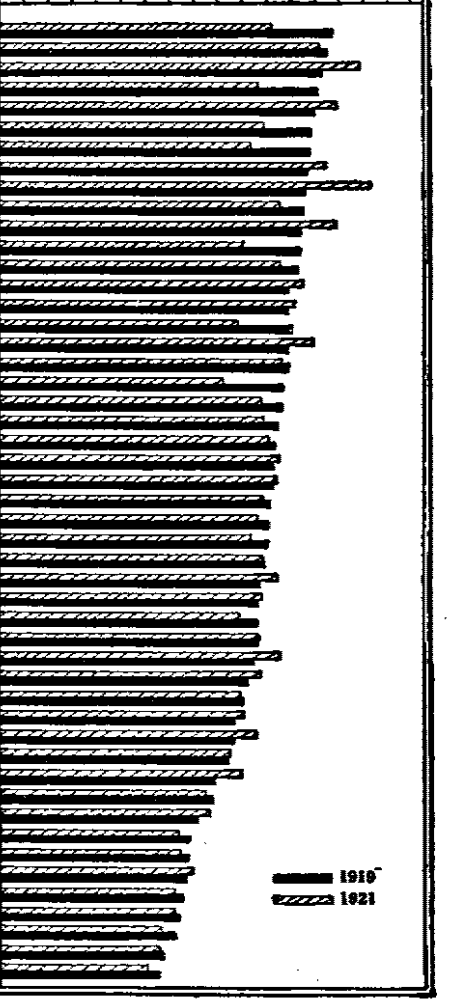


TABLE XV. — TOTAL WAGES AND SALARIES AND AVERAGE

1910—1920—1921

State and Geographic Division	Estimated Total Wages and Salaries Dollars (000's Omitted)		
	1919	1920	1921
Continental United States	**34,769,362**	**41,560,157**	**34,700,877**
New England	**3,313,256**	**4,134,927**	**3,231,649**
Maine	235,075	285,639	238,993
New Hampshire	164,273	198,652	160,705
Vermont	94,744	111,621	92,361
Massachusetts	1,902,544	2,441,830	1,927,457
Rhode Island	288,326	345,666	285,126
Connecticut	628,294	751,519	527,007
Middle Atlantic	**10,154,284**	**12,258,491**	**10,252,722**
New York	5,016,170	6,124,529	5,387,336
New Jersey	1,464,335	1,715,302	1,383,625
Pennsylvania	3,673,779	4,418,660	3,481,761
East North Central	**8,281,806**	**9,996,982**	**7,840,634**
Ohio	2,384,508	2,799,140	2,066,060
Indiana	899,235	1,136,634	888,349
Illinois	2,734,692	3,340,511	2,910,080
Michigan	1,507,358	1,824,778	1,268,181
Wisconsin	756,013	895,919	707,964
West North Central	**3,236,437**	**3,779,339**	**3,380,261**
Minnesota	661,740	766,911	671,477
Iowa	592,756	699,652	619,691
Missouri	968,579	1,159,932	1,054,598
North Dakota	111,709	126,367	114,188
South Dakota	122,948	137,726	120,953
Nebraska	311,792	354,294	317,910
Kansas	466,913	534,457	481,444
South Atlantic	**3,026,348**	**3,498,719**	**2,959,841**
Delaware	85,509	89,210	67,656
Maryland	542,310	636,223	546,246
District of Columbia	284,939	317,415	310,442
Virginia	503,820	549,214	481,798
West Virginia	397,203	523,980	384,574
North Carolina	350,504	405,661	335,674
South Carolina	212,037	249,870	208,984
Georgia	441,323	496,240	428,338
Florida	208,703	230,906	196,129

EARNINGS PER EMPLOYEE IN ALL INDUSTRIES IN EACH STATE

1919—1920—1921

Estimated Total Number of Employees Attached to Industry[a]			Average Earnings per Employee		
1919	1920	1921	1919	1920	1921
30,530,000	29,959,268	30,744,000	1,139	1,387	1,129
2,880,944	2,823,794	2,888,908	1,150	1,464	1,119
240,191	233,342	235,359	979	1,224	1,015
162,263	157,997	159,790	1,012	1,257	1,006
99,630	96,484	96,900	951	1,157	953
1,595,759	1,564,357	1,601,931	1,192	1,561	1,203
256,004	250,831	255,584	1,126	1,378	1,116
527,097	520,783	539,344	1,192	1,443	977
8,030,471	7,870,311	8,097,197	1,264	1,557	1,266
3,888,112	3,805,755	3,904,203	1,290	1,609	1,380
1,165,814	1,151,145	1,196,417	1,256	1,490	1,156
2,976,545	2,913,411	2,996,577	1,234	1,517	1,162
6,700,328	6,589,855	6,771,980	1,236	1,517	1,158
1,854,140	1,830,453	1,886,696	1,286	1,529	1,095
816,483	798,708	811,028	1,101	1,423	1,095
2,168,331	2,125,300	2,170,455	1,261	1,572	1,341
1,155,478	1,143,838	1,195,411	1,305	1,595	1,061
705,896	691,556	708,390	1,071	1,281	999
2,964,144	2,892,964	2,941,535	1,092	1,306	1,149
617,530	606,702	621,855	1,071	1,264	1,080
546,217	533,865	543,368	1,085	1,311	1,140
919,835	894,700	903,602	1,053	1,296	1,167
99,942	97,779	100,322	1,118	1,292	1,138
110,897	108,354	110,384	1,109	1,271	1,096
278,018	270,355	275,709	1,121	1,310	1,153
391,705	381,209	386,295	1,192	1,402	1,246
3,387,784	3,317,595	3,384,179	893	1,054	875
73,897	72,186	73,556	1,157	1,236	920
507,460	495,352	507,144	1,069	1,284	1,077
226,548	211,672	203,562	1,258	1,499	1,525
565,854	554,113	566,009	890	991	851
359,666	354,675	369,289	1,104	1,477	1,041
463,018	453,987	465,888	757	894	721
313,674	307,203	313,141	676	813	667
594,275	582,343	593,680	743	852	721
283,392	286,064	291,910	736	807	672

TABLE XV. — TOTAL WAGES AND SALARIES AND AVERAGE EARNINGS

1919—1920—1921

STATE AND GEOGRAPHIC DIVISION	ESTIMATED TOTAL WAGES AND SALARIES Dollars (000's Omitted)		
	1919	1920	1921
East South Central	**1,331,490**	**1,555,750**	**1,354,599**
Kentucky	430,620	538,676	481,103
Tennessee	374,494	433,540	387,480
Alabama	353,470	396,810	329,630
Mississippi	172,906	186,724	156,386
West South Central	**1,979,618**	**2,292,405**	**2,076,081**
Arkansas	208,258	229,018	201,081
Louisiana	360,266	434,694	369,453
Oklahoma	425,838	479,203	419,220
Texas	985,256	1,149,490	1,086,327
Mountain	**1,074,510**	**1,248,172**	**1,075,875**
Montana	181,521	199,542	157,548
Idaho	107,087	116,885	105,571
Wyoming	77,380	98,571	89,911
Colorado	315,317	374,985	345,045
New Mexico	85,240	97,995	88,869
Arizona	137,491	161,600	120,835
Utah	127,564	148,083	127,803
Nevada	42,910	50,511	40,293
Pacific	**2,371,613**	**2,795,372**	**2,529,215**
Washington	573,761	603,322	476,978
Oregon	280,449	308,761	268,073
California	1,517,403	1,883,289	1,784,164

PER EMPLOYEE IN ALL INDUSTRIES IN EACH STATE — *Continued*

1919—1920—1921

ESTIMATED TOTAL NUMBER OF EMPLOYEES ATTACHED TO INDUSTRY[a]			AVERAGE EARNINGS PER EMPLOYEE		
1919	1920	1921	1919	1920	1921
1,636,480	1,591,753	1,615,415	814	977	839
478,521	465,780	472,932	900	1,157	1,017
451,649	439,407	446,770	829	987	867
444,415	433,102	440,732	796	916	748
261,895	253,464	254,981	660	737	613
2,116,447	2,076,731	2,132,422	935	1,104	974
262,515	257,169	261,823	793	891	767
460,951	449,217	456,832	782	968	808
385,297	379,858	392,432	1,105	1,262	1,068
1,007,684	990,487	1,021,335	978	1,160	1,064
881,955	873,064	906,732	1,218	1,430	1,187
133,220	133,393	140,672	1,363	1,496	1,120
94,309	93,803	97,857	1,135	1,246	1,079
58,394	58,000	60,777	1,325	1,699	1,479
265,615	261,106	268,766	1,187	1,433	1,284
82,682	80,799	82,512	1,031	1,213	1,077
108,106	109,266	115,778	1,272	1,479	1,044
107,693	106,024	109,680	1,185	1,379	1,165
31,936	30,673	30,690	1,344	1,647	1,313
1,931,447	1,923,201	2,005,632	1,228	1,453	1,261
464,052	456,003	470,919	1,236	1,323	1,013
242,671	238,338	244,716	1,156	1,295	1,095
1,224,724	1,228,860	1,289,997	1,239	1,532	1,383

[a] The estimates of the total number of employees attached to Industry in each state are based on the Census of Manufactures, 1919, Census of Mines and Quarries, 1919, and the Occupation Statistics of the 1920 Census of Population. Changes from year to year are based on the estimated trend of population in each state as revealed by increase in population between 1910 and 1920. The preliminary estimates by states have been adjusted to correspond with the Total Number of Employees in the Continental United States as estimated by W. I. King.

by the values at specified intervals of the array. The following readings are expressed as relatives with respect to the highest average earnings recorded:

Highest (Montana)	100
Upper Quartile (Washington or Pennsylvania)	90
Median [1] (South Dakota)	81
Lower Quartile (Maine or Texas)	72
Lowest (Mississippi)	48

We see that the decrease in average earnings as we go down is quite gradual in the first three quarters of the array, the change being about 9 to 11 units (or percentages of the highest) to a quarter. However, in the last quarter of the array, we find a change of 24; in other words, the greatest change in range takes place in the lowest 25 per cent of all the States.

How have average earnings changed in the three years? On account of lack of space, it has not been possible to include 1920 in our graphic presentation. A comparison between 1920 and the other two years can, however, conveniently be made directly from the figures presented in Chart 6, or those shown in Table XV. The bar diagram compares average earnings in 1919 and 1921. The most important point that strikes us about this diagram is the fact that not in all States have average earnings been lower in 1921 than in 1919. The depression of 1921 seems to have missed a number of States — at least in so far as wages and salaries are concerned — so much so that in such States the average earnings were actually higher in 1921 than in 1919.

The most striking increase in average earnings is shown in the case of the District of Columbia, where Government employment is the dominant influence. The reduction of personnel in Government departments since the War apparently affected the lower positions more than the higher ones. In addition to this explanation, the increase in average earnings of employees may also be explained by the fact that actual increases in the rates of pay have been made in Government departments in 1920 and 1921. Government institutions are, as a rule, very slow to respond to changes in conditions. In 1919, and particularly in 1920, on account of the high cost of living and the high business and industrial activities of the country, there was a great agitation for higher salaries for

[1] The middle item of the array.

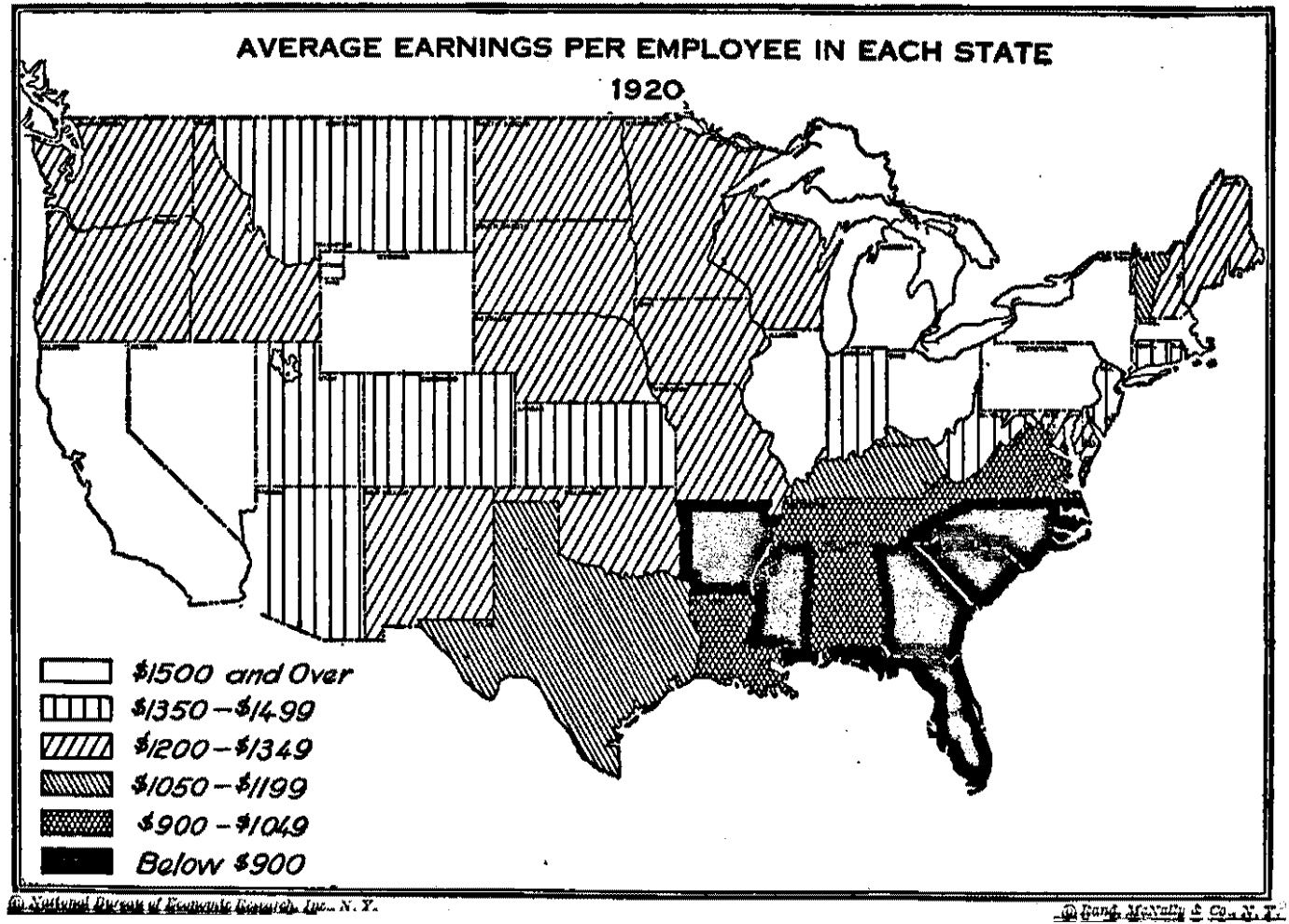
Government employees. The claims were deemed just, and steps were taken to relieve the situation. However, it appears that Government inertia has introduced a lag between the application of the pressure, or the cause, and the final relief. We therefore observe the characteristic situation that in the wake of general reductions in average earnings of employees in non-governmental fields, the earnings of Government employees actually increased.

The District of Columbia was not alone in showing an increase in average earnings of employees in 1921 in comparison with 1919. Nineteen States, including New York and California, showed the same condition. In addition, there were a number of States where the difference between 1919 and 1921 was so slight that we might properly make the statement that less than 50 per cent of the States showed any appreciable decrease in average earnings in 1921 when compared with 1919.

We have seen from Chart 6 that there is a marked tendency for States within the same geographic region to line themselves up close to each other with respect to average earnings per employee. This geographic tendency in the variation in the size of average earnings of employees is shown in a more graphic, though a more general way, in Chart 7. In this chart is shown an outline map of the United States shaded in accordance with the size of average earnings per employee in 1920, classified into six groups. The shading of the different States on the map has been carried out in a gradation from white to black, black representing the lowest average earnings. A glance at the map shows distinctly the areas of high and low earnings. Thus, we see the lightest shadings or highest earnings in the eastern part of the United States, extending from Illinois east through Massachusetts. The light shades also extend from Kansas west to the Pacific. The Northern States from Wisconsin to the Pacific are, with the exception of Montana and Wyoming, a shade darker than the East and Southwest. True to form, the darkest shades, designating lowest average earnings, persist in the South.

The figures on which Chart 7 is based are for 1920, which, in some respects, was not a "normal" year. However, the shadings on the map, which represent rather broad classes, are, in a general way, undoubtedly representative of the other two years as well.

CHART 7



CHAPTER VII

AGRICULTURAL RECEIPTS

Within the memory of a great number of persons now living, the United States has emerged from the position of a nation of predominantly rural pursuits into one of the most important industrial and commercial powers of the world. Not to go back further than the beginning of the present century, we find that in the Census of 1900 only 40 per cent of the population of the country was classed as urban. However, by the time of the 1920 Census, the manufacturing and commercial activities of the country had grown to such an extent that the balance of population was thrown to the cities. In the twenty years intervening between 1900 and 1920, the population of places of over 2,500 increased from about 30,000,000 to 54,000,000.

The tremendous growth of manufacturing and kindred industries, which has been responsible for cities attaining ascendancy in the United States, has also been indirectly responsible for the gradual reduction in the importance of agriculture as a factor in the national economy. There is no record prior to 1920 of the total farm population of the country. However, from the records of the number of farms and the size of the rural population,[1] we can judge that agriculture has not kept pace with the general development of the country.

The apparent gain of city over country has by some observers been viewed with anxiety. Remedies have been sought whereby to keep the farm population on the farm and "back to the farm" movements have been started at various times. However, it would appear that if cause for alarm exists, it is concerning the relative rather than the absolute status of the industry. We may say that, in general, the waning in importance of agriculture is only relative. Agriculture, as an industry, has not grown as rapidly

[1] The Census classifies as rural all population residing in places with less than 2,500 inhabitants.

as some of the other industries in recent years, but it certainly has not lost ground [1] in the absolute sense.

In spite of the industrial changes of the country, and the ever present concern about the migration from farm to city, agriculture is still the most important single basic industry of the country. Nearly 32,000,000 people directly depend upon it for a living,[2] and in normal years the value of its products approaches very closely the value of the products added by all manufacturing industries combined.

The importance of agriculture in the life of the nation is measured not merely by the size of the farm population and the total value of its products. It is socially of great significance that in an age of industrial centralization and corporate form of organization agriculture has retained the predominance of the individual entrepreneur.[3] Only a small portion of agriculture is controlled by corporations, since over 90 per cent of the industry is in the hands of individual entrepreneurs. It is estimated that there are, in all, about 10,000,000 individual entrepreneurs in the United States. Of this number, about 6,400,000, or nearly two-thirds, are farmers. The influence of such a large body of entrepreneurs upon the social, political, and economic life of the country must be very great indeed.

Although agriculture is carried on in one form or another in every State in the Union, the relative importance of the industry varies in the different States. In some States, as we shall see, agriculture furnishes a very small portion of the income of the people. In others, however, the industry is of paramount importance. Consequently, in any study of the geographic distribution of income, agriculture should take a very prominent place.

Notwithstanding the fact that the data pertaining to agriculture are both abundant and reasonably reliable, the task of arriving at accurate estimates of the net income from the industry in each State is not simple. As will appear, to obtain the final totals, it

[1] Between 1910 and 1920 the number of farms increased from 6,361,502 to 6,448,343, or 1.4 per cent; the farm acreage increased from 878,798,325 to 955,883,715, or 8.8 per cent; the rural population, which is, of course, not the same as the farm population, also increased 3.2 per cent. The figures are as reported by the *Census of Agriculture*, 1920, Vol. V, p. 34.

[2] The *Census of Agriculture*, 1920, Vol. V, p. 894, gives the farm population as 31,614,269.

[3] The term *individual entrepreneur*, as used here, does not refer to any person whose relationship to a business enterprise is merely that of stock ownership.

has been necessary to compute separate estimates for the individual items of gross income and expense entering into the operation of the industry. These items are necessarily of different magnitudes, and, consequently, their importance, in so far as the final results are concerned, is not the same in each case. However, assuming that each individual factor contributing to the total agricultural income may prove of interest in itself, the same degree of care has been taken with the smaller items as with the larger ones.

The method adopted in making the estimates of the individual items by States consists of the distribution of carefully prepared national totals in accordance with index numbers showing the relative share of the total contributed by each State.

Whenever independent estimates by States were made, they have been adjusted by scaling up or down, without disturbing their relationship, so as to correspond with the national totals computed by a different method.[1] The figures used in the computation of the indices or preliminary estimates are derived chiefly from the Census of Agriculture and the reports of the United States Department of Agriculture.

Farm Crops.

The production of farm crops forms the backbone of agriculture. In comparison, the other agricultural activities of the country are very small indeed. In 1919, out of a total gross agricultural income of about $21,000,000,000, $15,000,000,000 was derived from crop raising. The relative importance of farm crops as compared with that of all the other farm products is, of course, considerably greater than that indicated by the above figures, as a large portion of the gross value of the animal products is merely a duplication of the value of crops fed to livestock.

To deal intelligently with the problem of estimating the total income derived from the production of farm crops, we must consider carefully the disposition of the crops. The total crops raised may be divided into four parts, namely:

1. Crops sold.
2. Crops, such as vegetables, etc., consumed by the farmers and their families.

[1] Practically all the national totals used in this report are as estimated by W. I. King, of the National Bureau of Economic Research.

3. Crops fed to livestock.
4. Crops reserved for seed.

The relative proportion of the total crops disposed of in any one of the above four ways is, presumably, not the same in different parts of the country. Thus, in the "Corn Belt" the portion of the total crops fed to livestock is undoubtedly relatively greater than in the "Cotton Belt," where the principal crop is almost exclusively sold for money. Similarly, the proportion of the total crops consumed as food by the farmers and their families will vary from place to place, and so also with seed. As will be shown later (see Table XXVII, p. 177), the average ratio of yield to seed requirements for corn is 175, while for wheat it is only 10, and hence, the portion of total crop reserved for seed in the "Corn Belt" is very small when compared with the seed requirements in the wheat regions.

From the standpoint of computing the total income derived from agriculture, we are really not interested in the value of the crops fed to livestock, nor are we concerned about the value of the crops reserved for seed. It would be quite sufficient for our purposes to know the value of the crops sold, and of those consumed by the farmers and their families. However, there are no available data that would enable us to estimate with accuracy the value of these items for each State separately, and we are, therefore, compelled to compute for each State the total value of the crops, including crops fed to livestock and those reserved for seed as well as the crops sold and eaten.

The Census of Agriculture gives us for 1919 the total value of the crops raised. For the intercensal years, similar data are estimated by the Department of Agriculture. However, these figures do not represent actual receipts, as the total values are computed on the basis of average prices as of a single date. Manifestly, the farmers do not dispose of all their crops on one day and at one set of prices. The movement of farm products, though at its peak in the late autumn, continues more or less throughout the year, and at prices covering in some years a very substantial range. It follows, then, that the Census figures, as well as those of the Department of Agriculture, though probably fairly representative of the relative values in each State, do not give a fair picture of the values actually realized by the farmers.

W. I. King, in his estimates of income covering the entire Continental United States, has computed yearly figures of the total value of the crops sold and consumed by farmers and their families on the basis of monthly sales and consumption and average prices taken at the middle of each month. These figures are manifestly more accurate from the standpoint of income realized than are the totals based on the December prices alone. Consequently, in computing the gross income from all farm crops by States, the national totals have been obtained by adding estimates of the total value of seed and the total value of crops fed to livestock to the value of crops sold or consumed by farmers and their families, as computed by W. I. King.

As already indicated, seed and feed values are added merely for the purpose of facilitating the apportionment by States which must be made on the basis of the value of total crops raised. The values of crops fed to livestock and crops reserved for seed will subsequently be subtracted from the gross income as expense items in each State, so that the adding in of the feed and seed factors does not affect the national totals in the final analysis.

It is obvious that the crop year does not correspond with the calendar year in so far as the sale and consumption of crops are concerned. The total amount produced within any year is only partially disposed of during the same year. Part of it is carried over to the next calendar year, so that the amount sold, and the amount consumed by farmers' families during any calendar year, are obtained from at least two crop years. Consequently, in computing indices for the distribution of income from all farm crops during any calendar year, the production of two years must be considered.

In its *Year Books* [1] the Department of Agriculture furnishes figures showing averages of monthly sales of crops from farms in different sections of the country. These figures were used in the computation of weights representing the share of each of the two contributing crop years in the total crops sold during a calendar year in each geographic division. By applying these weights to the production figures covering two successive crop years, it has been possible to arrive at adjusted figures for the calendar years. Thus,

[1] See *Year Book* of the Department of Agriculture, 1922, p. 992.

for the calendar year 1919 a portion of the value of the crops raised in each State in 1918 has been combined with a portion of the value of the crops raised in 1919. These adjustments for the calendar year are obviously very crude; nevertheless, it is believed that they add materially to the accuracy of the final estimates.

The adjusted values of all farm crops that were raised in the different States have been used as indices for the distribution by States of the estimated total gross income from the production of all farm crops. These indices, on a percentage basis, in terms of the United States as a whole, are given in Table XVI. In the same table are also recorded the final estimates by States of the income received from farm crops in 1919, 1920, and 1921.

1921 marks a year of particular hardship in the economic life of the agricultural population of the United States. After the prolonged price inflation of farm products which reached its peak early in 1920, there was a sudden and sharp recession which swept away a considerable portion, if not all, of the gains made during and immediately after the War. For the crop year 1919 the value of all farm crops, as reported in the *Census of Agriculture*, was about $15,250,000,000. In 1920 the value of the crops, as estimated by the Department of Agriculture, was only about $10,000,000,000, and in 1921 the value dropped to $6,500,000,000.

The effect of the 1921 depression was apparently not felt in all sections of the country with the same degree of severity. The West North Central States seem to have been hit hardest, while the Pacific, New England, and the Middle Atlantic States came through with comparatively small losses. Reference to Table XVI, which gives a comparison of the estimated income from all the farm crops in each State for the three years, will tell the story. Glancing at the percentage columns, we note that in 1921 the New England States seemingly gained on the other sections of the country as regards their share of the total value of all crops. In 1919 these States were credited with but 2.069 per cent of the total. Their share in 1920 was 2.564 per cent, and in 1921 we find that the value of all crops in New England amounted to 3.47 per cent of the total. The same is, on the whole, true in the Middle Atlantic States. From about 6.6 per cent of the total in 1919, the share of these States rose to about 8.6 per cent in 1921. These apparent

TABLE XVI.—GROSS AGRICULTURAL INCOME FROM ALL FARM CROPS IN EACH STATE, 1919–1920–1921

State and Geographic Division	Dollars (000's Omitted)			Per Cent of Total		
	1919	1920	1921	1919	1920	1921
Continental United States	**14,504,576**	**13,610,676**	**8,056,727**	**100.000**	**100.000**	**100.000**
New England	**300,158**	**348,942**	**279,615**	**2.069**	**2.564**	**3.470**
Maine	99,449	100,594	76,318	.685	.739	.947
New Hampshire	28,378	34,485	29,353	.196	.253	.364
Vermont	51,428	68,269	51,681	.354	.502	.642
Massachusetts	63,348	77,716	62,283	.437	.571	.773
Rhode Island	7,099	8,452	6,054	.049	.062	.075
Connecticut	50,456	59,426	53,926	.348	.437	.669
Middle Atlantic	**956,306**	**1,064,136**	**691,575**	**6.593**	**7.818**	**8.584**
New York	436,354	511,390	338,968	3.009	3.757	4.207
New Jersey	94,623	99,225	66,285	.652	.729	.823
Pennsylvania	425,329	453,521	286,322	2.932	3.332	3.554
East North Central	**2,728,328**	**2,656,333**	**1,475,875**	**18.811**	**19.517**	**18.319**
Ohio	567,483	558,409	297,186	3.913	4.103	3.689
Indiana	495,671	449,990	232,182	3.417	3.306	2.882
Illinois	857,311	746,126	386,265	5.911	5.482	4.794
Michigan	375,685	414,329	251,906	2.590	3.044	3.127
Wisconsin	432,178	487,479	308,336	2.980	3.582	3.827
West North Central	**3,553,990**	**3,046,171**	**1,684,909**	**24.503**	**22.381**	**20.913**
Minnesota	514,842	424,142	236,512	3.550	3.116	2.935
Iowa	851,172	674,746	403,622	5.868	4.957	5.010
Missouri	535,172	484,094	251,060	3.690	3.557	3.116
North Dakota	317,055	279,828	164,978	2.186	2.056	2.048
South Dakota	331,342	260,624	138,696	2.284	1.915	1.721
Nebraska	470,523	413,719	211,712	3.244	3.040	2.628
Kansas	533,884	509,018	278,329	3.681	3.740	3.455
South Atlantic	**2,176,449**	**1,904,744**	**1,103,005**	**15.005**	**13.994**	**13.690**
Delaware	24,018	24,061	13,829	.166	.177	.172
Maryland	116,264	113,837	63,655	.802	.836	.790
District of Columbia	829	880	648	.005	.006	.008
Virginia	303,200	304,324	175,012	2.090	2.236	2.172
West Virginia	113,573	121,070	77,585	.783	.889	.963
North Carolina	530,974	476,479	309,616	3.661	3.501	3.843
South Carolina	441,438	353,308	182,291	3.043	2.596	2.262
Georgia	558,425	426,519	221,451	3.850	3.134	2.749
Florida	87,728	84,266	58,918	.605	.619	.731
East South Central	**1,374,141**	**1,154,748**	**722,032**	**9.474**	**8.484**	**8.962**
Kentucky	368,500	326,382	187,719	2.541	2.398	2.330
Tennessee	325,774	308,866	193,988	2.246	2.269	2.408
Alabama	322,110	260,428	175,800	2.221	1.913	2.182
Mississippi	357,757	259,072	164,525	2.466	1.904	2.042
West South Central	**1,985,030**	**1,845,475**	**1,034,541**	**13.685**	**13.559**	**12.841**
Arkansas	341,736	300,193	185,962	2.356	2.206	2.308
Louisiana	228,609	183,005	116,872	1.577	1.344	1.451
Oklahoma	462,649	429,035	213,137	3.189	3.152	2.646
Texas	951,976	933,242	518,570	6.563	6.857	6.436
Mountain	**580,316**	**610,162**	**387,659**	**4.001**	**4.483**	**4.812**
Montana	92,515	103,352	78,804	.638	.759	.978
Idaho	121,668	124,441	79,466	.839	.914	.986
Wyoming	39,160	39,243	25,639	.270	.288	.318
Colorado	175,373	182,982	104,905	1.209	1.345	1.302
New Mexico	39,782	44,691	31,770	.274	.329	.395
Arizona	41,948	45,886	25,798	.289	.337	.320
Utah	55,791	56,360	32,376	.385	.414	.402
Nevada	14,091	13,207	8,903	.097	.097	.111
Pacific	**849,858**	**979,965**	**677,516**	**5.859**	**7.200**	**8.409**
Washington	202,029	223,161	168,305	1.393	1.640	2.089
Oregon	130,000	143,560	99,475	.896	1.055	1.235
California	517,829	613,244	409,736	3.570	4.505	5.085

gains are, of course, not real. They are only comparative, and indicate that other sections of the country lost more heavily than the New England and Middle Atlantic divisions. As a matter of fact, there actually was a drop in the total value of the crops in nearly all of these States in 1921 as compared with 1919. The value realized from all farm crops in New England in 1919 was $300,158,000. In 1920 it rose to $348,942,000, but it dropped in 1921 to $279,615,000. The Middle Atlantic States sustained similar losses in the value of all crops, the reduction between 1919 and 1921 being from $956,306,000 to $691,575,000.

Passing to the East North Central States, it appears that this section of the country practically maintained its relative position in the value of all crops throughout the three years, the changes in their percentages of the total from year to year being very slight. However, the actual losses in this section of the country were significant. The gross income from all farm crops in 1919 was $2,728,328,000, while in 1921 it was only $1,475,875,000.

The West North Central division was affected more than any other section of the country. In 1919 its total income from all farm crops was 24.5 per cent of the national total. In 1921 its share of the total amounted to not quite 21 per cent. Iowa apparently lost more than any other single State in the division. Its gross income from all crops, which in 1919 was $851,172,000, dropped in 1921 to $403,622,000, a reduction of about 53 per cent. Of the Southern States, South Carolina and Georgia seem to stand out prominently in the reduction of their income from all farm crops in 1921, as compared with 1919. The 1921 income of these two States from crops was only about 40 per cent of the 1919 receipts.

In the agricultural depression of 1921, the far West seems to have reacted in very much the same way as the New England and Middle Atlantic States, for while the total income of the Mountain and Pacific States from all crops was less in 1921 than in 1919, the decrease was relatively smaller than in most of the other States.

Dairy Products.

Of all the branches of agricultural enterprise, dairying is the most important stabilizing factor in the total income of farmers. The

continuous demand for practically the entire farm supply and the perishable nature of the original product prevents the accumulation of large stocks and, hence, also the disastrous effects that usually accompany such accumulations. The prices of dairy products are, consequently, unusually uniform from year to year, and although phenomenal profits cannot, under such circumstances, be made, the farmer does not run the risk of sustaining great losses, as in the case of other agricultural products.

Dairying, though common in all parts of the United States, follows in its relative importance definite geographic lines, determined to a large extent by climatic conditions, and also by the centers of population. The northeastern part of the United States seems to be favored in both these respects, and we find that the bulk of dairying operations is carried on in that part of the country.

In 1919 the gross agricultural income from the production of dairy products was nearly $1,900,000,000. This sum included, in addition to the value of products sold, the farm value of milk, butter, and cheese consumed by the farmers and their families. The above total representing the entire United States has been used in estimating the amount of income received from dairy products in each State, and the distribution has been made on the basis of the figures recorded in the 1920 *Census of Agriculture.*[1] For the intercensal years, i.e., 1920 and 1921, in this study, the estimates by States of the total gross farm income from dairy products have been made on the basis of indices taking into consideration the 1919 Census distribution and also changes in the number of dairy cows in each State. Dairying, in general, is subject only to slow growth, but since such changes in the amount of dairying operations as do take place are not uniform throughout the country, it has been thought advisable to introduce a factor accounting for the changes in the number of dairy cows in the different years.

It should, however, be observed that while the adjustment just mentioned takes care of the increase or decrease in the volume of the dairy industry due to changes in the number of dairy cattle, it does not take into consideration the changes in the quality of the stock which naturally would materially affect the volume of dairy

[1] Volume VI, p. 63.

TABLE XVII.—GROSS AGRICULTURAL INCOME FROM DAIRY PRODUCTS, 1919–1920–1921.

State and Geographic Division	Dollars (000's Omitted)			Per Cent of Total		
	1919	1920	1921	1919	1920	1921
Continental United States.	**1,888,535**	**1,939,609***	**1,393,329**	**100.000**	**100.000**	**100.000**
New England	125,852	127,160	91,584	6.664	6.556	6.573
Maine	22,602	23,159	16,636	1.200	1.194	1.194
New Hampshire	13,031	13,092	9,238	.690	.675	.663
Vermont	34,675	34,525	25,024	1.836	1.780	1.796
Massachusetts	31,557	31,887	22,823	1.671	1.644	1.638
Rhode Island	4,891	4,965	3,595	.259	.256	.258
Connecticut	19,036	19,532	14,268	1.008	1.007	1.024
Middle Atlantic	380,539	389,532	279,627	20.150	20.083	20.069
New York	229,079	235,313	168,816	12.130	12.132	12.116
New Jersey	24,475	25,060	18,169	1.296	1.292	1.304
Pennsylvania	126,985	129,159	92,642	6.724	6.659	6.649
East North Central	571,869	592,996	422,638	30.281	30.573	30.333
Ohio	103,454	105,224	74,724	5.478	5.425	5.363
Indiana	56,184	58,790	42,176	2.975	3.031	3.027
Illinois	91,783	93,353	65,598	4.860	4.813	4.708
Michigan	90,593	94,827	67,353	4.797	4.889	4.834
Wisconsin	229,855	240,802	172,787	12.171	12.415	12.401
West North Central	335,366	338,753	241,185	17.758	17.465	17.310
Minnesota	99,280	102,896	74,543	5.257	5.305	5.350
Iowa	70,631	67,169	47,206	3.740	3.463	3.388
Missouri	44,324	45,057	31,015	2.347	2.323	2.226
North Dakota	24,947	26,127	18,922	1.321	1.347	1.358
South Dakota	21,435	21,802	15,187	1.135	1.124	1.090
Nebraska	30,217	30,432	21,833	1.600	1.569	1.567
Kansas	44,532	45,270	32,479	2.358	2.334	2.331
South Atlantic	112,972	117,482	85,663	5.982	6.057	6.148
Delaware	3,248	3,375	2,452	.172	.174	.176
Maryland	17,091	17,689	12,819	.905	.912	.920
District of Columbia	94	97	70	.005	.005	.005
Virginia	24,438	25,079	18,169	1.294	1.293	1.304
West Virginia	14,523	14,877	10,784	.769	.767	.774
North Carolina	18,999	20,133	14,714	1.006	1.038	1.056
South Carolina	10,198	10,862	7,956	.540	.560	.571
Georgia	21,378	22,170	16,372	1.132	1.143	1.175
Florida	3,003	3,200	2,327	.159	.165	.167
East South Central	89,403	92,869	67,660	4.734	4.788	4.856
Kentucky	28,668	29,463	21,792	1.518	1.519	1.564
Tennessee	26,307	27,465	19,701	1.393	1.416	1.414
Alabama	19,414	20,075	14,672	1.028	1.035	1.053
Mississippi	15,014	15,866	11,495	.795	.818	.825
West South Central	91,556	95,021	69,708	4.848	4.899	5.003
Arkansas	17,129	17,437	12,498	.907	.899	.897
Louisiana	5,741	6,090	4,459	.304	.314	.320
Oklahoma	26,609	26,999	19,200	1.409	1.392	1.378
Texas	42,077	44,495	33,551	2.228	2.294	2.408
Mountain	52,351	53,883	39,250	2.772	2.778	2.817
Montana	9,613	9,776	7,078	.509	.504	.508
Idaho	10,274	10,435	7,635	.544	.538	.548
Wyoming	2,738	2,774	2,020	.145	.143	.145
Colorado	16,147	16,933	12,261	.855	.873	.880
New Mexico	2,719	2,871	2,174	.144	.148	.156
Arizona	3,494	3,549	2,550	.185	.183	.183
Utah	6,138	6,304	4,598	.325	.325	.330
Nevada	1,228	1,241	934	.065	.064	.067
Pacific	128,627	131,913	96,014	6.811	6.801	6.891
Washington	35,202	35,805	26,139	1.864	1.846	1.876
Oregon	22,492	22,655	16,135	1.191	1.168	1.158
California	70,933	73,453	53,740	3.756	3.787	3.857

* Since the computation of the 1920 State totals, Dr. King has revised his national total for this item to read $1,930,587.

production. It also does not take into account the relative changes in feeding practice which supposedly affect the milk supply per cow. However, such changes are very slow and, it is believed, cannot disturb our figures to any noticeable extent, particularly during the years immediately following the Census.

Detailed data of the farm income from dairy products by States for 1919, 1920, and 1921 are presented in Table XVII. It will be noticed that while the reduction in the total income from dairy products between 1919 and 1921 was significant, it was not as great as in the case of other agricultural products. The drop in the total value of dairy products was from $1,888,535,000 in 1919 to $1,393,329,000 in 1921, or a little more than 26 per cent. During the same period, the income from meat products dropped about 50 per cent, and the income from all farm crops, exclusive of crops fed, dropped about 46 per cent. The relative stability of income from dairying operations accounts for the fact that in States like Wisconsin, New York, etc., where dairying constitutes an important part of agriculture, the farmers did not suffer from the 1921 depression as much as the farmers in other States.

Meat Products.

Next to the production of all farm crops, the production of meat animals constitutes the largest single item entering into the gross agricultural income of the country. In 1919 the total farm value of the larger meat animals sold and slaughtered was about $3,371,000,000, or 16 per cent of the total gross agricultural income of the country. Unfortunately, owing to the complexity of the meat industry, it is very difficult to determine with great accuracy the farm income from meat products by States. Since there are no accurate production statistics by States, it becomes necessary to build up indices of the relative share of each State in the agricultural end of the meat industry from more or less imperfect data which only indirectly measure the meat supply. For convenience in handling the problem and in conformity with the existing material, the meat animals have been divided into two classes which are treated separately in our attempt to arrive at estimates of the total income from meat products. In the first class are included all cattle which contribute beef and veal, and in the second class are sheep, goats, and swine.

As already noted, there are no accurate statistics pertaining to the amount of beef and veal produced in each State. Without such statistics, it is only possible to make very rough estimates of the share of each State in the agricultural income from the production of these products. Such figures are shown in the first three columns of Table XVIII. The indices used in apportioning by States the total agricultural income derived from the production of beef and veal are based on the value of all beef cattle and the imputed value, at average beef cattle prices, of all dairy cows on the farm. In this index dairy cattle are given the weight of approximately one-fourth, which corresponds with the estimates of the Department of Agriculture showing that dairy cattle together with veal calves from dairy herds furnish about one-fourth of the beef and veal supply of the country. The figures entering into the construction of the indices are derived from the *Census of Agriculture* and the reports of the Department of Agriculture. Since changes in the relative importance of different States in the beef supply of the country take place at a slow rate, the same index, based on values as of January 1, 1920, has been used for all the three years covered in this study. The indices expressed as percentages of the United States total are recorded in the third from the last column of Table XVIII.

As in the case of beef and veal, the only available data that may practically be utilized in apportioning the total value of sheep, goats, and swine products are the values of these animals on the farm on January 1, 1920, as given in the 1920 *Census of Agriculture*. In order to use one index to apportion the total value of the three kinds of meat animals, it is necessary to make an adjustment for the differences in the period in which the three types of animals reach maturity and become ready for slaughter. It is known, for instance, that swine reach maturity sooner than sheep, and, consequently, in a given period, say a year, probably a larger proportion of swine will be slaughtered than of sheep. Another consideration that makes the adjustment necessary is that while swine are produced primarily for their meat products, sheep and goats are raised for their wool and mohair, which makes the turnover of swine a great deal larger than that of either sheep or goats.

On the basis of statistics covering a period of eleven years (1910

to 1920 inclusive), it is estimated that the ratios between the number of animals slaughtered during the year and the number of animals on hand at the end of the year are as follows:

Sheep	.375
Goats	.101
Swine	1.009

The significance of the above ratios is obvious. We may say that a thousand sheep found on the farm at the end of the year indicate a total number slaughtered during the year of about 375; a thousand goats imply a slaughter for the year of 101 and a thousand swine, a slaughter of 1,009. In other words, for the same number on the farm at the end of the year, ten times as many swine are slaughtered during the year as goats. These ratios multiplied by the values of sheep, goats, and swine on the farm on January 1, 1920, in each State furnish approximations of the value of these animals slaughtered during 1919. These approximate values have been added together for each State and used in apportioning the estimated national income from the sale and slaughter of these animals in each of the three years. The final estimates, as well as the percentages of the total, are recorded in Table XVIII.

An examination of the section of the table dealing with the income from sheep, goats, and swine will show that the West North Central States lead with an aggregate amount of nearly 41 per cent of the national total. The East North Central division follows with 24 per cent of the total value, thus giving the Middle West about 65 per cent of the total value of the product. This is, of course, accounted for by the fact that 87 per cent of the total income under consideration is due to the production of swine which are raised chiefly in the corn belt.

It is interesting to study the share of the national total contributed by each State to the production of all meat and meat products. The combined totals for each State for 1919, 1920, and 1921, as well as the percentages of the totals for 1919, are given in Table XVIII. It will be observed that the West North Central States produce over 37 per cent of the total meat products. The East North Central States produce about 21 per cent, the West South Central about 10 per cent, and the Mountain States about 9.4 per cent. These figures are very significant in measuring the

TABLE XVIII. — GROSS AGRICULTURAL INCOME IN EACH STATE

1919—1920—1921

State and Geographic Division	Dollars				
	Beef and Veal Animals			Sheep, Goats, and	
	1919	1920	1921	1919	1920
Continental United States	**1,328,941**	**1,204,286**	**738,457**	**2,042,442**	**1,518,916**
New England	**19,600**	**17,763**	**10,891**	**16,749**	**12,456**
Maine	3,760	3,408	2,090	4,269	3,175
New Hampshire	2,365	2,144	1,314	1,818	1,352
Vermont	5,940	5,383	3,301	3,002	2,233
Massachusetts	3,841	3,480	2,134	4,371	3,250
Rhode Island	598	542	332	613	456
Connecticut	3,096	2,806	1,720	2,676	1,990
Middle Atlantic	**73,306**	**65,898**	**40,956**	**74,099**	**55,106**
New York	40,708	36,984	23,065	26,143	19,442
New Jersey	4,199	3,804	2,333	4,779	3,554
Pennsylvania	28,399	25,110	15,558	43,177	32,110
East North Central	**213,420**	**194,700**	**119,978**	**488,224**	**362,338**
Ohio	38,728	35,565	21,742	100,773	74,199
Indiana	34,344	30,950	19,139	118,421	88,067
Illinois	67,430	61,356	38,024	167,317	124,430
Michigan	26,754	24,714	15,088	44,382	33,006
Wisconsin	46,164	42,115	25,985	57,331	42,636
West North Central	**428,338**	**387,179**	**237,180**	**835,626**	**621,435**
Minnesota	39,486	35,250	22,163	97,670	72,635
Iowa	106,888	97,458	57,949	325,158	241,812
Missouri	63,452	57,422	35,758	121,158	90,102
North Dakota	24,140	21,063	13,303	18,341	13,640
South Dakota	52,558	47,005	28,983	84,312	62,701
Nebraska	72,580	65,959	40,219	133,392	99,200
Kansas	69,234	63,022	38,805	55,595	41,345
South Atlantic	**80,140**	**72,186**	**44,198**	**138,641**	**103,103**
Delaware	877	795	487	1,103	820
Maryland	6,183	5,697	2,880	8,333	6,197
District of Columbia	13	12	7	41	30
Virginia	20,366	19,019	11,982	22,181	16,495
West Virginia	14,911	12,887	8,063	10,641	7,914
North Carolina	8,730	7,912	4,852	29,289	21,781
South Carolina	6,538	5,925	3,633	19,322	14,369
Georgia	13,057	11,643	7,367	37,172	27,644
Florida	9,465	8,296	4,927	10,559	7,853

FROM THE SALE AND SLAUGHTER OF THE LARGER MEAT ANIMALS

1919—1920—1921

(000's Omitted)				Per Cent of Total[a]		
Swine	All Larger Meat Animals			Beef and Veal Animals	Sheep, Goats, and Swine	All Larger Meat Animals
1921	1919	1920	1921			
957,698	3,371,383	2,723,202	1,696,155	100.000	100.000	100.000
7,853	36,349	30,219	18,744	1.475	.820	1.078
2,002	8,029	6,583	4,092	.283	.209	.238
852	4,183	3,496	2,166	.178	.089	.124
1,408	8,942	7,616	4,709	.447	.147	.265
2,049	8,212	6,730	4,183	.289	.214	.244
287	1,211	998	619	.045	.030	.036
1,255	5,772	4,796	2,975	.233	.131	.171
34,746	147,405	121,004	75,702	5.514	3.628	4.372
12,259	66,851	56,426	35,324	3.062	1.280	1.983
2,241	8,978	7,358	4,574	.316	.234	.266
20,246	71,576	57,220	35,804	2.136	2.114	2.123
228,460	701,644	755,038	348,438	16.054	23.855	20.812
46,784	139,501	109,764	68,526	2.913	4.885	4.138
55,527	152,765	119,017	74,666	2.583	5.798	4.531
78,455	234,747	185,786	116,479	5.073	8.192	6.963
20,811	71,136	57,720	35,899	2.012	2.173	2.110
26,883	103,495	84,751	52,868	3.473	2.807	3.070
391,822	1,263,964	1,008,614	629,002	32.224	40.913	37.491
45,797	137,156	107,885	67,960	2.970	4.782	4.068
152,465	432,046	339,270	210,414	8.042	15.920	12.815
56,811	184,610	147,524	92,569	4.774	5.932	5.476
8,600	42,481	34,703	21,903	1.815	.893	1.260
39,534	136,870	109,706	68,517	3.954	4.128	4.060
62,547	205,972	165,159	102,766	5.460	6.531	6.109
26,068	124,829	104,367	64,873	5.209	2.722	3.703
65,008	218,781	175,289	109,206	6.022	6.788	6.491
517	1,980	1,615	1,004	.065	.054	.059
3,907	14,516	11,894	6,787	.464	.408	.431
19	54	42	26	.001	.002	.002
10,401	42,547	35,514	22,383	1.531	1.086	1.262
4,990	25,552	20,801	13,053	1.121	.521	.758
13,733	38,019	29,693	18,585	.656	1.434	1.128
9,060	25,860	20,294	12,693	.491	.946	.767
17,430	50,229	39,287	24,797	.982	1.820	1.490
4,951	20,024	16,149	9,878	.711	.517	.594

TABLE XVIII. — GROSS AGRICULTURAL INCOME IN EACH STATE FROM 1919—1920—1921

STATE AND GEOGRAPHIC DIVISION	DOLLARS				
	Beef and Veal Animals			Sheep, Goats, and	
	1919	1920	1921	1919	1920
East South Central	60,702	56,039	33,617	125,753	93,519
Kentucky	19,911	18,512	11,285	33,088	24,606
Tennessee	16,252	15,102	8,808	37,703	28,039
Alabama	9,502	8,611	5,280	27,920	20,764
Mississippi	15,037	13,814	8,244	27,042	20,110
West South Central	190,794	172,049	104,800	150,505	111,696
Arkansas	10,073	9,128	5,597	23,651	17,589
Louisiana	10,592	9,723	6,108	14,032	10,435
Oklahoma	39,832	35,814	21,800	34,331	25,300
Texas	130,297	117,384	71,295	78,491	58,372
Mountain	184,444	166,891	102,717	131,454	98,734
Montana	32,999	30,263	18,170	22,385	16,647
Idaho	15,894	14,403	8,832	25,939	19,290
Wyoming	24,143	21,785	13,972	18,280	13,594
Colorado	43,624	39,343	24,351	26,960	20,050
New Mexico	32,224	28,607	16,352	13,112	9,751
Arizona	16,937	17,536	11,191	4,495	3,830
Utah	10,399	9,236	5,890	15,073	11,210
Nevada	6,224	5,718	3,959	5,210	4,362
Pacific	78,197	71,581	44,120	81,391	60,529
Washington	9,600	9,152	5,612	14,256	10,602
Oregon	19,103	17,124	10,727	24,775	18,424
California	49,494	45,305	27,781	42,360	31,503

THE SALE AND SLAUGHTER OF THE LARGER MEAT ANIMALS — *Continued*

1919—1920—1921

(000's Omitted)				Per Cent of Total[a]		
Swine	All Larger Meat Animals			Beef and Veal Animals	Sheep, Goats, and Swine	All Larger Meat Animals
1921	1919	1920	1921			
58,966	186,455	149,558	92,583	4.565	6.157	5.530
15,515	52,999	43,118	26,800	1.497	1.620	1.572
17,679	53,955	43,141	26,487	1.222	1.846	1.600
13,092	37,422	29,375	18,372	.715	1.367	1.110
12,680	42,079	33,924	20,924	1.131	1.324	1.248
69,164	341,299	283,745	173,964	14.354	7.222	10.123
11,090	33,724	26,717	16,687	.758	1.158	1.000
6,579	24,624	20,158	12,687	.796	.687	.730
14,691	74,163	61,114	36,491	2.996	1.534	2.200
36,804	208,788	175,756	108,099	9.804	3.843	6.193
63,514	315,898	265,625	166,231	13.873	6.632	9.370
10,496	55,384	46,910	28,666	2.482	1.096	1.643
12,163	41,833	33,693	20,995	1.196	1.270	1.241
8,571	42,423	35,379	22,543	1.816	.895	1.258
12,642	70,584	59,393	36,993	3.282	1.320	2.094
6,148	45,336	38,358	22,500	2.424	.642	1.345
3,045	23,432	21,366	14,236	1.424	.318	.695
7,068	25,472	20,446	12,958	.782	.738	.755
3,381	11,434	10,080	7,340	.467	.353	.339
38,165	159,588	132,110	82,285	5.919	3.985	4.733
6,685	23,856	19,754	12,297	.760	.698	.708
11,617	43,878	35,548	22,344	1.436	1.213	1.301
19,863	91,854	76,808	47,644	3.723	2.074	2.724

[a] Based on 1919 Values.

effect of falling prices of meat animals on the farm income in different sections of the country. Thus, in the West North Central division, the shrinkage in the farm income from this item alone was from $1,264,000,000 in 1919 to $629,000,000 in 1921.

Poultry and Eggs.

The national gross agricultural income from the production of poultry and eggs was over $1,000,000,000 in 1919. Of this amount, nearly 26 per cent went to the West North Central States, and about 24 per cent to the East North Central States, thus giving the Middle West nearly 50 per cent of the total. Table XIX gives the percentages of the total value of the product in each geographic division for the years 1899 to 1909, 1919, 1920, and 1921. A general geographic shifting in the production of poultry and eggs is distinctly noticeable. The East seems to be gradually losing ground to the West and the South. While maintaining their rank with respect to population, the New England States, which in 1899 contributed about 5 per cent of the total value of the product, produced scarcely 3 per cent of the total in 1921. The reduction in the Middle Atlantic States was from 12.5 per cent to 10.1 per cent, while in the East North Central States it was from 26.3 per cent in 1899 to 23.8 per cent of the total in 1921. The largest growth in the industry has apparently taken place in the Pacific States, which show an increase from 3.7 per cent in 1899 to 6.2 per cent in 1921. In the same period the population in the last division increased from 3.2 per cent of the total to 5.3 per cent of the total.

The percentages of the total value of poultry and eggs in 1920 and 1921 for each State were estimated on the basis of the corresponding percentages computed from the figures recorded for the three preceding Census years, namely, 1899, 1909, and 1919. By plotting the three points representing the three Census years for each State, the general tendency of growth or decline is clearly discernible, and the projection of the curve drawn through the three points in each case consequently affords fairly accurate estimates for the years succeeding the last Census. The percentages thus estimated for each State were adjusted on the basis of 100, which represents the total for the entire country.

TABLE XIX. — PERCENTAGES OF TOTAL VALUE OF POULTRY AND EGGS PRODUCED IN EACH GEOGRAPHIC DIVISION IN 1899, 1909, 1919, 1920, AND 1921 AND PER CENTS OF TOTAL POPULATION IN THESE DIVISIONS IN 1900 AND 1920

Geographic Division	Per Cent of Total						
	Value of Poultry and Eggs					Population[c]	
	1899[a]	1909[a]	1919[a]	1920[b]	1921[b]	1900	1920
Continental United States	100.000	100.000	100.000	100.000	100.000	100.0	100.0
New England	4.984	4.422	3.114	2.970	2.800	7.4	7.0
Middle Atlantic	12.532	11.592	10.385	10.250	10.120	20.3	21.1
East North Central	26.297	24.198	23.850	23.840	23.825	21.0	20.3
West North Central	24.951	25.498	25.795	25.845	25.885	13.6	11.9
South Atlantic	9.692	10.008	10.564	10.620	10.685	13.7	13.2
East South Central	8.601	8.133	8.134	8.140	8.150	9.9	8.4
West South Central	7.492	8.656	9.264	9.320	9.365	8.6	9.7
Mountain	1.732	2.544	2.866	2.900	2.925	2.2	3.2
Pacific	3.719	4.949	6.028	6.115	6.245	3.2	5.3

[a] Computed from Census figures.
[b] Estimated on the basis of 1899, 1909, and 1919.
[c] *Census of Population*, 1920, Vol. I, p. 16.

Comparative figures of income from poultry and eggs for 1919, 1920, and 1921 are given in Table XX. The first three columns show State estimates in thousands of dollars for each of the three years; the fourth column shows for 1921 the per cent of total income from poultry and eggs in each State; while the fifth and last column of the table offers a percentage comparison between 1921 and 1919. It will be noticed that the national farm income from poultry and eggs in 1921 was about 79 per cent of that in 1919. This is a higher percentage than in the case of other agricultural products. In the case of meat products, it will be recalled that the 1921 income was only about half of that in 1919, while for wool and mohair it was only about one-third of the 1919 income from that item. In this respect, the production of poultry and eggs is like dairying. Both of these industries seem to afford a steady income to the farmers.

Farm Income from Wool.

The production of wool contributes considerably to the agricultural income, particularly in the Mountain States. In 1919 the total value of wool, according to Census figures, was $120,418,000.[1] Of this amount about $47,500,000, or nearly 40 per cent was the share of the Mountain States. Other sections of the country where income from wool is significant are the East North Central States with a little better than 17 per cent of the total, the Pacific States with 14 per cent, and the West North Central States with nearly 13 per cent of the total.

The depression of 1921 affected the producers of wool more than any other class of farmers. In 1921 the gross agricultural income from wool amounted to only about $36,000,000, a drop of 70 per cent from the 1919 mark. Obviously, the Mountain States sustained the greatest losses. Their income from wool in 1921 was barely 29.6 per cent of the amount received in 1919. In dollars, the reduction in the income from wool in the Mountain States was from $47,500,000 to about $14,000,000, a loss of over $33,000,000. Reference to Tables XXXI, XXXII, and XXXIII will show the significance of the wool industry in the Western States. In Nevada, for instance, in 1919 wool contributed about $3,000,000 to the

[1] Includes about $4,000,000 reported for mohair.

TABLE XX.—FARM INCOME FROM POULTRY AND EGGS IN EACH STATE 1919—1920—1921

State and Geographic Division	Dollars (000's Omitted)			1921	
	1919	1920	1921	Per Cent of Total in Each State	Per Cent of 1919
Continental United States	1,027,392	1,025,033	810,540	100.000	78.9
New England	31,994	30,443	22,695	2.800	70.9
Maine	7,675	7,175	5,350	.680	69.7
New Hampshire	4,264	4,100	2,958	.365	69.4
Vermont	3,955	3,844	2,958	.365	74.7
Massachusetts	8,836	8,354	6,160	.760	69.7
Rhode Island	1,500	1,435	1,054	.130	70.2
Connecticut	5,764	5,535	4,215	.520	73.1
Middle Atlantic	106,685	105,066	82,026	10.120	76.9
New York	42,020	40,745	31,854	3.930	75.8
New Jersey	11,969	11,532	8,024	.990	67.0
Pennsylvania	52,696	52,789	42,148	5.200	79.9
East North Central	245,053	244,368	193,112	23.825	78.8
Ohio	62,887	63,040	50,172	6.190	79.8
Indiana	51,760	51,662	40,812	5.035	78.8
Illinois	66,400	66,422	52,685	6.500	79.3
Michigan	34,294	32,801	24,316	3.000	71.1
Wisconsin	29,712	30,443	25,127	3.100	84.6
West North Central	265,025	264,920	209,808	25.885	79.1
Minnesota	32,805	32,904	26,140	3.225	79.7
Iowa	68,876	68,986	54,712	6.750	79.4
Missouri	65,013	64,577	50,902	6.280	78.2
North Dakota	10,294	10,763	8,673	1.070	84.3
South Dakota	15,750	15,888	12,725	1.570	80.8
Nebraska	28,931	28,957	23,019	2.840	79.6
Kansas	43,356	42,846	33,637	4.150	77.6
South Atlantic	108,524	108,858	86,606	10.685	79.8
Delaware	3,144	3,075	2,391	.295	76.0
Maryland	11,517	11,480	9,038	1.115	78.5
District of Columbia	31	21	16	.002	51.6
Virginia	25,387	25,113	19,696	2.430	77.6
West Virginia	12,791	12,895	10,334	1.275	80.8
North Carolina	20,024	20,347	16,373	2.020	81.7
South Carolina	11,979	12,095	9,726	1.200	81.2
Georgia	18,853	19,066	15,279	1.885	81.0
Florida	4,798	4,766	3,753	.463	78.2
East South Central	83,568	83,438	66,059	8.150	79.0
Kentucky	25,716	25,421	19,939	2.460	77.5
Tennessee	28,510	28,702	22,898	2.825	80.3
Alabama	14,496	14,760	11,874	1.465	81.9
Mississippi	14,846	14,555	11,348	1.400	76.4
West South Central	95,168	95,533	75,908	9.365	79.8
Arkansas	15,935	16,042	12,807	1.580	80.3
Louisiana	8,661	8,610	6,768	.835	78.1
Oklahoma	28,089	28,240	22,452	2.770	79.9
Texas	42,483	42,641	33,881	4.180	79.7
Mountain	29,444	29,726	23,707	2.925	80.5
Montana	6,750	6,919	5,568	.687	82.5
Idaho	4,962	4,971	3,955	.488	79.7
Wyoming	1,983	1,999	1,597	.197	80.5
Colorado	8,610	8,713	6,954	.858	80.8
New Mexico	2,065	2,050	1,621	.200	78.4
Arizona	1,664	1,691	1,337	.165	80.3
Utah	2,835	2,819	2,229	.275	78.6
Nevada	575	564	446	.055	77.5
Pacific	61,931	62,681	50,619	6.245	81.7
Washington	13,520	13,582	10,821	1.335	80.0
Oregon	8,848	8,836	6,995	.863	79.1
California	39,565	40,263	32,803	4.047	82.9

total income of the State. This amount, small as it may appear in the light of the large totals familiarly dealt with throughout this study, formed one-fourth of the total net current agricultural income of the State. Manifestly, changes affecting the wool market have enormous influence upon the agricultural income of Nevada. The reduction in the current agricultural income of that State between 1919 and 1921 was about $7,000,000, of which amount 30 per cent was due to the drop in the price of wool.

The gross agricultural income from the production of wool is recorded by States in the Agricultural Summary, Tables XXXI, XXXII and XXXIII, pp. 192–209. The derivation of the figures is as follows: for 1919, the amounts are as recorded by the 1920 Census of Agriculture; the estimates for 1920 and 1921 are based on production and price figures published in the *Year Books* of the Department of Agriculture.

Income from Honey and Wax.

The method used in estimating the gross income from honey and wax in the intercensal years is the same as that followed in the case of poultry and eggs, — that is, percentages of the total value of the product in the years covered by the last three Censuses, 1899, 1909, and 1919, were calculated and plotted for each State. The percentages for 1920 and 1921 were then estimated on the basis of the projected curves. The figures thus obtained were used as indices for the distribution by States of the estimated totals for the entire United States. The State estimates for the three years will be found in Tables XXXI, XXXII, and XXXIII.

Sale of Dairy Cows for City and Village Use.

Another item contributing to the agricultural income of the country is the sale of dairy cows for use in cities and villages. On January 1, 1920, there were about 1,220,000 dairy cows not on the farm. It is presumed that very few cows are raised off the farm, and, consequently, the yearly replacements of cows kept in cities and villages are supplied from the country. This small item of income, which in 1919 was only about $15,000,000, was distributed by States on the basis of the value of dairy cows off the farm in each State. This, of course, involved the hypothesis that cows in the villages and cities are supplied from the farms within the

same States. This, to be sure, is only roughly true, but any possible error would be quite negligible as compared with the total agricultural income.

The number of dairy cows not on farms is reported by States in the *Census of Agriculture*, 1920. The number of cows not on farms in 1920 and 1921 was estimated from the projection of straight lines drawn between the points plotted from the figures of the two Census years 1910 and 1920. To obtain the values of cows off the farm in each State, the estimated aggregates were multiplied by average prices of dairy cows, as reported by the United States Department of Agriculture.

It may be of interest to note that, while the aggregate number of dairy cows off the farm in the United States was maintained practically at the same level between 1910 and 1920, some States show a gain and others a loss, in the period covered by the present study. The New England States, for instance, show an increase from 4.6 per cent of the national total in 1919 to 5.4 per cent of the total in 1921. On the other hand, the Middle Atlantic States, the East North Central States, and particularly the West North Central States, show a decided drop in the number and value of dairy cows found off the farm. The other sections of the country indicate a tendency toward increase.

The final estimates of income derived from this item are to be found in the Agricultural Summaries, Tables XXXI, XXXII, and XXXIII.

Horses and Mules.

It is estimated that the United States produces annually about 1,500,000 horses and about 400,000 mules for replacements and exports abroad. At farm prices of 1919 the farm value of these animals would amount to about $180,000,000 for horses, and about $64,000,000 for mules, or a total of nearly $250,000,000 a year. In a general way, this whole sum constitutes a part of the agricultural income of the country. However, most of the horses and mules raised (about 85 per cent of the total) either remain on the home farm or are sold to other farmers,[1] and the addition to the

[1] Of the total annual production of horses, about 86 per cent are used as replacements on the farm, the other 14 per cent are supplied to cities or are exported abroad. Of the 400,000 mules produced annually, about 64,000, or nearly 16 per cent are destined for city use or exports abroad, leaving 84 per cent on the farm.

agricultural income from animals supplied for city use and exports abroad cannot be very large, especially if we consider the costs, such as selling, transportation, and feeding, involved in trading in horses and mules between farmers. As a matter of fact, in the income of the country as a whole, this item would prove to be nearly negligible and would not materially affect the total one way or another.

However, in studying individual States, the income derived from the sale of horses and mules may be significant. It is, for instance, conceivable that the farmers of one single stock-raising State derive a greater net income from trading in horses and mules than do all the farmers of the country put together. It is also reasonable to assume that, in the case of some States, the result of trading in horses and mules will appear as an expense item rather than an item of income.

There are no statistics giving in direct form the number of animals raised and sold by farmers in each State. For the Census years, we have reliable figures of the total number of horses and mules on the farm. Similar figures for other years are made available by the Department of Agriculture. This Department also publishes yearly figures of exports abroad as well as statistics giving receipts at the principal markets of the country. However, no data are to be found which indicate definitely the geographic sources of the horses and mules recorded. Fortunately, the *Census of Agriculture* gives a detailed classification by age of the animals found on the farm at the time of the last Census. This enables us to compute with a fair degree of accuracy the number of animals raised in each State and, consequently, also the number of animals available for sale, or the number that must be purchased from the outside.

As the basis for estimating the total number of animals raised in each State, we have taken the relative number of colts one year of age and under. From the Census figures for the entire United States, it appears that, on the average, the ratio between the total number of animals and the number of colts one year and under is about 18.5 for horses, and 15.75 for mules, — or that normally we would expect a total of 18.5 horses or 15.75 mules for every colt one year of age and under. Hence, to estimate the total number

of horses and mules to be expected in each State under *normal* conditions, if no exports or imports were to have taken place, the corresponding number of colts of the age specified reported for each State has been multiplied by the above ratios. From the hypothetical totals thus obtained, the total number of horses and mules actually found on the farm in the different States has then been subtracted. The differences presumably give approximations of the number of animals taken out of each State. In many States these differences are, of course, negative quantities, as the numbers acquired by farmers from the outside are in excess of those sold. Thus, we find that while the South has the greatest number of mules on hand, it raises a very small proportion of its requirements. For instance, judging from the number of young animals, the number of mules one would expect to find in the South Atlantic States is about 189,000. However, the Census of 1920 gives the number as 1,079,033, which indicates that about 890,000 have, presumably, been brought in from other sections of the country.

Obviously, the difference between the number of horses and mules raised, as estimated from the number of colts one year of age and under, and the actual number of horses and mules on the farm represents an accumulation of more than one year. It is estimated that the average useful life of a horse or mule is about eleven years, which roughly gives a yearly turnover of one-eleventh of the number on hand. Consequently, the accumulation due to the sales or purchases divided by eleven should give approximately the net number sold or purchased during one year. Apparently, then, of the 890,000 mules in the South Atlantic States on January 1, 1920, which supposedly were not raised in that section of the country, only one-eleventh, or about 81,000, were replaced from States outside of this division in one year.

A glance at Table XXI will show that most of the horses raised in the United States come from the Mountain States. The West North Central States, except Minnesota, also raise horses for sale, while, with very few exceptions, the other States do not raise enough horses to supply their own farm needs.

It is curious to observe that, contrary to expectations, there is an excess of purchases over sales of horses in the State of Kentucky. Kentucky, which in the popular mind is a horse-breeding State,

TABLE XXI.—NET NUMBER OF HORSES AND MULES BOUGHT OR SOLD BY FARMERS IN EACH STATE IN 1919 (Thousands).

State	Horses		Mules	
	Sold	Bought	Sold	Bought
All Farms in United States	218.5	....	63.5	....
New England	....	....	....	0.1
Maine	....	5.7	....	....
New Hampshire	....	2.0	....	....
Vermont	....	3.2	....	....
Massachusetts	....	2.7	....	....
Rhode Island	....	0.4	....	....
Connecticut	....	2.5	....	....
Middle Atlantic	....	....	....	....
New York	....	27.0	....	0.3
New Jersey	....	5.0	....	0.4
Pennsylvania	....	22.7	....	2.3
East North Central	....	....	....	....
Ohio	....	24.5	1.1	....
Indiana	....	11.5	11.7	....
Illinois	1.5	....	26.5	....
Michigan	....	25.8	....	0.1
Wisconsin	....	22.0	....	....
West North Central	....	....	....	....
Minnesota	....	6.4	0.6	....
Iowa	7.8	....	16.7	....
Missouri	11.5	....	62.7	....
North Dakota	38.7	....	0.4	....
South Dakota	48.7	....	1.4	....
Nebraska	30.5	....	13.5	....
Kansas	39.4	....	42.4	....
South Atlantic	....	....	....	....
Delaware	....	1.4	....	0.6
Maryland	....	4.3	....	1.7
District of Columbia	....	....	....	....
Virginia	....	6.6	....	3.9
West Virginia	....	4.7	....	0.5
North Carolina	....	9.7	....	18.4
South Carolina	....	3.9	....	18.5
Georgia	....	5.2	....	33.9
Florida	....	0.8	....	3.4
East South Central	....	....	....	....
Kentucky	....	3.6	6.9	....
Tennessee	....	1.4	15.5	....
Alabama	....	1.2	....	20.4
Mississippi	1.5	....	....	13.6
West South Central	....	....	....	....
Arkansas	....	1.4	....	8.4
Louisiana	1.1	....	....	11.7
Oklahoma	29.6	....	20.0	....
Texas	....	1.9	....	26.4
Mountain	....	....	....	....
Montana	83.0	....	0.2	....
Idaho	20.5	....	0.8	....
Wyoming	28.3	....	0.3	....
Colorado	31.4	....	3.2	....
New Mexico	8.8	....	1.0	....
Arizona	13.4	....	....	0.4
Utah	10.4	....	0.6	....
Nevada	4.9	....	0.3	....
Pacific	....	....	....	....
Washington	5.9	....	0.6	....
Oregon	14.8	....	1.0	....
California	....	5.9	1.2	....
Totals	431.7	213.2	228.6	165.0

apparently specializes in pure bred racing stock and imports most of its draft animals.

Another feature worthy of note is the competition which Missouri seems to encounter in the production of mules. While it still leads in the export of mules, it furnishes only about 27 per cent of the total farm exports. Kansas is apparently coming to the front in the production of mules for sale. Its annual sales are approximately 42,000 as compared with about 63,000 from Missouri and 26,000 from Illinois, which is the third ranking State in the production of mules for sale.

Now that the net number of horses and mules purchased or sold by farmers in each State has been estimated, it is necessary to obtain the amounts of money received or spent by farmers for these animals. If all sales and purchases were made on one date, and at one place, this would be a simple matter. All that would be necessary would be to obtain average prices of horses and mules prevalent on that date at the given market and multiply them by the total number traded. However, it is obvious that the sales and purchases of horses and mules are distributed throughout the year, and are consequently made at different prices. The Department of Agriculture furnishes data on the following three items, which, together with the data appearing in the *Census of Agriculture*, 1920, make it possible to compute an average price for each State at which horses and mules were bought or sold:

1. Average price per head of horses and mules on farm on January 1, given for each year and each State.
2. Farm price per head for horses as of the 15th of each month, given for the country as a whole.
3. Number of horses and mules received at the principal livestock markets during each month of the year.

Thus, item 1 gives us an index of the price level of horses and mules in each State, item 2 shows the variation in prices from month to month, and item 3 shows the approximate distribution of sales throughout the year.

Before the Department of Agriculture figures of average prices of horses and mules on the farm on January 1 of each year can be

used as an index of the price level of horses and mules sold in each State, they must be adjusted for age distribution of animals in each State. Only mature animals are as a rule traded in, and the prices of animals sold and purchased must therefore be put on the basis of mature animals. This has been done by the use of the formula:

$$X = \frac{ED}{AF + BG + C}$$

where X is the price of mature animals,

E is the price of the aggregate on the farm on January 1, as reported by the Department of Agriculture,

D the aggregate number of horses (or mules) on the farm on January 1,

A the number of colts one year of age and under,

F the ratio of the price of colts one year and under to that of mature animals,

B the number of colts under two years and above one year,

G the ratio of colts under two years and over one year to that of mature animals, and

C is the number of mature animals.

The next step is to measure for each year the relationship between average-for-the-year prices and the January 1 prices. The average-for-the-year prices of horses in the Continental United States for each of the three years have been obtained by weighting the average monthly prices by the monthly receipts of horses at the principal markets. The ratios between these average-for-the-year farm prices and the average farm prices of horses in the United States on January 1 of each year are as follows:

1919	1.218
1920	1.291
1921	1.107

By multiplying the January 1 prices of mature animals in each State by the above ratios, we arrive at the yearly prices for each State used to compute the value of horses and mules sold or purchased by farmers. The complete formula used in computing the

average farm prices of mature horses and mules in each State is given in the footnote below.[1]

In computing the values of horses and mules sold or purchased during 1920 and 1921, the numbers of animals sold were adjusted only in so far as sales to cities and villages were concerned. Purchases by, and sales to, other farmers were deemed to be approximately the same as in 1919, and changes in value were accounted for only through changes in price. The number of horses and mules on farms is not being reduced as rapidly as in cities and villages, and consequently a yearly adjustment for purchases by farmers is not essential.

Price Changes and Agricultural Income.

An analysis of the farm value of net sales and purchases of horses and mules by States for the years 1919, 1920, and 1921 throws an interesting side light on the effect of changing prices on agricultural income. It would seem off-hand that, for a given product,

[1] *Formulae Used in Computing Average Farm Prices of Mature Horses and Mules in Each State*

Explanation of Terms.

- a Number of Colts under 1 year of age in the State on Jan. 1.
- b Number of Colts from 1 to 2 years of age in the State on Jan. 1.
- c Number of Mature Animals (above 2 years of age) in the State on Jan. 1.
- d Aggregate Number of Horses or Mules in the State on Jan. 1.
- e Average Price of Aggregate Number of Animals on Jan. 1.
- f Ratio of Price of "a" to Price of "c."
- g Ratio of Price of "b" to Price of "c."
- R Ratio of Average Price of Horses for the year to Average Price of Horses on Jan. 1.
- P Average Price of Mature Animals for the year.
- x Average Price of Grown Animals in the given State on Jan. 1.

Formulae.

$$e = x\frac{af + bg + c}{d} \quad \text{or} \quad x = \frac{ed}{af + bg + c}$$

$$P = Rx = \frac{R\,ed}{af + bg + c}$$

Sources of Above Data.

a, b, c, and d—*Census of Agriculture*, 1920, p. 52.

e — *Year Books* of the Department of Agriculture for corresponding years.

Ratios.

f — Horses, 0.37; Mules, 0.41 } Based on comparable data given in the *Census of*
g — Horses, 0.63; Mules, 0.65 } *Agriculture*, 1900—*Abstract of Census*, 1910, p. 321.

R — 1919 — 121.8; 1920 — 129.1; 1921 — 110.7. See Table LIII.

rising or falling prices should affect the consumer and the producer to the same degree. That is, if the price of an article goes up twenty per cent, the producer would receive twenty per cent more while the purchaser would pay twenty per cent more. This, however, does not seem to work out in the case of farmers as a class, — at least, in so far as their trading operations in horses and mules are concerned.

Expressed in terms of 1919, as 100 per cent, the net income to the farmers in 1920 from the same number of animals as in 1919 was only 61.4 per cent for horses and 64.8 per cent for mules. In 1921 these percentages dropped to 34 per cent and 52.7 per cent, respectively. Did the farmer sustain these losses merely as a producer, through the fall of the price of his product, or were there at the same time other factors operating against him? Obviously, farmers as a class are producers as well as consumers, and in the case of horses and mules, we have an example where the farmer produces 100 per cent of the product, and consumes about 85 per cent of it. Part of this 85 per cent he has to purchase in the open market.

It is, of course, understood that the price to the consumer should be somewhat higher than the producer's price, to cover the handling and selling costs.

Assuming that in 1919 the ratio between the consumer's price and that of the producer was normal, let us examine what happened during 1920 and 1921. It will be recalled that we have taken the aggregates of horses and mules traded in annually by farmers to be the same in each of the three years under observation; consequently, changes in value merely reflect changes in price. The amounts paid out by all farmers of the country for horses and mules in 1919, 1920, and 1921, with their corresponding percentages on the basis of 1919, are shown in Table I. Table J shows similar figures for farmers' receipts.

What does the comparison between the two sets of transactions show?

In 1920 the purchasing price to the farmer for horses was 6 per cent greater than in 1919, while the selling price was about 10 per cent below that of 1919. In 1921 the purchasing price fell to 85 per cent of the 1919 level, while the selling price dropped to 67

per cent. The very same tendency appears in the case of mules. When prices advance, they advance a great deal more rapidly for the farmer as a consumer than as a producer. When prices fall, the reverse seems to be the case, i.e., they fall more rapidly for the farmer as a producer than a consumer. They react sharply at the source, and their decline is greatly retarded by the time they reach the consumer.

TABLE I—AMOUNTS PAID BY FARMERS FOR HORSES AND MULES

Animal	Year	Amount (Thousands of Dollars)	Per Cent of 1919
Horses	1919	32,207	100
	1920	34,112	105.9
	1921	27,402	85
Mules	1919	33,144	100
	1920	38,824	117.1
	1921	25,843	80

TABLE J—AMOUNTS RECEIVED BY FARMERS FOR HORSES AND MULES

Animal	Year	Amount (Thousands of Dollars)	Per Cent of 1919
Horses	1919	49,752	100
	1920	44,884	90.2
	1921	33,374	67.1
Mules	1919	39,598	100
	1920	43,012	108.6
	1921	29,245	74.5

Taking 1919 as a point of departure, it appears that in 1920 and 1921 the farmer "caught it going and coming." He lost both as a producer and as a consumer. Why these divergences in the movement of producers' and consumers' prices? Is it a coincidence of circumstances peculiar to the trading in horses and mules during the period stated, is it a phenomenon more universal and also holding true of other farm commodities, or is it merely a reflection of the difference in movement of wholesale and retail prices? It is

evidently unsafe to generalize from the scant data presented here. To answer these questions with any degree of certainty would require a far more detailed study of farm prices and the movement of farm commodities than lies within the scope of the present work. A partial clue to the discrepancy between the selling and buying prices of horses and mules may be discovered by referring to Table XXI, p. 156, which gives a picture of the geographic distribution of sales and purchases. It will be noticed that the excess production of horses and mules is highly centralized. The bulk of these animals seems to come from the West North Central and Mountain States. Is it possible that the general price level in these sections fell more rapidly in the given period than elsewhere, and that prices of horses and mules merely followed the general tendency, the cause of which may have been only accidental? This would, of course, imply that the phenomenon under discussion, though very interesting in its effects on agricultural income for the years 1919 to 1921, is merely fortuitous, and has no permanent significance in agricultural economics. At any rate, this would present an interesting problem for further study and investigation.

Farm Income from the Sale of Land for Urban Use.

An item which is ordinarily left out of consideration in discussing farm income is that of agricultural land sold for non-agricultural purposes. The growth of cities makes it necessary to increase the urban land areas of the country, and agricultural land is practically the only supply to draw upon. As a city expands, farm lands immediately bordering the city become very valuable; this naturally makes their use for agricultural purposes too expensive to be profitable.

During the decade of 1910 to 1920, the urban population of the United States increased from 42,166,000 to 54,314,000, a net gain of 12,148,000 in ten years, or an average of 1,215,000 per year. It is evident that an addition of a million and a quarter people to the population of the country would necessitate a considerable addition to urban land. On the basis of figures published by the United States Bureau of the Census in its report on *Financial Statistics of Cities*, it is estimated that from 110 to 115 acres of land

are required for every thousand of urban population. At this rate, the total yearly requirements are at least 150,000 acres, most of which must be yielded by agriculture. It should be borne in mind that urban expansion is not taking place at the same rate throughout the country, and, consequently, the bulk of the 150,000 acres of land transferred annually from agriculture to cities and villages is distributed among a comparatively few States, and therefore, presents in some cases items of considerable magnitude.

The estimated total farm income from the sale of land to cities and villages for 1919, 1920, and 1921, as calculated by W. I. King, has been apportioned by States in accordance with an index based on:

1. The increase in population between 1910 and 1920.
2. The volume of construction in each year.
3. Agricultural land values as indicated by the value of plough land.

It is, of course, true that there elapses a period of years between the time land is purchased from the farmer, and the time it goes into actual use for urban building. It is, however, believed that the amount of land purchased from farmers each year for city plotting will vary with the amount of new land used in urban construction — that is, when construction is at its height, there is a tendency to extend urban land development projects, even though the land taken out from farming will not be built upon until some future year. Consequently, the volume of construction and growth in urban population may be considered as good indices of the sale of farm lands for urban use each year.

The final estimates of income from this source by States are shown in Tables XXXI, XXXII, and XXXIII.

CHAPTER VIII

AGRICULTURAL EXPENSES

In the foregoing chapter, we have surveyed the significant items of agricultural income. We shall now attempt to review briefly the items of expense that must be deducted from the total gross farm income in order to arrive at estimates of the amounts received in each State by the owners and operators of farms. As will be seen, some of the items of expense are payments to other industries for materials and supplies, or the use of capital necessary in the conduct of agriculture. Other items of expense are merely deductions to offset duplications in the figures of the gross income.

Expenses for Farm Implements.

The estimated cost of farm machinery used by farmers of the United States has been apportioned to the several States in accordance with the total value of implements on hand on January 1, 1920, and the acreage under cultivation each year. In computing the cost of farm implements in each State in 1919, the values as reported in the 1920 Census were used as a basis. For 1920 and 1921 the Census figures were adjusted by means of the ratios of crop acreage in each given year to that of 1919. The estimated cost of implements in thousands of dollars together with the per cents of the total in each State during 1919, 1920, and 1921, are recorded in Table XXII. It will be seen that, as might be expected, the Middle West possesses about 54 per cent of the farm implements of the country, and consequently bears over 50 per cent of the annual expenses for this item.

Farm Expenses for Fertilizer.

The amounts spent on fertilizer by farmers of each State in 1919 are recorded in the 1920 Census of Agriculture. The expenses for this item in 1920 and 1921 were estimated by distributing the estimated total cost of fertilizer for the Continental United States in

TABLE XXII.—FARM EXPENSES FOR FARM IMPLEMENTS IN EACH STATE, 1919–1920–1921

State and Geographic Division	Thousands of Dollars			Per Cent of Total		
	1919	1920	1921	1919	1920	1921
Continental United States	**455,970**	**526,710**	**254,760**	**100.000**	**100.000**	**100.000**
New England	**11,719**	**13,536**	**6,548**	**2.570**	**2.650**	**2.666**
Maine	3,379	3,903	1,888	.741	....	....
New Hampshire	1,204	1,390	673	.264	....	....
Vermont	2,695	3,113	1,506	.591	....	....
Massachusetts	2,453	2,834	1,371	.538	....	....
Rhode Island	305	353	170	.067	....	
Connecticut	1,683	1,943	940	.369	....	....
Middle Atlantic	**45,556**	**52,625**	**25,453**	**9.991**	**10.163**	**10.332**
New York	21,549	24,894	12,040	4.726	....	....
New Jersey	3,228	3,729	1,804	.708	....	....
Pennsylvania	20,779	24,002	11,609	4.557	....	....
East North Central	**99,716**	**115,186**	**55,713**	**21.869**	**21.718**	**21.794**
Ohio	18,594	21,479	10,389	4.078	....	....
Indiana	16,164	18,672	9,031	3.545	....	....
Illinois	28,243	32,625	15,780	6.184	....	....
Michigan	15,521	17,929	8,672	3.404	....	....
Wisconsin	21,194	24,481	11,841	4.648	....	....
West North Central	**147,515**	**170,401**	**82,420**	**32.352**	**31.909**	**32.118**
Minnesota	22,972	26,536	12,835	5.038	....	....
Iowa	39,218	45,302	21,912	8.601	....	....
Missouri	17,537	20,257	9,798	3.846	....	....
North Dakota	14,481	16,728	8,091	3.176	....	....
South Dakota	14,258	16,410	7,966	3.127	....	....
Nebraska	10,424	22,438	10,853	4.260	....	....
Kansas	19,625	22,670	10,965	4.304	....	....
South Atlantic	**36,013**	**41,600**	**20,121**	**7.898**	**7.989**	**7.846**
Delaware	857	990	479	.188	....	....
Maryland	3,675	4,245	2,053	.806	....	....
District of Columbia	123	143	69	.027	....	....
Virginia	6,365	7,353	3,557	1.396	....	....
West Virginia	2,334	2,697	1,304	.512	....	....
North Carolina	6,932	8,006	3,872	1.520	....	....
South Carolina	6,097	7,042	3,406	1.337	....	....
Georgia	8,039	9,286	4,492	1.763	....	....
Florida	1,591	1,838	889	.349	....	....
East South Central	**22,333**	**25,798**	**12,478**	**4.898**	**4.864**	**4.835**
Kentucky	6,133	7,084	3,427	1.345	....	....
Tennessee	6,780	7,832	3,788	1.487	....	....
Alabama	4,359	5,035	2,435	.956	....	....
Mississippi	5,061	5,847	2,828	1.110	....	....
West South Central	**39,460**	**45,581**	**22,047**	**8.654**	**8.850**	**8.985**
Arkansas	5,504	6,357	3,076	1.207	....	....
Louisiana	4,154	4,798	2,321	.911	....	....
Oklahoma	10,227	11,814	5,714	2.243	....	....
Texas	19,575	22,612	10,936	4.293	....	....
Mountain	**24,189**	**27,942**	**13,515**	**5.305**	**5.444**	**5.299**
Montana	6,976	8,059	3,898	1.530	....	....
Idaho	4,874	5,631	2,724	1.069	....	....
Wyoming	1,491	1,722	833	.327	....	....
Colorado	6,320	7,300	3,531	1,386	....	....
New Mexico	1,236	1,427	690	.271	....	....
Arizona	1,117	1,291	624	.245	....	....
Utah	1,714	1,980	958	.376	....	....
Nevada	461	532	257	.101	....	....
Pacific	**29,469**	**34,041**	**16,465**	**6.463**	**6.413**	**6.125**
Washington	6,940	8,016	3,877	1.522	....	....
Oregon	5,271	6,089	2,945	1.156	....	....
California	17,258	19,936	9,643	3.785	....	....

accordance with an index based on the quantities consumed yearly in each State, and the reported costs in 1919.

The index may be expressed algebraicly as $\frac{A \times C}{B}$, A being the quantity used in the given year, B the quantity used in 1919, and C the value of fertilizer used in 1919. A and B were obtained from the *American Fertilizer Hand Book*, and C from the 1920 *Census of Agriculture*.

Table XXIII gives comparative figures for 1919, 1920, and 1921 of the farm expenses for fertilizer. The States bordering the Atlantic seacoast apparently use about 75 per cent of the total commercial fertilizer in the United States, the two Carolinas and Georgia alone consuming about 45 per cent.

Farm Expenses Incurred in the Business Use of Automobiles.

The automobile is more and more becoming a part of agricultural equipment. It is, however, difficult, if not impossible, to estimate just how much farmers spend for automobiles for business use. In the majority of cases, the same machine is used for both personal and business purposes, and there is no way of determining mathematically the proportion of the expense to be charged against each class of service. On the basis of 30 per cent for business and 70 per cent for personal use, W. I. King estimates the business costs of automobiles on the farm as $297,969,000 in 1919, $430,936,000 in 1920, and $329,836,000 in 1921. These totals may be accepted as conservative, and they are probably not very far from the truth. The estimated expenses for business use of automobiles in each State have been obtained by apportioning the above totals in accordance with the value of automobiles on the farm on January 1, 1920, which is reported by States in the 1920 *Census of Agriculture*. The final figures for this item of expense appear in Tables XXXI, XXXII, and XXXIII.

The Value of Farm Buildings and the Number of Automobiles on the Farm.

A very interesting relationship obtains when we compare the number of automobiles on the farm in the different sections of the country with the value of farm buildings. Table XXIV gives

TABLE XXIII.—COST OF FERTILIZER USED ON FARMS IN EACH STATE, 1919–1920–1921

State and Geographic Division	Thousands of Dollars			Per Cent of Total		
	1919	1920	1921	1919	1920	1921
Continental United States	**326,400**	**377,200**	**204,774**	**100.000**	**100.000**	**100.000**
New England	**18,323**	**19,867**	**14,596**	**5.612**	**5.267**	**7.177**
Maine	7,759	8,648	6,052	2.377	....	....
New Hampshire	526	660	513	.161	....	....
Vermont	857	985	766	.262	....	....
Massachusetts	3,907	4,072	3,141	1.197	....	....
Rhode Island	380	438	289	.116	....	....
Connecticut	4,894	5,064	3,935	1.499	....	....
Middle Atlantic	**41,438**	**42,433**	**35,142**	**12.695**	**11.249**	**17.158**
New York	15,067	14,640	12,117	4.616	....	....
New Jersey	10,743	12,252	9,452	3.291	....	....
Pennsylvania	15,628	15,541	13,573	4.788	....	....
East North Central	**30,590**	**31,632**	**21,106**	**9.372**	**8.386**	**10.306**
Ohio	13,206	13,433	8,868	4.046	....	....
Indiana	8,735	8,632	5,029	2.676	....	....
Illinois	2,996	3,100	2,409	.918	....	....
Michigan	4,873	5,498	3,985	1.493	....	....
Wisconsin	780	969	815	.239	....	....
West North Central	**6,169**	**7,440**	**2,939**	**1.890**	**1.972**	**1.435**
Minnesota	433	448	348	.133	....	....
Iowa	597	618	480	.183	....	....
Missouri	3,941	5,392	1,743	1.207	....	....
North Dakota	120	124	97	.037	....	....
South Dakota	34	35	19	.010	....	....
Nebraska	65	67	52	.020	....	....
Kansas	979	756	200	.300	....	....
South Atlantic	**185,701**	**220,902**	**106,139**	**56.897**	**58.564**	**51.838**
Delaware	1,222	2,559	1,934	.374	....	....
Maryland	7,610	7,804	5,262	2.330	....	....
District of Columbia	23	24	19	.007	....	....
Virginia	17,278	18,202	12,978	5.294	....	....
West Virginia	1,710	3,399	530	.524	....	....
North Carolina	48,797	64,179	28,411	14.950	....	....
South Carolina	52,547	65,958	27,383	16.100	....	....
Georgia	46,197	47,183	20,088	14.156	....	....
Florida	10,317	11,594	9,375	3.162	....	....
East South Central	**25,476**	**31,571**	**9,912**	**7.806**	**8.370**	**4.840**
Kentucky	3,597	3,253	1,770	1.102	....	....
Tennessee	3,525	3,743	972	1.080	....	....
Alabama	14,066	18,966	5,577	4.310	....	....
Mississippi	4,288	5,609	1,593	1.314	....	....
West South Central	**8,697**	**10,088**	**2,441**	**2.664**	**2.675**	**1.192**
Arkansas	2,573	3,384	467	.788	....	....
Louisiana	3,841	3,899	1,226	1.177	....	....
Oklahoma	452	468	273	.138	....	....
Texas	1,831	2,337	475	.561	....	....
Mountain	**807**	**835**	**816**	**.246**	**.221**	**.398**
Montana	126	130	101	.039	....	....
Idaho	106	110	85	.032	....	....
Wyoming	8	8	2	.002	....	....
Colorado	294	304	118	.090	....	....
New Mexico	113	118	31	.035	....	....
Arizona	41	42	33	.012	....	....
Utah	109	113	438	.033	....	....
Nevada	10	10	8	.003	....	....
Pacific	**9,199**	**12,432**	**11,583**	**2.818**	**3.296**	**5.655**
Washington	526	544	304	.161	....	....
Oregon	490	372	315	.150	....	....
California	8,183	11,516	10,964	2.507	....	....

the percentage distribution of these two items by geographic divisions for 1919.

TABLE XXIV. — PER CENTS OF TOTAL VALUES OF FARM BUILDINGS AS COMPARED WITH PER CENTS OF TOTAL NUMBER OF AUTOMOBILES ON FARMS IN EACH GEOGRAPHIC DIVISION, AS OF JANUARY 1, 1920*

Geographic Division	Per Cent of Total	
	Value of Farm Buildings	Number of Automobiles on Farms
Total — United States	100.000	100.000
New England	3.738	2.087
Middle Atlantic	11.670	7.684
East North Central	25.173	25.666
West North Central	27.244	32.288
South Atlantic	10.457	9.323
East South Central	6.508	4.012
West South Central	7.689	8.587
Mountain	3.147	4.599
Pacific	4.374	5.754

* Based on Census of Agriculture, 1920.

As might be expected, there is fairly good correlation between the value of farm buildings and the number of automobiles owned by farmers. It is, however, particularly interesting to note the gradation in ownership of automobiles as compared with the value of buildings from the older to the newer States. As we go west the number of automobiles on farms assumes greater importance as compared with the value of farm buildings. It appears that the East and the South have a greater share of the national total in the case of farm buildings than in the case of automobiles. For instance,

over 3.7 per cent of the total value of farm buildings is in New England, while the number of automobiles on the farms in that part of the country is only about 2 per cent of the total. The same condition appears in the Middle Atlantic, South Atlantic, and East South Central divisions. The very opposite is, however, true of the other divisions, particularly those lying west of the Mississippi. Thus, in the Mountain States the percentage representing the value of farm buildings and the percentage representing the number of automobiles are 3.1 and 4.6, respectively.

If we take the ratios of the percentages representing the value of farm buildings to those representing the proportion of automobiles and array them according to size, the geographic divisions shown in Table XXIV line themselves up as follows:

Division	*Ratio of Per Cent of Total Value of Buildings to the Per Cent of the Total Number of Automobiles on Farms*
1. New England	1.79
2. East South Central	1.62
3. Middle Atlantic	1.52
4. South Atlantic	1.12
5. East North Central	.99
6. West South Central	.89
7. West North Central	.84
8. Pacific	.76
9. Mountain	.68

The alignment is significant. It would appear that the distribution of automobiles, as compared with the value of farm buildings, follows, roughly at least, the historic development of the country. Building values represent an accumulation of long standing, while automobiles represent more recent wealth, which is naturally in evidence to a greater degree in the agriculturally more prosperous and newer sections of the country.

The position of the East North Central division in the above array is characteristic. Its share of automobiles on farms is proportionately the same as that of the total value of farm buildings. It truly marks the middle point between the East and the West at the present stage of development of the country. Of course, the geographic divisions are only rough groupings of States, and

yet, an examination of the figures indicates that an array of individual States would undoubtedly substantiate the general tendency indicated above.

Farm Expenses for Feed.

Feed consumed by livestock and poultry on the farm may be divided into three classes as follows:

1. Feed crops raised and fed on the home farm.
2. Feed purchased.
3. Pasture and range.

It is obvious that there is a wide variation in the proportions of each of the three classes of feed used in different States. It is reasonable to assume that in the "Corn Belt" States a large portion of the feed used is in the form of recorded crops, — that is, corn which comes off the home farms. In these States pasture is limited in quantity, and enters but little into the total value of feed consumed. The situation is entirely different in the Mountain States where the principal source of sustenance for livestock is the range.

The difference in the proportion of the three classes of feed used in the several sections of the country is well brought out in Table XXV. In this table, comparison is made for each geographic division between the percentages of the total livestock and the percentages of the estimated total value of feed used, exclusive of pasture and range. It will be seen that in the New England and Middle Atlantic States, the cost of feed is very high. These States have roughly about 6 per cent of all the livestock found on farms and account for over 11 per cent of the total feed bill. In the East North Central division, the percentage of total livestock approaches the percentage of total feed costs. In the West North Central States, the percentages of the two are almost identical. The same is practically true in the South Atlantic and East South Central divisions. In the West South Central division the relative amount spent for feed is considerably below the average for the country. But in the Mountain States the percentage of the value of feed is only one-half as great as the percentage representing livestock in that division, and the expense for feed per domestic animal is much lower there than in any of the other divisions. The

Pacific States show a relative cost of feed somewhat similar to that for the Middle West.

The reason for the variation in the value of feed used per animal in different parts of the country is, as suggested above, the difference in the proportions in which the three classes of feed are used.

TABLE XXV. — PERCENTAGE COMPARISONS BY GEOGRAPHIC DIVISIONS OF TOTAL LIVESTOCK AND TOTAL COST OF FEED, EXCLUSIVE OF PASTURE AND RANGE, 1919

Geographic Division	Per Cent of Total	
	Livestock[a]	Value of Feed (exclusive of Pasture and Range)
Total — United States	100.0	100.0
New England	1.4	2.9
Middle Atlantic	4.8	8.7
East North Central	18.9	23.9
West North Central	32.3	31.5
South Atlantic	8.4	8.3
East South Central	8.4	7.6
West South Central	13.6	8.8
Mountain	8.1	4.4
Pacific	4.1	3.9

[a] Based on total units of Livestock in each Division computed by weighting the total number of Horses, Mules, Cattle, and Swine in accordance with estimated value of feed crops consumed by each type of animal, as recorded by the U. S. Department of Agriculture.

It appears that in New England and the Middle Atlantic States a great deal of expensive feed is purchased from the mills. This, in addition to the fact that farm prices of feed crops are higher in the East than in the Middle West, causes feed expenses in the former section to be far above the average. It would seem that

in the Mountain States the livestock get comparatively little feed in addition to range.

To estimate with accuracy the total value of feed of all sorts used by farmers each year is not feasible. There are no basic figures for a reliable approximation of the value of feed in the form of pasture and range, and we must confine our estimates to feed of recorded crops and feed purchased from mills. But to estimate even this part of the feed costs presents a problem that is not easily solved. As already indicated, the source of the greater part of feed used by farmers is the home farm, — that is, each autumn the farmer reserves a certain portion of his crops for this purpose.

At what prices should the farmer charge up his feed, — at the prices prevailing at the time the crops are harvested, or at the time the crops are fed? In some years, the variations in feed prices from month to month are very great. For instance, in 1920 the average price per bushel of corn in January was $1.40, in June and July it was about $1.85, and in December it dropped to 67 cents.

It seems that, considering the available data, neither method would yield highly accurate results, and from a theoretical standpoint, both methods can be equally well defended. Fortunately, owing to the manner in which "crops fed to livestock" were handled in connection with estimating the income from all other crops, an error in the estimate of the value of crops fed is greatly minimized in its effect in the final results. It will be remembered that the total value of all crops used in our distribution by States was obtained by adding to the value of all the crops sold and eaten by farmers and families the value of seed and the value of crops fed to livestock on the farm; consequently, the exact amount of the value of feed to be subtracted as an expense has already been accounted for in the total agricultural gross income as a source of revenue, so that, in the case of the net agricultural income for the entire United States, one cancels the other, and there can be no question of error. As far as individual States are concerned, an error due to price changes would show only in the amount of feed sold to or purchased from other farmers, which forms only a small portion of the total value of feed in each State.

The prices at which the value of crops fed each year by farmers in the United States were computed are the same as those used by

W. I. King in computing the value of feed crops sold, which are averages of monthly prices, weighted in accordance with monthly sales. This probably makes a fairly close approach to average feeding conditions.

To the value of crops fed which come off the home farm must be added the amount spent by farmers on feed purchased from mills. The combined totals representing the estimated total value of feed used annually in the United States, excepting pasture and range, are as follows:

1919	$6,087,434
1920	6,187,497
1921	3,180,969

These totals have been distributed by States in accordance with index numbers described below.

If it were possible to calculate the relative value of pasture and range in each State, the problem of apportioning the farm expense for feed by States would be comparatively simple. The best criterion for the apportionment would then be the comparative feed requirements as gauged by the number and kind of livestock in each State. However, with pasture and range as unknown variables the total feed requirements as indicated by livestock cannot be utilized as a basis. A more laborious method was therefore adopted.

The value of feed used in each State in 1919 was approximated from figures of the *Census of Agriculture*, 1920, and information published by the Department of Agriculture, as indicated in the formula: $V = A - B + C + D + F$, where

- V is the total value of feed used
- A is the value of the portion of corn, oats, barley, and hay not sold off the farm (computed by multiplying the portion of total production not sold by the December 1 price)
- B is the estimated value of corn, barley, and oats reserved for seed
- C is the value of forage and hay
- D is the estimated value of other crops used as feed on the farm
- F is the amount of actual money spent by farmers for feed.

The values of V in the above formula as determined for individual States served as index numbers for the apportionment of the total value of feed used in the entire United States in 1919.

The index for apportionment of the costs of feed in the Census year 1919 must necessarily be used as a basis for the computation of index numbers to be employed in the apportionment of this item of expense among the States in the intercensal years. The necessary adjustments for the years following 1919 were made by multiplying the 1919 indices by the ratios for each State of the total number of livestock in the given year to the total number of livestock in 1919.[1]

No correction is made in the index numbers used in the apportionment of the 1920 feed. It appears that some of the 1920 livestock data, as reported in the *Year Book* of the Department of Agriculture, are computed on the basis of the 1909 Census, which makes it impossible to use them with accuracy in connection with 1919 figures reported by the 1920 Census. An examination of the figures for the number of swine in 1920, which are found to be comparable with 1919 figures, shows that the differences between 1919 and 1920 are too slight to affect the index materially. The 1919 index is, therefore, used also for 1920.

Table XXVI gives a comparison of the estimated farm expenses for feed, exclusive of pasture and range, in the different States for 1919, 1920, and 1921. It will be seen that feed costs at farm prices in the West North Central States in 1919 were nearly two billion dollars, of which five hundred and fifty-nine million was the share of Iowa alone. The East North Central and the West North Central States combined consume about 55 per cent of the total value of feed. The New England States together with New York, New Jersey, and Pennsylvania consume about 11 per cent of the total, the South about 24 per cent, and the West, including the Mountain and Pacific divisions, only about 8 per cent of the total, of which over 2 per cent is attributed to California. Of the individual States with a feed cost of over 5 per cent of the total,

[1] The total amount of livestock in each year was computed for this purpose by adding the aggregates (properly weighted with respect to feed consumption) of each class of livestock in each State as reported by the Census and the Department of Agriculture. The weights assigned to each class of livestock are in accordance with the proportionate amount of feed crops consumed by different classes of domestic animals as reported in *Farmers' Bulletin No. 629* of the United States Department of Agriculture.

TABLE XXVI.—FARM EXPENSES FOR FEED [a] IN EACH STATE
1919–1920–1921

State and Geographic Division	Dollars (000's Omitted)			Per Cent of Total	
	1919	1920	1921	1919	1921
Continental United States	6,087,434	6,187,497	3,180,969	100.000	100.000
New England	175,805	178,695	92,344	2.888	2.903
Maine	42,916	43,622	21,822	.705	.686
New Hampshire	21,245	21,545	11,134	.349	.350
Vermont	40,299	40,961	22,012	.662	.692
Massachusetts	39,386	40,083	20,390	.647	.641
Rhode Island	5,296	5,383	2,958	.087	.093
Connecticut	26,663	27,101	14,028	.438	.441
Middle Atlantic	531,372	540,107	280,721	8.729	8.825
New York	257,864	262,102	135,955	4.236	4.274
New Jersey	36,646	37,249	19,277	.602	.606
Pennsylvania	236,862	240,756	125,489	3.891	3.945
East North Central	1,452,218	1,476,089	751,822	23.856	23.635
Ohio	313,138	318,285	160,162	5.144	5.035
Indiana	282,944	287,595	146,579	4.648	4.608
Illinois	394,161	400,640	196,520	6.475	6.178
Michigan	186,336	189,399	98,451	3.061	3.095
Wisconsin	275,639	280,170	150,110	4.528	4.719
West North Central	1,915,464	1,947,147	997,064	31.466	31.344
Minnesota	254,211	258,390	133,601	4.176	4.200
Iowa	558,362	568,180	286,081	9.181	8.993
Missouri	325,652	331,021	168,345	5.350	5.292
North Dakota	92,833	94,359	48,796	1.525	1.534
South Dakota	160,526	163,164	79,779	2.637	2.508
Nebraska	292,910	297,774	153,859	4.811	4.837
Kansas	230,470	234,259	126,603	3.786	3.980
South Atlantic	502,944	511,211	269,269	8.262	8.465
Delaware	9,192	9,343	4,899	.151	.154
Maryland	43,343	44,055	22,967	.712	.722
District of Columbia	183	186	95	.003	.003
Virginia	111,156	112,984	58,053	1.826	1.825
West Virginia	53,691	54,574	28,374	.882	.892
North Carolina	98,312	99,928	52,677	1.615	1.656
South Carolina	69,153	70,290	37,408	1.136	1.176
Georgia	100,504	102,155	53,854	1.651	1.693
Florida	17,410	17,696	10,942	.286	.344
East South Central	462,341	469,940	235,487	7.595	7.403
Kentucky	152,125	154,626	77,329	2.499	2.431
Tennessee	151,273	153,759	76,566	2.485	2.407
Alabama	80,293	81,613	41,671	1.319	1.310
Mississippi	78,650	79,942	39,921	1.292	1.255
West South Central	535,303	544,118	286,105	8.794	8.994
Arkansas	88,511	89,966	45,710	1.454	1.437
Louisiana	47,299	48,077	24,589	.777	.773
Oklahoma	146,464	148,871	74,594	2.406	2.345
Texas	253,029	257,204	141,212	4.157	4.439
Mountain	271,777	276,031	142,922	4.464	4.494
Montana	49,917	50,738	26,561	.820	.835
Idaho	45,473	46,221	23,380	.747	.735
Wyoming	23,740	24,131	12,406	.390	.390
Colorado	74,997	76,230	38,998	1.232	1.226
New Mexico	24,602	24,924	12,743	.404	.401
Arizona	16,923	17,086	9,376	.278	.295
Utah	25,811	26,235	13,932	.424	.438
Nevada	10,314	10,466	5,526	.169	.174
Pacific	240,210	244,159	125,235	3.946	3.937
Washington	60,813	61,813	31,269	.999	.983
Oregon	51,256	52,099	26,816	.842	.843
California	128,141	130,247	67,150	2.105	2.111

[a] Includes value of Crops fed off the farm and Feed purchased.

Iowa leads with about 9 per cent, and is followed by Illinois, Missouri, and Ohio.

Farm Expenses for Seed.

The production of crops is very unlike the production of other commodities. In manufacturing processes, for instance, the amount of raw materials used determines quite accurately the amount of product to be expected, and vice versa. Thus, when it is decided to construct ten locomotives of specified size, it may be computed beforehand just how much steel will be required. Should the number to be constructed be reduced to five, there would correspondingly be a 50 per cent reduction in the amount of steel to be used. It is not so, however, with agriculture. Seed, which may be considered as the raw material entering into crop production, remains an unknown function of the amount of crops produced until the harvest is gathered. All the farmer can do is to plant a certain amount of seed per acre and then trust to favorable weather conditions to get a return on his investment and labor. Not only is there an uncertainty from year to year as to the yield per unit of seed in a given place, but there is also great variation in the average yield per acre in different parts of the country.

In the first two columns of Table XXVII, we have the maxima and minima of average yields per acre for selected crops in the different States. The ranges between the lowest and the highest average yields are apparently very great. For instance, in the case of wheat, the highest yield per acre is about three times as great as the lowest. For corn, the variation is even greater, the highest being 48 bushels and the lowest only 12 bushels.

It follows, then, that even when dealing with one single crop, to know merely the amount produced gives us little information as to the amount of seed used. However, in our problem, we have the added difficulty of having to deal with totals including a great number of crops produced in different proportions in different parts of the country. Other things being equal, do seed requirements for the different crops correspond with the yields per acre? The answer to this is found in Table XXVII. It will be noticed that the United States average yield per acre for wheat is 13.8 bushels. The approximate average requirements of seed per acre for wheat

are 1.38 bushels which gives a ratio of yield to seed of 10. In the case of corn, we have an average yield of 28.1 with seed requirements of only 0.16 bushels per acre, a ratio between the two of 175. The ratio of yield of oats to the seed requirements is 13.4, barley 12.9, rye 9.5, and potatoes 11.3. These figures make it obvious that in the State where corn, for instance, is the principal crop, the seed requirements are normally rather small in comparison with the State where wheat or rye is the main product.

TABLE XXVII. — AVERAGE YIELD PER ACRE COMPARED WITH AVERAGE SEED REQUIREMENTS PER ACRE FOR SPECIFIED CROPS[a]

Crop	Average Yield in Bushels per Acre, 1917–1921			Approximate Seed Requirements in Bushels per Acre	Ratio of Yield to Seed
	Minimum[b]	Maximum[b]	Average for the Continental United States		
Wheat	8	24	13.8	1.38	10.0
Corn[c]	12	48	28.1	0.16	175.0
Oats	15	40	31.9	2.37	13.4
Barley	16	31	23.6	1.84	12.9
Rye	9	20	13.6	1.44	9.5
Potatoes	62	204	97.8	8.6	11.3

[a] Based on figures published in the *Year Book* of the Department of Agriculture.
[b] Approximate average for a single state.
[c] For grain.

The estimates of the total value of seed used each year on the farms of the different States are based on the acreage, the seed requirements per acre, and the farm price per bushel of the following crops: barley, beans, buckwheat, corn, cotton, flaxseed, oats, potatoes, rice, rye, soy beans, cow peas, wheat, tame hay,

and peanuts. The prices used in computing the totals are as of December 1 of the year when the seed was harvested.

The final estimates of the value of seed by States which are to be found in Tables XXXI, XXXII, and XXXIII, while answering the purpose at hand, cannot be considered as highly accurate. In the first place, it has been necessary to apply to each State the same average requirements of seed per acre for given crops. Such averages are necessarily fictitious in so far as any one State is concerned. The average seed requirements per acre of corn, for instance, are by no means the same in all States. Then again, there is the question of price. At what price should the farmer charge up the seed that comes from his own farm? Let us assume that he harvested the seed in August and planted it the following spring, say March. Let us also assume that the August price is 80 cents per bushel and that the March price is $1.00 per bushel. Should he compute seed at $1.00 or 80 cents per bushel? There is undoubtedly a good deal to be said in favor of either procedure. As already indicated, in our computations, the December prices were used. This is probably a good compromise, as the bulk of the crops is sold at about this time of the year, and the prices then prevailing are probably most representative of the prices the farmers would realize if they chose to sell, together with the other crops, the portion normally reserved for seed.

Farm Expenses for Binder Twine.

Farmers spend a considerable sum of money each year on binder twine. This commodity is used chiefly in connection with grain crops; consequently, the State estimates have been computed on the basis of the total production in bushels of the following crops: wheat, oats, barley, rye, buckwheat, and flax. The production data by States are derived from the *Year Books* of the United States Department of Agriculture. The final estimates appear in Tables XXXI, XXXII, and XXXIII.

Farm Expenses for Harness and Saddles.

An idea of the importance of harness and saddles in the expense bill of the American farmer may be obtained from the fact that at the time of the 1920 Census there were about 25,000,000 horses and mules on the farm. Nearly 22,000,000 were animals two

years of age and over. The annual cost of harness and saddles to all farmers in the country is as follows:

1919	$177,336,000
1920	194,397,000
1921	157,206,000

To obtain the amount spent by farmers on harness and saddles in each State, the above totals were distributed in accordance with the number of horses and mules two years of age and over in each State as of January 1, 1920, it being assumed that, on the whole, the number of grown animals will determine the amount of harness in use. The estimates by States for 1919, 1920, and 1921 are recorded in Tables XXXI, XXXII, and XXXIII.

Cost of Outside Labor and Material for Agricultural Buildings.

An item of expense which presents particular difficulty in estimating is the cost of farm buildings, fences, etc. The value of farm buildings as recorded in the Census of Agriculture does not offer any satisfactory clue, for the Census figures cover all buildings, the farmer's residence as well as his business buildings, and it is only in the business portion that we are interested at this time. Then, again, there is the question of labor and material. A considerable amount of the work connected with new buildings and repairs to old buildings is done by the farmer himself and his regular farm hands, and, in some sections of the country, a good portion of the material comes from the farm.

How much does the farmer spend on outside labor and additional material? Estimates of the cost of outside labor and materials entering into business buildings and farms must of necessity be approximations based on the scant evidence at hand. W. I. King's estimates of this item for the United States as a whole, which take into consideration maintenance and repairs of existing buildings, as well as new construction, were used in computing estimates by States, the basis for apportionment being the difference between the values of farm buildings in 1920 and 1910. (See Tables XXXI, XXXII, and XXXIII.)

Interest Paid Out on Farmers' Loans.

In computing the agricultural income of the country, the question of interest is considered under two heads:

1. Interest paid to banks and merchants, which is charged as a farm expense and is deducted from the gross agricultural income.
2. Interest on farm mortgages held by individuals, which item is not segregated from the total income from agriculture as an industry, the mortgage holders being considered as participating in the industry.

TABLE XXVIII. — PER CENT OF TOTAL BANK LOANS TO FARMERS IN EACH GEOGRAPHIC DIVISION, JULY 1, 1918, AND DECEMBER 31, 1920[a]

Geographic Division	July 1, 1918	December 31, 1920
Total	100.00	100.00
New England	3.24	2.27
Middle Atlantic	3.80	2.65
East North Central	19.55	18.64
West North Central	39.25	39.38
South Atlantic	6.73	7.66
East South Central	4.57	5.40
West South Central	9.58	11.57
Mountain	5.92	6.10
Pacific	7.36	6.33

[a] Based on Table XXVII, Report of the Joint Commission of Agricultural Inquiry, Part II, p. 97.

The amounts paid by farmers each year to banks and merchants to cover interest charges on loans are considerable. It has been estimated [1] that the amount of bank loans to farmers outstanding on December 31, 1920, was about $5,317,000,000. This amount at the rate of 7 per cent would show interest payments to banks alone of over $370,000,000. The total amounts of interest paid by farmers to banks and merchants, as computed by W. I. King,

[1] Joint Commission of Agricultural Inquiry.

are $430,429,000 in 1919, $503,056,000 in 1920, and $479,365,000 in 1921. To obtain estimates of the interest payments to banks and merchants by farmers in each State, the above totals for the entire United States have been distributed in accordance with indices based on the figures presented in the report of the Joint Commission of Agricultural Inquiry,[1] which show by States the amounts of bank loans to farmers, outstanding on July 1, 1918, and December 31, 1920. The State estimates appear in Tables XXXI, XXXII, and XXXIII.

Table XXVIII shows the distribution of bank loans to farmers in the form of percentages of the total bank loans outstanding against farmers in each geographic division on July 1, 1918, and December 31, 1920. It would seem that farmers of the Middle West depend upon borrowed capital more than those of any other section of the country. The West North Central States alone account for over 39 per cent of the total bank loans to farmers; the East North Central division comes next with about 19 per cent of the total, so that the two divisions together represent about 58 per cent of the total bank loans.

Business Taxes in Agriculture.

What proportion of the taxes paid by farmers in each State should be charged against agriculture as business taxes? This question presents another item of farm expense which, like the cost of business buildings and the cost of business use of automobiles, does not lend itself to exact measurements. This, again, is a case where the affairs of the farmer as an individual and as a business man are so intimately tied up that it is hard to determine the line of cleavage. Any mode of attack in the matter of business taxes must, therefore, be based on conjecture and judgment, rather than on measurable statistical facts. In his estimates of this item for the country as a whole, W. I. King has taken 30 per cent of the total taxes paid by farmers to be a reasonable charge against agriculture as an industry, the other 70 per cent being charged to the farmer as an individual. On this basis, he estimates the business taxes to be $132,555,000 in 1919, $166,278,000 in 1920, and $193,661,000 in 1921.

[1] Part II, p. 97.

The 1922 *Year Book* of the Department of Agriculture [1] furnishes figures of taxes paid on farm real estate in each State on a per acre basis. Using these data in conjunction with the farm acreage figures supplied in the Census of Agriculture, the annual farm taxes in each State were roughly approximated and then adjusted to correspond with the totals for 1919, 1920, and 1921 computed by W. I. King. The final estimates by States will be found in Tables XXXI, XXXII, and XXXIII.

[1] p. 1002.

CHAPTER IX

DISTRIBUTION OF THE AGRICULTURAL INCOME OF FARMERS AND NON-FARMERS

The items of agricultural gross income and agricultural expense discussed in the last two chapters, when properly combined, i.e., when expenses are subtracted from gross income, constitute the net current income drawn by farmers and non-farmers from agriculture in each State. However, to make a complete analysis of the distribution of agricultural income, we must also consider two other items of importance. One of these, labor, has already been estimated in connection with wages and salaries in Chapter II. Consideration of the remaining item, changes in the value of agricultural inventories, will be given in the first section of the present chapter.

Changes in Value of Agricultural Inventories.

It is a common business practice to take an inventory at the end of each year. The difference between two successive inventories is generally taken into account in computing the net result of the year's business, a result which may be either a gain or a loss. This practice is undoubtedly sound and logical as a method of accounting, and may also be followed to good advantage in determining the net income of the population, or of any class of the population. However, it must be realized that the inclusion of inventory changes in the estimates of income puts certain limitations upon the results. While, from the accounting standpoint, such final figures are correct and true, they may prove to be quite misleading in their final application. Differences in inventory values may be due to physical changes, — that is, additions to or reductions of stocks, in which case they are undoubtedly an integral part of the total income. The changes in the value of inventories may also be due to a favorable or unfavorable long-time trend in commodity prices or values, and here again, there can be

but little question that the gains or losses should constitute part of the income of the period for which calculations are made. But the greater part of changes in the value of inventories is due merely to temporary fluctuations in value which shortly cancel each other without having any definite effect on the financial condition of the individual property holders unless the property is sold. To include such gains with the regular income may mean giving weight to unusual conditions obtaining on two dates, i.e., the beginning and the end of the year, with the result that the income estimate for the calendar year may be materially different from a similar estimate for a year beginning and ending on some other date, as for example March 1. This is a minor matter, but what is much more important is the fact that because farmers sell but a small proportion of their assets yearly their scale of living is affected but little by temporary gains or losses in the value of their inventories. Although, thus, from a financial standpoint it is the total income which is of real significance, it constitutes a much poorer indicator of the money available to cover the farmer's immediate needs than does the excess of sales over expenses — a difference which is here referred to as the *current* income. Then again, in computing the average income of a large group, we may find that inventory changes affect only a fraction of the group, as is the case in the States having a large number of tenant farmers. In such States, averages computed on the basis of *total* income, including changes in the value of inventories, are surely not typical of the condition of the farm operators as a group. It is obvious that to compare such averages for two States having widely different proportions of tenant farmers would be misleading.

Hence, in the presentation of the material in this report, two sets of results are given: the one representing *current* income in which inventory changes are given no place; and the second showing the complete *total* covering gains or losses in inventories as well as the regular current income.

Gains or losses in inventories are the resultants of two factors:

1. The changes in value of the physical inventories under consideration.
2. The relative changes of the prices of goods that could be pur-

chased with the money realized from the sale of the goods inventoried.

The method used in calculating the gains in inventory is illustrated in the following example:

If all the farm property used in agriculture could have been sold on January 1, 1919, at the prices then prevailing, the owners would have realized about $72,000,000,000. On December 31 of the same year, all farm inventories were worth about $79,000,000,000. Does this mean that the farmers of the United States made a gain of $7,000,000,000 in one year? This apparently was not the case if we compare the amount of commodities the farmers could have bought with their $72,000,000,000 on January 1, 1919, and the goods they could have purchased with the $79,000,000,000 at the end of 1919. In terms of 1913 dollars, the price level of goods used by farmers was about 1.789 at the beginning of the year, and 1.988 at the end of the year. In other words, prices in general went up about 11 per cent in the twelve months. The value of farm inventories, however, rose only 8.6 per cent in the same period. Consequently, in place of the apparent gain of $7,000,000,000, the farmers in reality lost a considerable sum on their inventories in 1919.

Table XXIX shows the approximate value of farm inventories for each State at the beginning and at the end of 1919, 1920, and 1921, and also the gains or losses sustained by owners of farm property on their inventories during each of the three years. The amounts are given in 1913 dollars so as to make them comparable with respect to purchasing value. The figures are based on the estimated values at the beginning and end of each year of the following items:

1. Farm land.
2. Business buildings on farms.
3. Farm implements.
4. Livestock on farms.
5. Portion of automobiles on farms devoted to farm business.
6. Crops on hand.

TABLE XXIX.—ESTIMATES IN 1913 DOLLARS OF TOTAL GAINS OR LOSSES IN INVENTORY OF FARM LAND AND FARM PROPERTY IN EACH STATE, 1919–1920–1921

(000's Omitted)

State and Geographic Division	Approximate Value as of January 1, of All Property Devoted to Farming				Gain or Loss		
	1919	1920	1921	1922	1919	1920	1921
Continental United States	**40,562,370**	**39,639,071**	**40,874,434**	**39,557,208**	**–923,299**	**1,235,363**	**–1,317,226**
New England	**577,484**	**529,478**	**568,883**	**629,551**	**–48,006**	**39,410**	**60,663**
Maine	137,431	131,260	130,204	141,217	–6,171	–1,056	11,013
New Hampshire	59,490	53,410	53,105	64,548	–6,080	–305	11,443
Vermont	108,965	101,389	115,034	120,207	–7,576	13,645	5,173
Massachusetts	142,925	128,157	143,470	158,883	–14,768	15,313	15,413
Rhode Island	16,900	15,234	16,614	18,199	–1,666	1,380	1,585
Connecticut	111,773	100,028	110,461	126,497	–11,745	10,433	16,036
Middle Atlantic	**2,017,646**	**1,827,979**	**2,023,618**	**2,072,975**	**–189,667**	**195,639**	**49,357**
New York	960,523	876,569	978,233	1,023,660	–83,954	101,664	45,427
New Jersey	169,425	149,677	178,953	183,999	–19,748	29,276	5,046
Pennsylvania	887,698	801,733	866,432	865,316	–85,965	64,699	–1,116
East North Central	**8,920,520**	**8,638,725**	**8,774,199**	**8,387,102**	**–281,795**	**135,474**	**–387,097**
Ohio	1,550,329	1,538,830	1,450,608	1,437,725	–11,499	–88,222	–12,883
Indiana	1,518,722	1,546,798	1,483,013	1,339,983	28,076	–63,785	–143,030
Illinois	3,549,330	3,405,914	3,458,728	3,269,569	–143,416	52,814	–189,159
Michigan	922,676	839,991	941,788	908,415	–82,685	101,797	–33,373
Wisconsin	1,379,463	1,307,192	1,440,062	1,431,410	–72,271	132,870	–8,652
West North Central	**14,082,076**	**14,215,233**	**14,863,562**	**14,196,831**	**133,157**	**648,329**	**–666,731**
Minnesota	1,845,058	1,886,638	2,103,915	2,071,609	41,580	217,277	–32,306
Iowa	4,203,770	4,335,747	4,375,609	4,105,594	131,977	39,862	–270,015
Missouri	1,863,946	1,828,147	1,888,951	1,689,753	–35,799	60,804	–199,198
North Dakota	941,387	881,522	959,273	956,607	–59,865	77,751	–2,666
South Dakota	1,358,604	1,423,657	1,502,504	1,442,011	65,053	78,847	–60,493
Nebraska	2,071,846	2,164,833	2,191,657	2,154,504	92,987	26,824	–37,153
Kansas	1,797,465	1,694,689	1,841,653	1,776,753	–102,776	146,964	–64,900

South Atlantic	3,357,696	3,225,517	3,184,282	2,998,545	−132,179	−41,235	−185,737
Delaware	43,586	39,926	40,208	39,046	−3,660	282	−1,162
Maryland	244,187	224,690	227,390	237,480	−19,497	2,700	10,090
District of Columbia	2,456	2,053	2,314	2,602	−403	261	288
Virginia	650,999	606,248	635,526	608,765	−44,751	39,278	−26,761
West Virginia	271,287	246,244	262,889	254,364	−25,043	16,645	−8,525
North Carolina	694,246	681,280	668,189	662,302	−12,966	−13,091	−5,887
South Carolina	500,558	521,459	480,615	397,801	20,901	−40,844	−82,814
Georgia	755,762	729,008	650,990	572,438	−26,754	−78,018	−78,552
Florida	194,615	174,609	216,161	223,747	−20,006	41,552	7,586
East South Central	2,493,618	2,347,755	2,164,118	2,123,327	−145,863	−183,637	−40,791
Kentucky	868,341	793,771	706,889	683,283	−74,570	−86,882	−23,606
Tennessee	708,802	655,656	655,697	625,780	−53,146	41	−29,917
Alabama	404,045	381,499	355,744	355,567	−22,546	−25,755	−177
Mississippi	512,430	516,829	445,788	458,697	4,399	−71,041	12,909
West South Central	3,958,555	4,057,755	4,053,561	3,876,087	99,200	−4,194	−177,474
Arkansas	538,672	497,786	481,634	449,709	−40,886	−16,152	−31,925
Louisiana	307,672	320,194	290,542	271,820	12,522	−29,632	−18,722
Oklahoma	854,323	892,026	918,153	864,744	37,703	26,127	−53,409
Texas	2,257,888	2,347,749	2,363,232	2,289,814	89,861	15,483	−73,418
Mountain	2,300,136	2,078,204	2,177,404	2,110,861	−221,932	99,200	−66,543
Montana	587,181	489,858	476,030	435,413	−97,323	−13,828	−40,617
Idaho	340,888	363,607	384,228	378,968	22,719	20,621	−5,260
Wyoming	206,327	169,373	157,416	149,809	−36,954	−11,957	−7,607
Colorado	601,781	552,609	616,912	607,418	−49,172	64,303	−9,494
New Mexico	193,791	168,572	177,731	173,973	−25,219	9,159	−3,758
Arizona	123,691	122,853	142,460	148,317	−838	19,607	5,857
Utah	179,480	159,747	171,003	173,010	−19,733	11,256	2,007
Nevada	66,997	51,585	51,624	43,953	−15,412	39	−7,671
Pacific	2,854,639	2,718,425	3,064,802	3,161,929	−136,214	346,377	97,127
Washington	527,029	536,688	556,971	551,994	9,659	20,283	−4,977
Oregon	413,396	412,492	466,767	460,908	−904	54,275	−5,859
California	1,914,214	1,769,245	2,041,064	2,149,027	−144,969	271,819	107,963

The methods used in estimating the above items are briefly as follows:

1. The estimated value of all farm land in each State is primarily based on the value recorded in the *Census of Agriculture*, 1920. The Census figures, which are as of January 1, 1920, have been corrected for each of the several dates, January 1, 1919, 1921, and 1922, in accordance with estimated changes in acreage and changes in land values in each State. The data pertaining to acreage and land values are taken from the reports of the Department of Agriculture, the values of plough land in each State being used as indices of changes in the value of all farm lands.

2. The values of business buildings on farms on January 1, 1920, are taken to be roughly 40 per cent of the total value of farm buildings reported by the 1920 Census. For the other years, the 1920 values have been corrected on the basis of an index for the entire United States, computed by W. I. King of the National Bureau of Economic Research, which index takes into consideration changes in rents and in the number of farms.

3. The 1920 Census is also used as the principal source for the values of farm implements. For intercensal years, the values have been adjusted in accordance with the national estimates computed by W. I. King.

4. To compute the values of livestock on farms at the beginning and at the end of each year, the Census figures for this item have been used in connection with the estimated values of the several classes of livestock in each State, as reported in the *Year Books* of the Department of Agriculture. Wherever necessary, the Department of Agriculture figures were adjusted to make them comparable with the Census figures.

5. W. I. King's national estimates of the value of automobiles devoted to farm use have been employed as a basis for our estimates of this item by States. The distribution of the totals is made in accordance with estimates of the number of automobiles on the farm at the beginning of each year, com-

puted on the basis of Census figures for January 1, 1920, and the total registration for each year.

6. It goes without saying, that to estimate the value of the crops on the farms of each State on January 1 of each year is no simple matter, and that, irrespective of the method employed, the results can be no more than crude approximations. As a first step in our attempt to arrive at such approximations, estimates were made of the percentage of the total crops normally marketed in each State after January 1. To compute these percentages, the market figures of the Department of Agriculture,[1] covering corn, wheat, oats, barley, flax, and cotton were used in conjunction with weights representing the relative importance of the above crops in each State, as shown by the values in 1919. By multiplying the percentages of the total crops marketed after January 1, by the total value of all the farm crops produced in the preceding year, we obtain rough estimates of the value of crops on hand on January 1 of each year. These estimates have been adjusted to correspond with the estimated totals for the entire United States.

Table XXX shows the final estimates in current dollars of the total gains or losses on farm inventories. These totals are based on the last three columns of Table XXIX. As will be shown later, only about 75 per cent of the farm property of the country is owned by farmers; the other 25 per cent is owned by non-farmers and is operated either by tenants or farm managers. Hence, in Table XXX we show the distribution of the gains or losses on farm inventories as between farmers and non-farmers.

Total Agricultural Income of Entrepreneurs and Property Holders. We can now pass on to the consideration of the final totals of net income derived from agriculture in each State. In Tables XXXI, XXXII, and XXXIII are presented detailed statements for each of the three years, enumerating the different items of income or expense entering into the computation of the total farm income in the different States. The final results are assembled and summarized in Table XXXIV where the totals for the three years are

[1] *Year Book*, 1922, pp. 575, 597, 624, 634, 653, and 715.

TABLE XXX.—ESTIMATES IN CURRENT DOLLARS OF GAINS OR LOSSES ON FARM INVENTORIES IN EACH STATE, 1919–1920–1921

(000's Omitted)

State and Geographic Division	Total			Share of Farmers Only		
	1919	1920	1921	1919	1920	1921
Continental United States	**-1,702,304**	**2,474,581**	**-2,027,026**	**-1,302,267**	**1,825,619**	**-1,249,844**
New England	**-88,510**	**78,944**	**93,350**	**-71,680**	**61,995**	**76,546**
Maine	-11,378	-2,115	16,947	-10,601	-1,971	15,790
New Hampshire	-11,210	-611	17,609	-9,665	-527	15,182
Vermont	-13,968	27,333	7,960	-11,789	23,069	6,718
Massachusetts	-27,228	30,674	23,718	-20,612	23,220	17,955
Rhode Island	-3,072	12,764	2,439	-2,216	1,993	1,759
Connecticut	-21,654	20,899	24,677	-16,797	16,211	19,142
Middle Atlantic	**-349,693**	**391,888**	**75,954**	**-255,194**	**286,342**	**56,452**
New York	-154,788	203,645	69,906	-115,828	152,388	52,311
New Jersey	-36,410	58,643	7,765	-25,218	40,616	5,378
Pennsylvania	-158,495	129,600	-1,717	-114,148	93,338	-1,237
East North Central	**-519,551**	**271,372**	**-595,687**	**-342,442**	**237,448**	**-346,285**
Ohio	-21,201	-176,719	-19,825	-13,664	-113,895	-12,777
Indiana	51,764	-127,769	-220,103	32,114	-79,268	-136,552
Illinois	-264,419	105,793	-291,089	-132,606	53,055	-145,981
Michigan	-152,448	203,912	-51,356	-118,864	158,990	-40,042
Wisconsin	-133,247	266,155	-13,314	-109,422	218,566	-10,933
West North Central	**245,504**	**1,298,681**	**-1,026,005**	**125,177**	**880,876**	**-659,583**
Minnesota	76,662	435,232	-49,714	54,047	306,839	-35,048
Iowa	243,329	79,848	-415,515	140,425	46,080	-239,794
Missouri	-66,003	121,798	-306,538	-47,905	88,401	-222,485
North Dakota	-110,374	155,745	-4,103	-81,920	115,594	-3,045
South Dakota	119,939	157,940	-93,090	78,272	103,072	-60,751
Nebraska	171,442	53,732	-57,173	103,551	32,454	-34,532
Kansas	-189,491	294,386	-99,872	-121,293	188,436	-63,928

South Atlantic	-243,700	-82,598	-285,823	-183,069	-2,814	-171,525
Delaware	-6,748	565	-1,788	-3,832	321	-1,015
Maryland	-35,947	5,408	15,527	-22,693	3,414	9,802
District of Columbia	-743	523	443	-234	165	140
Virginia	-82,508	58,647	-41,181	-71,906	51,111	-35,889
West Virginia	-46,172	33,342	-13,119	-37,579	27,137	-10,678
North Carolina	-23,906	-26,223	-9,059	-15,491	-16,993	-5,870
South Carolina	38,536	-81,815	-127,439	21,969	-46,643	-72,653
Georgia	-49,327	-156,279	-120,881	-26,104	-82,703	-63,970
Florida	-36,885	83,234	11,674	-27,199	61,377	8,608
East South Central	-268,930	-367,847	-62,771	-198,379	-238,004	-51,003
Kentucky	-137,486	-174,035	-36,326	-104,022	-131,675	-27,484
Tennessee	-97,986	82	-46,038	-71,236	60	-33,470
Alabama	-41,569	-51,590	-272	-27,257	-33,828	-178
Mississippi	8,111	-142,304	19,865	4,136	-72,561	10,129
West South Central	182,897	-8,401	-273,108	109,361	-60,058	-167,006
Arkansas	-75,382	-32,354	-49,128	-46,880	-20,121	-30,553
Louisiana	23,087	-59,397	-28,811	14,411	-37,076	-17,984
Oklahoma	69,514	52,336	-82,189	43,467	32,726	-51,393
Texas	165,678	31,014	-112,980	98,363	18,413	-67,076
Mountain	-409,180	198,710	-102,401	-324,997	144,197	-82,419
Montana	-179,436	-27,699	-62,504	-149,470	-23,073	-52,066
Idaho	41,887	41,306	-8,094	33,007	32,549	-6,378
Wyoming	-68,133	-23,951	-11,706	-53,409	-18,775	-9,176
Colorado	-90,659	128,807	-14,610	-65,927	93,668	-10,624
New Mexico	-46,497	18,347	-5,783	-37,128	14,650	-4,618
Arizona	-1,545	39,275	9,013	-1,006	25,564	5,867
Utah	-36,382	22,547	3,088	-31,560	19,560	2,679
Nevada	-28,415	78	-11,805	-19,504	54	-8,103
Pacific	-251,141	693,832	149,465	-161,044	461,637	94,979
Washington	17,808	40,629	-7,659	12,631	28,818	-5,433
Oregon	-1,667	108,719	-9,016	-1,251	81,572	-6,765
California	-267,282	544,484	166,140	-172,424	351,247	107,177

TABLE XXXI.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

ITEM	CONTINENTAL UNITED STATES	Maine	N. H.
GROSS INCOME			
1. All Farm Crops	14,504,576	99,449	28,378
2. Dairy Products	1,888,535	22,662	13,031
3. Beef and Veal Sold and Slaughtered	1,328,941	3,760	2,365
4. Sheep, Goats and Swine Sold and Slaughtered	2,042,442	4,269	1,818
5. Poultry and Eggs	1,027,391	7,675	4,264
6. Wool and Mohair	124,022	413	96
7. Honey and Wax	14,280	74	19
8. Dairy Cows Sold for City and Village Use	14,602	154	78
9. Horses and Mules Sold	86,284	....	....
10. Sale of Land for City Use	37,898	60	44
11. **Total Gross Income**	21,068,971	138,516	50,093
EXPENSES			
12. Farm Implements	455,970	3,379	1,204
13. Fertilizer	326,400	7,759	526
14. Business Use of Automobiles	297,969	1,749	736
15. Feed	6,087,434	42,916	21,245
16. Seed	512,103	2,827	717
17. Binder Twine	48,517	96	13
18. Harness and Saddles	177,336	738	298
19. Business Buildings including Insurance	209,937	690	61
20. Interest on Farm Loans	430,421	1,056	2,170
21. Horses and Mules Purchased	62,285	1,087	372
22. Farm Wages	1,415,813	10,066	4,714
23. Salaries of Farm Managers	74,898	856	527
24. Taxes	132,556	635	340
25. **Total Expenses**	10,231,638	73,884	33,023
26. **Net *Current* Entrepreneurial and Property Income**	10,837,333	64,632	17,070
27. Gain or Loss on Inventories	−1,702,304	−11,378	−11,210
28. ***Total* Net Entrepreneurial and Property Income**	9,135,029	53,254	5,860

ITEM	EAST NORTH CENTRAL			
	Ohio	Ind.	Ill.	Mich.
GROSS INCOME				
1. All Farm Crops	567,483	495,671	857,311	375,685
2. Dairy Products	103,454	56,184	91,783	90,503
3. Beef and Veal Sold and Slaughtered	38,728	34,344	67,430	26,754
4. Sheep, Goats and Swine Sold and Slaughtered	100,773	118,421	167,317	44,382
5. Poultry and Eggs	62,387	51,760	66,400	34,294
6. Wool and Mohair	10,075	2,322	2,220	4,624
7. Honey and Wax	255	189	443	417
8. Dairy Cows Sold for City and Village Use	630	446	720	396
9. Horses and Mules Sold	....	540	5,032	....
10. Sale of Land for City Use	3,806	1,403	5,370	2,197
11. **Total Gross Income**	888,091	761,285	1,264,026	579,342

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1919
Omitted)

New England				Middle Atlantic		
Vt.	Mass.	R. I.	Conn.	N. Y.	N. J.	Pa.
51,428	63,348	7,099	50,456	436,354	94,623	425,329
34,675	31,557	4,891	19,036	229,079	24,475	126,985
5,940	3,841	598	3,096	40,708	4,199	28,399
3,002	4,371	613	2,676	26,143	4,779	43,177
3,955	8,836	1,500	5,764	42,020	11,969	52,695
251	56	8	31	1,978	32	2,239
76	25	2	30	951	51	446
66	232	36	105	447	162	960
..	...	..	...	...	...	...
25	1,491	196	485	3,690	1,853	2,412
99,418	113,757	14,943	81,679	781,370	142,143	682,642
2,695	2,453	305	1,683	21,549	3,228	20,779
857	3,907	380	4,894	15,067	10,743	15,628
1,138	1,290	194	1,112	10,375	1,901	10,619
40,299	39,386	5,296	26,663	257,884	36,646	236,862
1,582	860	118	727	13,780	2,412	15,349
60	7	...	9	911	97	1,401
592	397	51	307	4,192	621	4,260
903	1,290	14	946	6,388	640	7,785
7,181	2,103	409	938	7,847	1,248	7,253
567	535	74	511	4,724	973	3,915
8,041	17,291	2,194	13,789	67,152	18,858	43,441
583	1,959	240	1,243	5,372	1,186	5,154
538	584	65	368	4,551	989	3,825
65,036	72,062	9,340	53,190	419,772	79,542	376,271
34,382	41,695	5,603	28,489	361,598	62,601	306,371
-13,968	-27,228	-3,072	-21,654	-154,788	-36,410	-158,495
20,414	14,467	2,531	6,835	206,810	26,191	147,876

	West North Central						
Wisc.	Minn.	Iowa	Mo.	N. D.	S. D.	Nebr.	Kans.
432,178	514,842	851,172	535,172	317,055	331,342	470,523	533,884
229,855	99,280	70,631	44,324	24,947	21,435	30,217	44,532
46,164	39,486	106,888	63,452	24,140	52,558	72,580	69,234
57,331	97,670	325,158	121,158	18,341	84,312	133,392	55,595
29,712	32,805	68,876	65,013	10,294	15,750	28,931	43,358
1,693	1,559	3,764	4,217	914	2,761	1,230	1,021
734	369	863	360	4	116	174	181
327	482	417	663	127	145	238	417
...	...	3,795	13,094	4,820	5,400	5,625	12,044
911	691	1,394	595	35	68	377	317
798,905	787,164	1,432,958	848,048	400,677	513,887	743,287	760,581

Table XXXI.—Itemized Statement of Estimated

Dollars (000's

Item	East North Central			
	Ohio	Ind.	Ill.	Mich.
Expenses				
12. Farm Implements	18,594	16,164	28,243	15,521
13. Fertiliser	13,206	8,735	2,996	4,873
14. Business Use of Automobiles	17,824	14,174	19,317	11,445
15. Feed	313,138	282,944	394,161	188,336
16. Seed	18,845	17,340	28,345	16,223
17. Binder Twine	2,250	2,109	4,206	1,502
18. Harness and Saddles	6,232	5,836	10,138	4,625
19. Business Buildings including Insurance	11,317	7,537	12,830	7,811
20. Interest on Farm Loans	12,829	19,440	28,559	8,326
21. Horses and Mules Purchased	3,128	....	....	3,392
22. Farm Wages	48,464	34,305	82,882	33,342
23. Salaries of Farm Managers	3,625	2,472	4,013	2,771
24. Taxes	5,691	8,592	7,676	5,869
25. Total Expenses	475,143	419,648	623,366	302,036
26. Net *Current* Entrepreneurial and Property Income	412,948	341,637	640,560	277,306
27. Gain or Loss on Inventories	−21,201	+51,764	−264,419	−152,448
28. *Total* Net Entrepreneurial and Property Income	391,747	393,401	376,241	124,858

Item	South				
	Del.	Md.	D. C.	Va.	W. Va.
Gross Income					
1. All Farm Crops	24,018	116,264	829	303,200	113,573
2. Dairy Products	3,248	17,091	94	24,438	14,523
3. Beef and Veal Sold and Slaughtered	877	6,183	13	20,366	14,911
4. Sheep, Goats and Swine Sold and Slaughtered	1,103	8,333	41	22,181	10,641
5. Poultry and Eggs	3,144	11,517	31	25,387	12,791
6. Wool and Mohair	9	320	..	915	1,594
7. Honey and Wax	6	57	..	349	306
8. Dairy Cows Sold for City and Village Use	7	115	..	398	467
9. Horses and Mules Sold	..	..	..	..	..
10. Sale of Land for City Use	61	435	..	372	255
11. Total Gross Income	32,473	160,315	1,008	397,606	169,061
Expenses					
12. Farm Implements	857	3,675	123	8,365	2,334
13. Fertiliser	1,222	7,610	23	17,278	1,710
14. Business Use of Automobiles	554	2,458	12	4,303	1,541
15. Feed	9,192	43,343	183	111,156	53,691
16. Seed	743	3,651	....	7,815	3,206
17. Binder Twine	38	223	....	332	174
18. Harness and Saddles	284	1,291	2	3,015	1,360
19. Business Buildings including Insurance	184	1,974	15	5,308	1,878
20. Interest on Farm Loans	270	2,782	23	5,910	1,884
21. Horses and Mules Purchased	258	852	..	1,598	684
22. Farm Wages	2,941	17,456	..	21,332	6,074
23. Salaries of Farm Managers	170	1,416	23	1,993	1,076
24. Taxes	125	789	..	1,232	971
25. Total Expenses	16,838	87,520	404	187,627	76,583
26. Net *Current* Entrepreneurial and Property Income	15,635	72,795	604	209,979	92,478
27. Gain or Loss on Inventories	−6,748	−35,947	−743	−82,508	−46,172
28. *Total* Net Entrepreneurial and Property Income	8,887	36,848	−139	127,471	46,306

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1919—*Continued*

Omitted)

	WEST NORTH CENTRAL						
Wisc.	Minn.	Iowa	Mo.	N. D.	S. D.	Nebr.	Kans.
21,194	22,972	39,218	17,537	14,481	14,258	19,424	19,625
780	433	597	3,941	120	34	85	979
13,721	14,964	24,654	11,960	6,621	8,081	14,502	15,420
275,639	254,211	558,862	325,652	92,833	160,526	292,910	230,470
13,346	25,902	21,217	23,721	40,886	19,137	22,148	41,757
2,165	3,317	4,490	2,204	2,568	2,252	2,810	4,463
5,132	6,771	10,147	8,468	5,827	5,442	7,124	8,606
11,342	12,460	18,968	8,092	4,739	5,630	7,444	6,302
15,059	34,467	48,844	18,311	10,933	12,224	21,909	22,504
3,044	725	.....	.....	.....	.....	.....	.....
50,247	52,004	73,806	41,879	38,694	33,144	46,736	70,847
2,612	1,685	2,593	3,371	821	824	1,374	1,558
5,317	5,368	9,735	3,647	4,453	5,408	5,522	5,586
419,598	435,279	813,131	466,783	222,976	266,960	441,968	428,117
379,307	351,885	619,827	381,265	177,701	246,927	301,319	332,464
−133,247	+76,662	+243,329	−66,003	−110,374	+119,939	+171,442	−189,491
246,060	428,547	863,156	315,262	67,327	366,866	472,761	142,973

ATLANTIC				EAST SOUTH CENTRAL			
N. C.	S. C.	Ga.	Fla.	Ky.	Tenn.	Ala.	Miss.
530,974	441,438	558,425	87,728	368,500	325,774	322,110	357,757
18,999	10,198	21,378	3,003	28,668	26,307	19,414	15,014
8,730	6,538	13,057	9,465	19,911	16,252	9,502	15,037
29,289	19,322	37,172	10,559	33,088	37,703	27,920	27,042
20,024	11,979	18,853	4,798	25,716	28,510	14,496	14,846
185	36	94	100	1,775	734	135	255
356	118	332	288	455	521	283	168
390	258	416	101	438	505	417	315
...	...	...	...	688	2,697	...	...
325	133	271	180	193	366	128	41
609,272	490,029	649,998	116,202	479,432	439,369	394,405	430,475
6,932	6,097	8,039	1,591	6,133	6,780	4,359	5,061
48,797	52,547	46,197	10,317	3,597	3,525	14,066	4,288
6,135	4,553	6,919	1,305	4,187	3,263	2,304	2,302
98,312	69,153	100,504	17,410	152,125	151,273	80,293	78,650
7,861	5,966	10,518	1,075	6,406	6,621	8,158	5,065
182	166	159	12	335	220	88	59
3,332	2,344	4,020	617	4,811	4,673	3,281	3,907
4,271	4,136	5,351	1,160	4,214	4,387	2,301	2,761
3,932	6,474	6,410	1,192	8,096	4,548	2,856	3,486
5,762	5,562	9,358	879	....	....	4,151	2,149
12,558	15,857	19,850	11,313	18,944	11,723	8,056	7,348
855	661	1,505	1,613	892	747	876	889
1,719	849	1,490	767	2,193	2,018	1,032	2,379
200,648	174,365	220,320	49,251	212,533	199,778	131,621	118,244
408,624	315,655	429,678	66,951	266,899	239,591	262,784	312,231
−23,906	+38,536	−49,327	−36,885	−137,486	−97,986	−41,569	+8,111
384,718	354,191	380,351	30,066	129,413	141,605	221,215	320,342

TABLE XXXI.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

ITEM	WEST SOUTH CENTRAL					
	Ark.	La.	Okla.	Texas	Mont.	Idaho
GROSS INCOME						
1. All Farm Crops	341,736	228,669	462,649	951,976	92,515	121,668
2. Dairy Products	17,129	5,741	26,609	42,077	9,613	10,274
3. Beef and Veal Sold and Slaughtered	10,073	10,592	39,832	130,297	32,999	15,894
4. Sheep, Goats and Swine Sold and Slaughtered	23,651	14,032	34,331	78,491	22,385	25,939
5. Poultry and Eggs	15,935	8,661	26,089	42,483	6,750	4,962
6. Wool and Mohair	192	206	269	10,422	10,246	8,753
7. Honey and Wax	202	62	105	1,037	160	344
8. Dairy Cows Sold for City and Village Use	365	304	487	1,118	79	117
9. Horses and Mules Sold	...	...	6,254	....	9,743	2,568
10. Sale of Land for City Use	139	182	334	1,102	61	149
11. Total Gross Income	409,422	268,449	598,959	1,259,003	184,551	190,668
EXPENSES						
12. Farm Implements	5,504	4,154	10,227	19,575	6,976	4,874
13. Fertiliser	2,573	3,841	452	1,831	126	106
14. Business Use of Automobiles	2,276	1,461	7,232	14,619	3,069	2,446
15. Feed	88,511	47,299	146,464	253,029	49,917	45,473
16. Seed	6,734	5,346	22,942	29,764	7,333	4,891
17. Binder Twine	175	22	2,427	2,470	312	586
18. Harness and Saddles	4,219	2,688	7,145	13,495	4,128	1,967
19. Business Buildings including Insurance	3,330	1,654	4,168	9,930	2,424	1,801
20. Interest on Farm Loans	5,107	3,448	13,020	19,710	7,330	4,152
21. Horses and Mules Purchased	1,478	1,982	.....	4,039	....	....
22. Farm Wages	13,790	22,356	42,403	90,603	22,285	19,113
23. Salaries of Farm Managers	1,236	783	998	2,427	1,113	826
24. Taxes	2,248	1,506	3,555	7,789	1,095	2,089
25. Total Expenses	137,181	96,540	261,033	469,281	106,108	88,324
26. Net *Current* Entrepreneurial and Property Income	272,241	171,909	337,926	789,722	78,443	102,344
27. Gain or Loss on Inventories	−75,382	+23,087	+69,514	+165,678	−179,436	+41,887
28. *Total* Net Entrepreneurial and Property Income	196,859	194,996	407,440	955,400	−100,993	144,231

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1919—*Continued*
Omitted)

MOUNTAIN						PACIFIC		
Wyo.	Colo.	N. M.	Ariz.	Utah	Nev.	Wash.	Ore.	Cal.
39,166	175,373	39,782	41,946	55,781	14,091	202,039	130,000	517,829
2,738	16,147	2,719	3,494	6,138	1,328	35,202	22,492	70,933
24,143	43,624	32,224	18,937	10,399	6,224	9,600	19,103	49,494
18,280	26,960	13,112	4,495	15,073	5,210	14,256	24,775	42,360
1,983	8,610	2,065	1,664	2,835	575	13,520	8,846	39,565
9,574	4,859	4,089	1,633	5,787	3,010	2,259	8,231	6,806
265	585	121	218	252	135	408	246	1,142
34	164	52	35	158	6	219	149	360
3,158	4,371	850	1,247	1,247	448	786	1,877	...
27	138	35	220	160	9	570	304	4,283
99,362	280,861	95,049	73,889	97,830	30,936	278,849	216,023	732,672
1,491	6,320	1,236	1,117	1,714	461	6,940	5,271	17,258
8	294	113	41	109	10	526	490	8,183
929	4,276	835	706	1,207	235	4,136	3,084	9,925
23,740	74,997	24,602	16,923	25,811	10,314	60,818	51,256	128,141
1,536	7,364	1,547	671	1,577	379	9,561	5,603	12,531
88	546	90	46	129	14	1,079	643	972
1,179	2,891	1,350	883	821	325	2,229	1,899	3,376
598	2,294	505	437	597	104	2,764	1,829	6,379
2,174	6,696	1,095	1,510	1,838	570	5,680	3,283	22,705
....	....	....	....	....	...	....	....	486
9,712	28,534	11,725	11,807	5,863	6,074	35,622	21,959	125,629
441	952	470	282	322	187	1,439	1,061	5,806
899	3,247	1,472	379	414	198	1,809	2,062	4,470
42,795	138,411	45,040	34,902	43,402	18,871	132,598	98,440	345,855
56,567	142,450	50,009	38,987	54,428	12,065	146,251	117,583	386,817
-68,133	-90,659	-48,497	-1,545	-36,382	-28,415	+17,808	-1,667	-367,282
-11,566	51,791	3,512	37,442	18,046	-16,350	164,059	115,916	119,535

TABLE XXXII.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

ITEM	CONTINENTAL UNITED STATES	Maine	N. H.
GROSS INCOME			
1. All Farm Crops	13,610,675	100,594	34,485
2. Dairy Products	1,939,609	23,159	13,092
3. Beef and Veal Sold and Slaughtered	1,204,286	3,408	2,144
4. Sheep, Goats and Swine Sold and Slaughtered	1,518,916	3,175	1,352
5. Poultry and Eggs	1,025,033	7,175	4,100
6. Wool and Mohair	87,078	319	71
7. Honey and Wax	22,022	118	26
8. Dairy Cows Sold for City and Village Use	13,432	153	74
9. Horses and Mules Sold	83,791	...	..
10. Sale of Land for City Use	67,057	136	138
11. Total Gross Income	19,571,900	138,237	55,482
EXPENSES			
12. Farm Implements	526,710	3,903	1,390
13. Fertilizer	377,200	8,648	660
14. Business Use of Automobiles	430,936	2,530	1,064
15. Feed	8,187,497	43,622	21,545
16. Seed	576,815	3,266	842
17. Binder Twine	41,792	92	12
18. Harness and Saddles	194,397	809	327
19. Business Buildings including Insurance	233,440	770	89
20. Interest on Farm Loans	503,056	1,128	1,023
21. Horses and Mules Purchased	69,739	1,149	391
22. Farm Wages	1,580,767	11,540	5,517
23. Salaries of Farm Managers	82,470	942	691
24. Taxes	166,278	797	427
25. Total Expenses	10,971,097	79,196	33,958
26. Net *Current* Entrepreneurial and Property Income	8,600,803	59,041	21,524
27. Gain or Loss on Inventories	+2,474,581	−2,115	−611
28. *Total* Net Entrepreneurial and Property Income	11,075,384	56,926	20,913

ITEM	EAST NORTH CENTRAL			
	Ohio	Ind.	Ill.	Mich.
GROSS INCOME				
1. All Farm Crops	558,409	449,990	746,126	414,329
2. Dairy Products	105,224	58,790	93,353	94,827
3. Beef and Veal Sold and Slaughtered	35,565	30,950	61,356	24,714
4. Sheep, Goats and Swine Sold and Slaughtered	74,199	88,067	124,430	33,006
5. Poultry and Eggs	63,040	51,662	66,422	32,801
6. Wool and Mohair	7,062	1,524	1,499	3,620
7. Honey and Wax	382	282	679	598
8. Dairy Cows Sold for City and Village Use	582	386	644	380
9. Horses and Mules Sold	...	634	5,268	...
10. Sale of Land for City Use	5,635	2,806	5,794	2,963
11. Total Gross Income	850,098	685,091	1,106,571	607,238

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1920
Omitted)

New England				Middle Atlantic		
Vt.	Mass.	R. I.	Conn.	N. Y.	N. J.	Pa.
68,269	77,716	8,452	59,426	511,390	99,225	453,521
34,525	31,887	4,965	19,532	235,313	25,060	129,159
5,383	3,480	542	2,806	36,984	3,804	25,110
2,233	3,250	456	1,990	19,442	3,554	32,110
3,844	8,354	1,435	5,535	40,745	11,532	52,789
180	44	6	26	1,421	25	1,717
119	35	2	42	1,468	79	662
71	220	34	100	453	173	928
..	...	...	...	...	...	...
46	2,951	321	984	6,488	2,954	3,225
114,670	127,937	16,213	90,441	853,704	146,406	699,221
3,113	2,834	353	1,943	24,894	3,729	24,002
985	4,072	438	5,064	14,640	12,252	15,541
1,648	1,866	280	1,608	15,006	2,749	15,358
40,961	40,083	5,383	27,101	262,102	37,249	240,756
1,825	1,009	138	865	15,881	2,748	17,650
55	6	...	7	987	74	1,243
649	435	56	336	4,596	680	4,669
1,004	1,436	16	1,054	7,112	715	8,661
7,360	984	49	868	7,192	1,647	4,496
609	562	79	544	5,108	1,081	4,157
8,931	20,692	2,419	16,187	80,445	22,431	43,297
642	2,157	264	1,368	5,916	1,306	5,675
674	738	80	460	5,708	1,240	4,799
68,454	76,869	9,553	57,405	449,587	87,901	390,304
46,216	51,068	6,660	33,036	404,117	58,505	308,917
+27,333	+30,674	+2,764	+20,899	+203,645	+58,643	+120,600
73,549	81,742	9,424	53,935	607,762	117,148	438,517

	West North Central						
Wisc.	Minn.	Iowa	Mo.	N. D.	S. D.	Nebr.	Kans.
487,479	424,142	674,746	484,094	279,828	360,624	413,719	509,018
240,802	102,896	67,169	45,057	26,127	21,802	30,432	45,270
42,115	35,250	97,458	57,422	21,063	47,005	65,959	63,022
42,636	72,635	241,812	90,102	13,640	62,701	99,200	41,345
30,443	32,904	68,985	64,577	10,763	15,888	28,957	42,846
1,305	950	2,811	2,915	665	1,806	961	869
1,163	590	1,362	513	5	173	269	277
317	403	339	596	105	109	134	343
...	...	4,112	14,051	4,424	5,055	5,387	12,000
1,670	1,384	2,500	956	105	209	973	472
847,830	671,154	1,161,294	760,283	356,725	415,372	645,041	715,462

TABLE XXXII.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

ITEM	EAST NORTH CENTRAL			
	Ohio	Ind.	Ill.	Mich.
EXPENSES				
12. Farm Implements	21,479	18,672	32,625	17,929
13. Fertiliser	13,433	8,632	3,100	5,498
14. Business Use of Automobiles	25,779	20,500	27,929	16,552
15. Feed	315,285	287,595	400,640	189,399
16. Seed	21,020	18,964	31,813	18,020
17. Binder Twine	1,656	1,734	3,616	1,465
18. Harness and Saddles	6,831	6,398	11,114	5,070
19. Business Buildings including Insurance	12,589	8,381	14,277	8,684
20. Interest on Farm Loans	15,034	19,567	34,051	7,876
21. Horses and Mules Purchased	3,409	.....	.....	3,264
22. Farm Wages	54,552	36,168	92,792	39,503
23. Salaries of Farm Managers	3,992	2,722	4,419	3,051
24. Taxes	7,139	10,778	9,629	7,363
25. Total Expenses	505,198	440,111	666,005	323,674
26. Net *Current* Entrepreneurial and Property Income	344,900	244,980	440,566	283,564
27. Gain or Loss on Inventories	−176,719	−127,769	+105,793	+203,912
28. *Total* Net Entrepreneurial and Property Income	168,181	117,211	546,359	487,476

ITEM	SOUTH			
	Del.	Md.	D. C.	Va.
GROSS INCOME				
1. All Farm Crops	24,961	113,837	880	304,324
2. Dairy Products	3,375	17,689	97	25,079
3. Beef and Veal Sold and Slaughtered	795	5,697	12	19,019
4. Sheep, Goats and Swine Sold and Slaughtered	820	6,197	30	16,495
5. Poultry and Eggs	3,075	11,480	21	25,113
6. Wool and Mohair	8	236	..	698
7. Honey and Wax	9	82	..	527
8. Dairy Cows Sold for City and Village Use	7	105	..	378
9. Horses and Mules Sold	..	...	..	...
10. Sale of Land for City Use	57	987	..	313
11. Total Gross Income	32,207	156,310	1,040	391,944
EXPENSES				
12. Farm Implements	990	4,245	143	7,353
13. Fertiliser	2,559	7,804	24	18,202
14. Business Use of Automobiles	802	3,555	18	6,223
15. Feed	9,343	44,055	186	112,984
16. Seed	834	4,130	...	8,834
17. Binder Twine	39	199	...	250
18. Harness and Saddles	311	1,415	2	3,305
19. Business Buildings including Insurance	205	2,197	17	5,900
20. Interest on Farm Loans	517	2,220	162	6,264
21. Horses and Mules Purchased	248	893	...	1,679
22. Farm Wages	3,335	19,238	...	23,585
23. Salaries of Farm Managers	188	1,559	25	2,194
24. Taxes	157	990	...	1,545
25. Total Expenses	19,528	92,500	577	198,318
26. Net *Current* Entrepreneurial and Property Income	12,679	63,810	463	193,626
27. Gain or Loss on Inventories	+565	+5,408	+523	+58,647
28. *Total* Net Entrepreneurial and Property Income	13,244	69,218	986	252,273

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1920—*Continued*
Omitted)

	WEST NORTH CENTRAL						
Wisc.	Minn.	Iowa	Mo.	N. D.	S. D.	Nebr.	Kans.
24,481	26,536	45,302	20,257	16,728	16,470	22,438	22,670
969	448	618	5,392	124	35	67	756
19,845	21,642	35,656	17,307	9,570	11,687	20,974	22,301
280,170	258,390	568,180	331,021	94,359	163,164	297,774	234,259
15,502	28,415	24,076	26,864	44,430	21,803	24,118	46,429
2,178	3,237	3,954	1,553	2,793	2,136	2,454	3,684
5,636	7,422	11,123	9,282	6,388	5,966	7,800	9,434
12,609	13,854	21,087	8,990	5,268	6,257	8,270	7,005
17,266	34,052	58,102	27,072	13,813	16,688	22,677	25,720
3,244	727	.....	.....	.....	.....	.....	.....
60,986	57,350	83,496	44,467	43,850	36,974	49,035	79,544
2,876	1,856	2,855	2,610	904	907	1,513	1,715
6,670	6,733	12,212	3,320	5,586	6,784	6,927	7,007
452,422	**460,662**	**866,661**	**498,135**	**243,813**	**288,871**	**464,056**	**460,524**
395,408	**210,492**	**294,633**	**262,148**	**112,912**	**126,501**	**181,985**	**254,938**
+286,155	**+435,232**	**+79,848**	**+121,798**	**+155,745**	**+157,940**	**+53,732**	**+294,386**
661,563	**645,724**	**374,481**	**383,946**	**268,657**	**284,441**	**235,717**	**549,324**

ATLANTIC					EAST SOUTH CENTRAL			
W. Va.	N. C.	S. C.	Ga.	Fla.	Ky.	Tenn.	Ala.	Miss.
121,070	476,479	353,308	428,519	84,266	326,382	308,866	260,428	259,072
14,877	20,133	10,862	22,170	3,200	29,463	27,465	20,075	15,866
12,887	7,912	5,925	11,643	8,296	18,512	15,102	8,611	13,814
7,914	21,781	14,369	27,644	7,853	24,606	28,039	20,764	20,110
12,895	20,347	12,095	19,066	4,766	25,421	28,702	14,760	14,555
1,125	147	25	65	63	1,211	518	109	174
428	520	169	525	439	697	815	443	260
443	382	243	353	102	382	462	350	274
...	....	...	...	...	726	2,782	...	...
412	829	427	840	349	477	628	259	85
172,051	**548,530**	**397,423**	**508,625**	**109,334**	**427,877**	**413,379**	**325,799**	**324,210**
2,697	8,006	7,042	9,286	1,838	7,084	7,832	5,035	5,847
3,399	64,179	65,958	47,183	11,594	3,253	3,743	18,966	5,609
2,228	8,873	6,585	10,006	1,888	6,055	4,719	3,331	3,185
54,574	99,928	70,260	102,155	17,696	154,626	153,759	81,613	79,942
3,686	9,057	7,079	11,844	1,198	6,838	7,524	9,392	5,808
149	191	138	138	11	210	150	74	37
1,491	3,653	2,570	4,407	677	5,274	5,122	3,596	4,283
2,087	4,747	4,597	5,947	1,290	4,666	4,878	2,560	3,668
1,893	8,106	8,005	9,955	1,405	8,239	6,153	5,017	7,747
750	6,546	6,503	10,623	1,029	....	....	4,796	2,522
7,003	14,559	17,452	21,783	11,951	18,764	12,615	9,153	7,748
1,185	942	728	1,657	1,776	983	823	744	979
1,218	2,157	1,065	1,869	962	2,751	2,532	1,294	2,985
82,360	**230,944**	**198,012**	**236,853**	**53,315**	**218,761**	**209,852**	**145,571**	**129,758**
89,691	**317,586**	**199,411**	**271,772**	**56,019**	**209,116**	**203,527**	**180,228**	**194,452**
+33,342	**−26,223**	**−81,815**	**−156,279**	**+83,234**	**−174,035**	**+82**	**−51,590**	**−142,304**
123,033	**291,363**	**117,596**	**115,493**	**139,253**	**35,081**	**203,609**	**128,638**	**52,148**

TABLE XXXII.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

ITEM	WEST SOUTH CENTRAL					
	Ark.	La.	Okla.	Texas	Mont.	Idaho
GROSS INCOME						
1. All Farm Crops	300,193	183,005	429,035	933,242	103,352	124,441
2. Dairy Products	17,437	6,090	26,999	44,495	9,776	10,435
3. Beef and Veal Sold and Slaughtered	9,128	9,723	35,814	117,384	30,263	14,403
4. Sheep, Goats and Swine Sold and Slaughtered	17,589	10,435	25,300	58,372	16,647	19,290
5. Poultry and Eggs	16,042	8,610	28,240	42,641	6,919	4,971
6. Wool and Mohair	134	147	170	8,392	6,762	5,566
7. Honey and Wax	303	93	170	1,641	265	553
8. Dairy Cows Sold for City and Village Use	294	302	418	1,157	64	105
9. Horses and Mules Sold	...	...	8,820	....	7,254	2,338
10. Sale of Land for City Use	347	823	517	1,665	66	222
11. **Total Gross Income**	361,467	219,028	553,483	1,208,989	181,368	182,324
EXPENSES						
12. Farm Implements	6,357	4,798	11,814	22,612	3,059	5,631
13. Fertilizer	3,384	3,899	468	2,337	130	110
14. Business Use of Automobiles	3,292	2,112	10,459	21,142	4,439	3,538
15. Feed	89,966	48,077	148,871	257,204	50,738	46,221
16. Seed	7,945	6,420	25,064	34,942	7,556	5,538
17. Binder Twine	136	18	1,796	889	692	561
18. Harness and Saddles	4,625	2,947	7,832	14,794	4,526	2,156
19. Business Buildings including Insurance	3,701	1,839	4,634	11,042	2,693	2,003
20. Interest on Farm Loans	8,925	9,128	14,819	25,333	8,789	4,783
21. Horses and Mules Purchased	1,673	2,382	.....	5,231	....	....
22. Farm Wages	16,377	27,094	44,356	98,762	22,095	20,724
23. Salaries of Farm Managers	1,361	862	1,099	2,672	1,226	909
24. Taxes	2,821	1,889	4,459	9,771	1,374	2,671
25. **Total Expenses**	150,563	111,465	275,671	506,731	113,317	94,845
26. **Net *Current* Entrepreneurial and Property Income**	210,904	107,563	277,812	702,258	68,051	87,479
27. Gain or Loss on Inventories	−32,354	−59,397	+52,336	+31,014	−27,699	+41,306
28. ***Total* Net Entrepreneurial and Property Income**	178,550	48,166	330,148	733,272	40,352	128,785

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1920—*Continued*
Omitted)

MOUNTAIN						PACIFIC		
Wyo.	Colo.	N. M.	Ariz.	Utah	Nev.	Wash.	Ore.	Cal.
39,243	182,982	44,691	45,886	56,360	13,207	223,161	143,560	613,244
2,774	16,933	3,871	3,549	6,304	1,241	35,805	22,655	73,453
21,785	39,343	28,607	17,536	9,236	5,718	9,152	17,124	45,305
13,594	20,050	9,751	3,830	11,210	4,382	10,602	18,424	31,503
1,999	8,713	2,050	1,691	2,819	564	13,582	8,836	40,263
5,840	3,434	2,034	1,016	4,107	2,196	1,650	5,505	5,152
443	905	191	348	395	215	668	382	1,092
28	137	49	32	129	5	221	160	256
2,252	4,015	978	1,287	1,234	451	816	1,907	...
111	417	82	660	180	16	878	600	11,500
88,069	276,929	92,204	75,835	91,974	27,975	296,535	219,153	822,368
1,722	7,300	1,427	1,291	1,980	532	8,016	6,089	19,936
8	304	118	42	113	10	544	372	11,516
1,345	6,184	1,207	1,021	1,745	340	5,981	4,460	14,354
24,131	76,230	24,924	17,086	26,235	10,466	61,813	52,099	130,247
2,044	9,022	1,930	889	1,941	429	10,874	6,483	13,860
143	613	88	30	139	11	876	581	697
1,293	3,169	1,479	968	900	356	2,443	2,082	3,701
666	2,550	562	486	664	115	3,072	2,035	7,091
3,167	6,848	1,634	2,221	2,327	893	5,460	4,288	22,991
....	....	....	....	....	...	....	....	540
12,520	34,014	13,678	14,223	10,512	6,687	39,456	22,083	139,826
486	1,048	518	420	355	205	1,584	1,168	6,393
1,128	4,073	1,872	399	519	248	2,269	2,586	5,508
48,653	151,355	49,437	39,076	47,430	20,292	142,368	104,306	375,860
39,416	125,574	42,767	36,759	44,544	7,683	154,147	114,847	446,508
−23,951	+123,807	+18,347	+39,275	+22,547	+78	+40,639	+108,719	+544,484
15,465	254,381	61,114	76,034	67,091	7,761	194,776	223,566	990,992

TABLE XXXIII.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

ITEM	CONTINENTAL UNITED STATES	Maine	N. H.
GROSS INCOME			
1. All Farm Crops	8,056,727	76,318	29,353
2. Dairy Products	1,393,329	16,636	9,238
3. Beef and Veal Sold and Slaughtered	738,457	2,090	1,314
4. Sheep, Goats and Swine Sold and Slaughtered	957,698	2,002	852
5. Poultry and Eggs	810,540	5,350	2,958
6. Wool and Mohair	36,950	139	29
7. Honey and Wax	13,341	73	15
8. Dairy Cows Sold for City and Village Use	10,360	123	66
9. Horses and Mules Sold	59,010	...	..
10. Sale of Land for City Use	61,578	74	58
11. **Total Gross Income**	12,137,990	102,805	43,883
EXPENSES			
12. Farm Implements	254,760	1,888	673
13. Fertilizer	204,774	6,052	513
14. Business Use of Automobiles	329,836	1,936	815
15. Feed	3,180,969	21,822	11,134
16. Seed	467,090	2,713	685
17. Binder Twine	26,807	63	8
18. Harness and Saddles	157,206	654	264
19. Business Buildings, including Insurance	170,771	574	59
20. Interest on Farm Loans	479,365	1,075	975
21. Horses and Mules Purchased	50,780	944	306
22. Farm Wages	1,324,466	10,662	5,192
23. Salaries of Farm Managers	83,110	950	696
24. Taxes	193,661	928	497
25. **Total Expenses**	6,923,575	50,261	21,816
26. **Net *Current* Entrepreneurial and Property Income**	5,214,415	52,544	22,067
27. Gain or Loss on Inventories	−2,027,026	+16,947	17,609
28. ***Total* Net Entrepreneurial and Property Income**	3,187,389	69,491	39,676

ITEM	EAST NORTH CENTRAL			
	Ohio	Ind.	Ill.	Mich.
GROSS INCOME				
1. All Farm Crops	297,186	232,182	386,265	251,906
2. Dairy Products	74,724	42,176	65,598	67,353
3. Beef and Veal Sold and Slaughtered	21,742	19,139	33,024	15,088
4. Sheep, Goats and Swine Sold and Slaughtered	46,784	55,527	78,455	20,811
5. Poultry and Eggs	50,172	40,812	52,685	24,316
6. Wool and Mohair	3,143	631	583	1,627
7. Honey and Wax	225	165	409	336
8. Dairy Cows Sold for City and Village Use	451	279	422	273
9. Horses and Mules Sold	...	334	3,488	...
10. Sale of Land for City Use	4,634	2,214	6,053	2,338
11. **Total Gross Income**	499,061	393,459	631,982	384,048

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1921

Omitted)

New England				Middle Atlantic		
Vt.	Mass.	R. I.	Conn.	N. Y.	N. J.	Pa.
51,681	62,283	6,054	53,926	338,968	66,285	288,322
25,024	22,823	3,595	14,268	168,816	18,169	92,842
3,301	2,134	332	1,720	23,065	2,333	15,558
1,406	2,049	287	1,255	12,259	2,241	20,246
2,958	6,160	1,054	4,215	31,854	8,024	42,148
82	22	3	11	619	10	797
73	19	1	22	859	47	386
52	198	31	87	311	146	727
..	...	..	..	..	...	...
33	2,096	289	525	6,928	3,115	3,000
84,612	97,784	11,646	76,029	583,709	100,370	461,826
1,506	1,371	170	940	12,040	1,804	11,609
768	3,141	289	3,935	12,117	9,452	13,573
1,260	1,428	214	1,230	11,485	2,105	11,755
22,012	20,390	2,958	14,028	135,955	19,277	125,489
1,455	820	111	702	12,984	2,285	14,602
39	4	...	6	533	56	852
525	352	46	272	3,716	550	3,776
740	1,060	14	779	5,262	538	6,374
7,017	938	47	628	6,856	1,570	4,287
460	468	63	421	4,017	886	3,505
8,424	20,370	2,530	16,490	77,494	20,807	47,681
647	2,174	266	1,379	5,963	1,316	5,719
785	853	93	536	6,648	1,445	5,589
45,636	53,369	6,801	41,546	295,070	62,091	254,811
38,976	44,415	4,845	34,483	288,639	38,279	207,015
+7,960	+23,718	+2,439	+34,677	+69,906	+7,765	-1,717
46,936	68,133	7,284	59,160	358,545	46,044	205,298

	West North Central						
Wisc.	Minn.	Iowa	Mo.	N. D.	S. D.	Nebr.	Kans
308,336	236,512	403,622	251,060	164,978	138,696	211,712	278,320
172,787	74,543	47,206	31,015	18,922	15,187	21,833	32,479
25,985	22,183	57,949	35,758	13,303	28,983	40,219	38,805
26,883	45,797	152,465	56,811	8,600	30,534	62,547	26,068
25,127	26,140	54,712	50,902	8,673	12,725	23,019	33,637
514	358	1,095	1,109	245	704	355	332
723	372	844	285	2	102	162	168
206	281	224	434	77	80	131	257
...	...	3,028	9,498	2,929	3,773	4,113	7,965
1,195	1,415	1,649	692	16	207	794	649
561,756	407,581	722,794	437,564	217,746	239,991	364,885	418,689

TABLE XXXIII.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

	EAST NORTH CENTRAL			
	Ohio	Ind.	Ill.	Mich.
EXPENSES				
12. Farm Implements	10,389	9,031	15,780	8,672
13. Fertilizer	8,858	5,029	2,409	3,985
14. Business Use of Automobiles	19,731	15,690	21,877	12,669
15. Feed	160,162	146,579	196,520	98,451
16. Seed	16,978	15,236	25,935	14,646
17. Binder Twine	875	951	2,224	706
18. Harness and Saddles	5,524	5,174	8,987	4,100
19. Business Buildings, including Insurance	9,212	6,140	10,450	6,366
20. Interest on Farm Loans	14,332	18,655	32,463	7,508
21. Horses and Mules Purchased	2,909	.....	.....	2,853
22. Farm Wages	46,754	32,595	83,892	33,190
23. Salaries of Farm Managers	4,023	2,743	4,453	3,075
24. Taxes	8,315	12,553	11,215	8,575
25. **Total Expenses**	308,072	270,376	415,705	204,796
26. **Net *Current* Entrepreneurial and Property Income**	190,989	123,083	216,277	179,252
27. Gain or Loss on Inventories	−19,825	−220,103	−291,089	−51,356
28. ***Total* Net Entrepreneurial and Property Income**	171,164	−97,020	−74,812	127,896

ITEM	SOUTH				
	Del.	Md.	D. C.	Va.	W. Va.
GROSS INCOME					
1. All Farm Crops	13,829	63,655	648	175,012	77,585
2. Dairy Products	2,452	12,819	070	18,169	10,784
3. Beef and Veal Sold and Slaughtered	487	2,880	007	11,982	8,063
4. Sheep, Goats and Swine Sold and Slaughtered	517	3,907	19	10,401	4,990
5. Poultry and Eggs	2,391	9,038	18	19,696	10,334
6. Wool and Mohair	3	104	..	306	506
7. Honey and Wax	5	47	..	300	233
8. Dairy Cows Sold for City and Village Use	7	90	..	301	397
9. Horses and Mules Sold	..	..	..	...	...
10. Sale of Land for City Use	85	691	..	381	401
11. **Total Gross Income**	19,776	93,231	760	236,548	113,293
EXPENSES					
12. Farm Implements	479	2,053	69	3,557	1,304
13. Fertilizer	1,984	5,262	19	12,978	630
14. Business Use of Automobiles	614	2,721	13	4,763	1,705
15. Feed	4,899	22,967	95	58,053	28,374
16. Seed	673	3,258	..	7,042	2,906
17. Binder Twine	20	131	..	109	108
18. Harness and Saddles	252	1,144	2	2,673	1,206
19. Business Buildings, including Insurance	152	1,612	12	4,307	1,527
20. Interest on Farm Loans	493	2,117	155	5,971	1,805
21. Horses and Mules Purchased	211	725	..	1,355	635
22. Farm Wages	3,066	17,907	..	20,675	6,159
23. Salaries of Farm Managers	189	1,571	26	2,211	1,194
24. Taxes	183	1,153	..	1,800	1,419
25. **Total Expenses**	13,235	62,621	391	125,494	49,062
26. **Net *Current* Entrepreneurial and Property Income**	6,541	30,610	369	111,054	64,231
27. Gain or Loss on Inventories	−1,788	15,527	443	−41,181	−13,119
28. ***Total* Net Entrepreneurial and Property Income**	4,753	46,137	812	69,873	51,112

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1921—*Continued*
Omitted)

	WEST NORTH CENTRAL						
Wisc.	Minn.	Iowa	Mo.	N. D.	S. D.	Nebr.	Kans.
11,841	12,535	21,912	9,798	8,091	7,966	10,853	10,965
815	348	480	1,743	97	19	52	200
15,189	16,564	27,291	13,246	7,329	8,945	16,053	17,069
150,110	133,601	286,081	168,345	48,796	79,779	153,859	126,603
12,698	23,409	19,607	21,524	35,387	18,274	19,810	37,462
1,044	2,022	2,261	987	1,995	1,336	1,721	2,294
4,550	6,002	8,996	7,507	5,166	4,825	6,315	7,629
9,214	10,106	15,401	6,581	3,843	4,563	6,045	5,129
16,461	32,464	55,361	25,809	13,169	15,920	21,393	24,520
2,758	586	.....	.....	.....	.....	.....	.....
50,740	43,548	65,693	40,966	33,257	25,218	35,323	64,462
2,898	1,870	2,877	2,631	911	914	1,525	1,728
7,768	7,842	14,223	3,867	6,506	7,901	8,068	8,161
286,086	291,197	520,203	303,004	164,547	175,660	281,017	306,222
275,670	116,384	202,591	134,560	53,199	64,331	83,868	112,467
-13,314	-49,714	-415,515	-306,538	-4,103	-93,090	-57,173	-99,872
262,356	66,670	-212,924	-171,978	49,096	-28,759	26,695	12,595

ATLANTIC				EAST SOUTH CENTRAL			
N. C.	S. C.	Ga.	Fla.	Ky.	Tenn.	Ala.	Miss.
309,616	182,291	221,451	58,918	187,719	193,988	175,800	164,525
14,714	7,956	16,372	2,327	21,792	19,701	14,672	11,495
4,852	3,633	7,367	4,927	11,285	8,808	5,280	8,244
13,733	9,060	17,430	4,951	15,515	17,879	13,092	12,680
16,373	9,726	15,279	3,753	19,939	22,898	11,874	11,248
62	11	29	28	460	208	32	77
298	98	324	272	420	502	272	159
292	169	247	106	305	331	249	208
...	...	...	...	550	1,879	...	...
582	300	434	387	372	658	313	88
360,522	213,242	278,933	75,669	258,357	266,652	221,584	208,824
3,872	3,406	4,492	889	3,427	3,788	2,435	2,828
28,411	27,382	20,098	9,375	1,770	972	5,577	1,593
6,791	5,040	7,659	1,445	4,634	3,612	2,550	2,437
52,677	37,408	53,854	10,942	77,329	76,566	41,671	39,921
7,228	5,642	9,272	970	5,329	5,985	7,717	4,833
100	119	129	7	156	129	88	38
2,954	2,078	3,564	547	4,265	4,142	2,908	3,468
3,471	3,352	4,342	941	3,434	3,565	1,872	2,244
7,728	7,631	9,491	1,339	7,855	5,868	4,783	7,385
4,601	4,482	6,426	754	....	....	3,715	1,729
10,755	12,278	14,357	10,516	16,013	11,046	6,755	6,066
949	733	1,670	1,790	990	820	750	988
2,512	1,240	2,176	1,131	3,205	2,949	1,507	3,476
132,049	110,791	137,530	40,636	128,407	119,451	81,328	76,999
228,473	102,451	141,403	35,033	129,950	147,201	140,256	131,825
-9,059	127,439	-30,881	11,674	-36,326	-46,038	-272	19,885
219,414	-24,988	20,522	46,707	93,624	101,163	139,984	151,690

TABLE XXXIII.—ITEMIZED STATEMENT OF ESTIMATED

DOLLARS (000's

ITEM	WEST SOUTH CENTRAL				
	Ark.	La.	Okla.	Texas	Mont.
GROSS INCOME					
1. All Farm Crops	185,962	116,872	213,137	518,570	78,804
2. Dairy Products	12,498	4,459	19,200	33,551	7,078
3. Beef and Veal Sold and Slaughtered	5,597	6,103	21,800	71,295	18,170
4. Sheep, Goats and Swine Sold and Slaughtered	11,090	6,579	14,691	36,804	10,496
5. Poultry and Eggs	12,807	6,768	22,452	33,881	5,568
6. Wool and Mohair	53	56	72	3,678	3,181
7. Honey and Wax	177	55	107	1,021	173
8. Dairy Cows Sold for City and Village Use	227	239	326	953	57
9. Horses and Mules Sold	...	...	4,368	...	5,159
10. Sale of Land for City Use	327	364	497	1,707	28
11. Total Gross Income	228,738	141,500	296,650	701,460	128,714
EXPENSES					
12. Farm Implements	3,076	2,321	5,714	10,936	3,998
13. Fertiliser	467	1,226	273	475	101
14. Business Use of Automobiles	2,520	1,616	8,005	16,182	3,397
15. Feed	45,710	24,589	74,594	141,212	26,561
16. Seed	6,407	5,003	20,500	29,257	5,321
17. Binder Twine	95	16	1,080	711	845
18. Harness and Saddles	2,740	2,383	6,334	11,963	3,660
19. Business Buildings, including Insurance	2,700	1,345	3,362	8,059	1,962
20. Interest on Farm Loans	8,509	8,703	14,128	24,151	8,379
21. Horses and Mules Purchased	1,161	1,777	.....	3,519	....
22. Farm Wages	12,053	19,523	33,403	83,349	14,993
23. Salaries of Farm Managers	1,372	869	1,107	2,693	1,235
24. Taxes	3,285	2,200	5,193	11,380	1,600
25. Total Expenses	91,095	71,571	173,713	343,887	71,752
26. Net *Current* Entrepreneurial and Property Income	137,643	69,929	122,937	357,573	56,962
27. Gain or Loss on Inventories	-49,128	-28,811	-82,189	-112,980	-62,504
28. *Total* Net Entrepreneurial and Property Income	88,515	41,118	40,748	244,593	-5,542

AGRICULTURAL INCOME AND EXPENSES BY STATES, 1921—*Continued*

Omitted)

MOUNTAIN							PACIFIC		
Idaho	Wyo.	Colo.	N. M.	Ariz.	Utah	Nev.	Wash.	Ore.	Cal.
79,466	25,639	104,905	31,770	25,796	32,376	8,903	168,305	99,475	409,736
7,635	2,020	12,261	2,174	2,550	4,598	934	26,139	16,135	53,740
8,832	13,972	24,351	16,352	11,191	5,890	3,959	5,612	10,727	27,781
12,163	8,571	12,642	6,148	3,045	7,068	3,381	6,685	11,617	19,863
3,955	1,597	6,954	1,621	1,337	2,229	446	10,821	6,995	32,803
2,302	2,748	1,517	1,007	483	1,926	942	482	2,527	1,742
349	290	552	120	218	244	135	430	234	989
92	22	109	43	36	117	5	191	147	238
1,792	1,669	2,736	716	1,378	1,041	377	629	1,588	...
207	54	275	104	419	185	12	776	834	13,123
16,793	56,582	166,302	60,055	46,453	55,674	19,094	220,070	150,279	560,015
2,724	833	3,531	690	624	958	257	3,877	2,945	9,643
85	2	118	31	33	438	8	304	315	10,964
2,708	1,029	4,733	923	782	1,336	261	4,578	3,414	10,987
23,380	12,406	38,998	12,743	9,376	13,932	5,526	31,269	26,816	67,150
4,506	1,700	7,482	1,592	627	1,615	357	8,927	5,208	10,260
474	105	447	63	30	124	10	905	464	527
1,743	1,045	2,562	1,196	783	728	288	1,976	1,684	2,993
1,459	484	1,861	411	354	485	85	2,242	1,486	5,176
4,560	3,019	6,529	1,558	2,117	2,218	851	5,205	4,089	21,060
....	....	....	....	....	....	....	....	....	494
16,503	10,106	28,423	11,026	9,761	8,980	6,013	32,542	19,576	118,314
916	490	1,056	522	424	357	207	1,597	1,177	6,442
3,143	1,313	4,743	2,197	416	805	289	2,644	3,012	6,532
62,201	32,532	99,483	32,952	25,327	31,776	14,152	96,066	70,246	270,542
54,592	24,050	66,819	27,103	21,126	23,898	4,942	124,004	80,033	289,473
−8,094	−11,706	−14,610	−5,783	+9,013	+3,088	−11,805	−7,659	−9,016	+166,140
46,498	12,344	52,209	21,320	30,139	26,986	−6,863	116,345	71,017	455,613

TABLE XXXIV.—TOTAL INCOME OF ENTREPRENEURS AND OTHER PROPERTY HOLDERS FROM AGRICULTURE IN EACH STATE

1919–1920–1921

DOLLARS (000's Omitted)

State and Geographic Division	Total Income Including Gains on Inventories			Current Income Only.		
	1919	1920	1921	1919	1920	1921
Continental United States	**9,135,029**	**11,075,384**	**3,187,389**	**10,837,333**	**8,600,803**	**5,214,415**
New England	**103,361**	**296,489**	**290,680**	**191,871**	**217,545**	**197,330**
Maine	53,254	56,926	69,491	64,632	59,041	52,544
New Hampshire	5,860	20,913	39,676	17,070	21,524	22,067
Vermont	20,414	73,549	46,936	34,382	46,216	38,976
Massachusetts	14,467	81,742	68,133	41,695	51,068	44,415
Rhode Island	2,531	9,424	7,284	5,603	6,660	4,845
Connecticut	6,835	53,935	59,160	28,489	33,036	34,483
Middle Atlantic	**380,877**	**1,163,427**	**609,887**	**730,570**	**771,539**	**533,933**
New York	206,810	607,762	358,545	361,598	404,117	288,639
New Jersey	26,191	117,148	46,044	62,601	58,505	38,279
Pennsylvania	147,876	438,517	205,298	306,371	308,917	207,015
East North Central	**1,532,307**	**1,980,790**	**389,584**	**2,051,858**	**1,709,418**	**985,271**
Ohio	391,747	168,181	171,164	412,948	344,900	190,989
Indiana	393,401	117,211	−97,020	341,637	244,980	123,083
Illinois	376,241	546,359	−74,812	640,660	440,566	216,277
Michigan	124,858	487,476	127,896	277,306	283,564	179,252
Wisconsin	246,060	661,563	262,356	379,307	395,408	275,670
West North Central	**2,656,892**	**2,742,290**	**−158,605**	**2,411,388**	**1,443,609**	**767,400**
Minnesota	428,547	645,724	66,670	351,885	210,492	116,384
Iowa	863,156	374,481	−212,924	619,827	294,633	202,591
Missouri	315,362	383,946	−171,978	381,265	262,148	134,560
North Dakota	67,327	268,657	49,096	177,701	112,912	53,199
South Dakota	366,866	284,441	−28,759	246,927	126,501	64,331
Nebraska	472,761	235,717	26,695	301,319	181,985	83,868
Kansas	142,973	549,324	12,595	332,464	254,938	112,467
South Atlantic	**1,368,699**	**1,122,459**	**434,342**	**1,612,399**	**1,205,057**	**720,165**
Delaware	8,887	13,244	4,753	15,635	12,679	6,541
Maryland	36,848	69,218	46,137	72,795	63,810	30,610
Dist. of Columbia	−139	986	812	604	463	369
Virginia	127,471	252,273	69,873	209,979	193,626	111,054
West Virginia	46,306	123,033	51,112	92,478	89,691	64,231
North Carolina	384,718	201,363	219,414	408,624	317,586	228,473
South Carolina	354,191	117,596	−24,988	315,655	199,411	102,451
Georgia	380,351	115,493	20,522	429,678	271,772	141,403
Florida	30,066	139,253	46,707	66,951	56,019	36,033
East South Central	**812,575**	**419,476**	**486,461**	**1,081,505**	**787,323**	**549,232**
Kentucky	129,413	35,081	93,624	266,899	209,116	129,950
Tennessee	141,805	203,609	101,163	239,591	203,527	147,201
Alabama	221,215	128,638	139,984	262,784	180,228	140,256
Mississippi	320,342	52,148	151,690	312,231	194,452	131,825
West South Central	**1,754,695**	**1,290,136**	**414,974**	**1,571,798**	**1,298,537**	**688,082**
Arkansas	196,859	178,550	88,515	272,241	210,904	137,643
Louisiana	194,996	48,166	41,118	171,909	107,563	69,929
Oklahoma	407,440	330,148	40,748	337,926	277,812	122,937
Texas	955,400	733,272	244,593	789,722	702,258	357,573
Mountain	**126,113**	**650,983**	**177,091**	**535,293**	**432,273**	**279,492**
Montana	−100,993	40,352	−5,542	78,443	68,051	56,962
Idaho	144,231	128,785	46,498	102,344	87,479	54,592
Wyoming	−11,566	15,465	12,344	56,567	39,416	24,050
Colorado	51,791	254,381	52,209	142,450	125,574	86,819
New Mexico	3,512	61,114	21,320	50,009	42,767	27,103
Arizona	37,442	76,034	30,139	38,987	36,759	21,126
Utah	18,046	67,091	26,986	54,428	44,544	23,898
Nevada	−16,350	7,761	−6,863	12,065	7,683	4,942
Pacific	**399,510**	**1,409,334**	**642,975**	**650,651**	**735,502**	**493,510**
Washington	164,059	194,776	116,345	146,251	154,147	124,004
Oregon	115,916	223,566	71,017	117,583	114,847	80,033
California	119,535	990,992	455,613	386,817	446,508	289,473

placed in adjacent columns for convenient comparison. As indicated by the title of the table, the totals do not represent the entire income derived from agriculture, but only the part received by or accrued to entrepreneurs and property holders. It should also be noted that these totals follow geographic lines based upon the production of agricultural income rather than its distribution. Although most of the income goes to farmers residing within the States where the farm income is produced, part of it, as will be seen later, goes to non-farmers, whose residence does not necessarily fall within the geographic unit containing the property from which the income is derived. The thing that strikes the attention more than anything else in the table is the extreme variation in total income derived from agriculture during the three years. Considering the total income, including gains on inventories, we find the total entrepreneurial and property income for 1921 to have been on the whole only about one-third as great as in 1919, and some sections of the country fared a great deal worse than that. The West North Central division, which in 1919 and 1920 showed an income of about $2,700,000,000, dropped to a negative income of about $259,000,000 in 1921. In other words, in this division, for farm entrepreneurs and property holders, there was a difference in income between 1919 and 1921 of nearly $3,000,000,000. The East North Central and the South Atlantic divisions also showed an enormous reduction in agricultural income between 1919 and 1921. Farm entrepreneurs and property holders in the East North Central States earned in 1921 only about one-fourth as much as in 1919, and one-fifth as much as in 1920. In the South Atlantic States, the differences were somewhat smaller, but still significant. Of course, not all sections of the country suffered reductions in income from agriculture in 1921 as compared with 1919. On the contrary, some divisions showed a considerable advance over the 1919 income. For instance, the New England total in 1921 was $290,000,000, but in 1919 it was only $103,000,000. The Middle Atlantic and Pacific States also showed considerable gains in 1921 over 1919.

However, the differences among the various sections of the country in the total income cannot be taken to represent equivalent differences in what the farmer and his family had to depend

upon for immediate livelihood. The current income, as shown in the last three columns of Table XXXIV, is evidently a better gauge of agricultural living conditions in the different States. We note first of all that, for the Continental United States, the current income is not as divergent in the three years as are the totals which include the inventory changes.

The Share of the Farmers of the Different States in the Total Agricultural Income.

The investment represented by the farms not owned by farmers makes up a notable share of the total value of farm property. Assuming that the livestock, machinery, etc., on tenant farms belong to the tenants (which is approximately true, particularly in the North) we find that the value of the land and buildings alone of such farms is reported by the 1920 Census as $23,787,000,000. About 68 per cent, or roughly $16,175,000,000 of this amount is, presumably, owned by non-farmers.[1] Adding to this $3,132,000,000 representing the value of farms operated by managers, we find that, out of the total value of farm property in the country of $77,924,000,000, about 25 per cent, or $19,307,000,000, represents the equity of non-farmers. In addition, a considerable portion of the value of farms owned by farmers is held by individual non-farmers in the form of mortgages. This shows that not all the income derived from agriculture is received by the agricultural population. A considerable portion of the income evidently goes to non-farmers in the form of rent, profits, and interest.

The significance of the participation of non-farmers in the agricultural income of the country is very great, especially in the years when the total agricultural income is below normal. The bulk of their share comes to them in the form of rent or interest on farm mortgages and consequently does not fluctuate to correspond with agricultural receipts. For example, the disbursements[2] to

[1] According to a study conducted in 1920 by Dr. L. C. Gray of the United States Department of Agriculture, about 68 per cent of the tenant land belonged to non-farmers. It should be noted that, as stated by Dr. Gray, a "rigid distinction between farmers and non-farmers is difficult to apply to the farm landlord class in the United States. A large proportion of the landlords are retired farmers in various stages of retirement, some of them actively supervising the farms of tenants and others with a less active relationship but still more or less closely connected with the business of farming." It therefore follows that the division of the agricultural income into shares going to *farmers* and *non-farmers* is of necessity merely an attempt at a rough estimate.

[2] Exclusive of gains in value of inventories.

non-farmers, as estimated by W. I. King for the entire Continental United States, were as follows:

1919	$1,248,077,000
1920	1,276,918,000
1921	1,249,679,000

These figures show very little change from year to year. However, as shown in Table XXXIV, the total current income of all entrepreneurs and property holders for the corresponding years was $10,837,000,000, $8,601,000,000, and $5,214,000,000. In other words, while the total current agricultural income was cut in half, the part going to non-farmers remained practically the same through the three years, and, hence of necessity, the losses must have been borne chiefly by the farmers.

Since in some States there are proportionately more tenant farmers and more mortgaged farms than in others, the relative portion of the total net entrepreneurial income going to farmers is not the same in all parts of the country. This accounts for the fact that, even when all other conditions are the same, the farmers of some States show lower incomes than others.

The estimates of the total agricultural income received by farmers are recorded in Table XXXV. The figures are derived by subtracting from the totals representing the agricultural income of all entrepreneurs and property holders the part that was disbursed to non-farmers. The non-farmer portion is composed of three parts:

1. Rent or profits on farms leased from non-farmers and those operated by managers.
2. Interest on farm mortgages held by non-farmers.
3. Gains or losses on farm inventories owned by non-farmers.

The estimates by States of the agricultural income disbursed to non-farmers in the form of rents and profits are made on the basis of the estimated value of farm property in each State owned by non-farmers at the time of the 1920 Census. The share of non-farmers in the gains or losses on farm inventories has also been estimated on this basis. In the case of the interest on farm mortgages held by non-farmers, it has been assumed that the distribution by States would be similar to that of farm loans from banks and

TABLE XXXV.—PORTION OF TOTAL AGRICULTURAL INCOME[a] RECEIVED BY FARMERS IN EACH STATE, 1919–1920–1921

DOLLARS (000's Omitted)

STATE AND GEOGRAPHIC DIVISION	TOTAL INCOME Including Inventory Gains			CURRENT INCOME ONLY (Thousands of Dollars)			Per Cent of Total Current Agr. Income[a] in the State Received by Farmers 1921
	1919	1920	1921	1919	1920	1921	
Continental United States	**8,286,989**	**9,149,504**	**2,714,892**	**9,589,256**	**7,323,885**	**3,964,736**	**76.03**
New England	**108,928**	**268,644**	**263,318**	**180,608**	**206,649**	**186,772**	**94.65**
Maine	53,037	56,063	67,359	63,638	58,034	51,569	98.15
New Hampshire	6,314	20,102	36,383	15,979	20,629	21,201	96.08
Vermont	10,826	66,516	43,077	31,615	43,447	36,339	93.29
Massachusetts	17,534	70,888	59,037	38,146	47,668	41,082	92.50
Rhode Island	2,907	8,229	6,188	5,123	6,236	4,429	91.42
Connecticut	9,310	46,846	51,274	26,107	30,635	32,132	93.18
Middle Atlantic	**426,335**	**1,008,682**	**542,143**	**681,529**	**722,340**	**485,691**	**90.96**
New York	223,471	534,018	318,917	339,299	381,630	266,606	92.37
New Jersey	32,988	94,599	39,229	58,206	53,983	33,851	88.43
Pennsylvania	169,876	380,065	183,997	284,024	286,727	185,234	89.48
East North Central	**1,413,854**	**1,645,564**	**343,725**	**1,756,296**	**1,408,116**	**690,010**	**70.03**
Ohio	349,093	179,728	127,950	362,757	293,623	140,727	73.68
Indiana	320,036	111,267	–66,782	287,922	190,535	69,770	56.69
Illinois	358,271	340,672	–79,782	490,877	287,617	66,199	30.61
Michigan	140,059	424,023	121,081	258,923	265,033	161,123	89.89
Wisconsin	246,395	589,874	241,258	355,817	371,308	252,191	91.48
West North Central	**2,071,537**	**1,848,492**	**–357,845**	**1,946,360**	**967,616**	**301,738**	**39.32**
Minnesota	351,230	462,129	27,493	297,183	155,290	62,541	53.74
Iowa	594,635	171,245	–203,152	454,210	125,165	36,642	18.00
Missouri	287,253	302,387	–134,943	335,158	213,986	87,542	*65.06
North Dakota	74,105	206,096	28,295	156,025	90,502	31,340	58.91
South Dakota	280,323	183,317	–41,716	202,051	80,245	19,035	29.59
Nebraska	328,547	136,919	–26,648	224,996	104,465	7,884	9.40
Kansas	155,444	386,399	–7,174	276,737	197,963	56,754	50.46

South Atlantic	1,330,023	1,099,935	448,488	1,513,092	1,102,749	620,013	86.09
Delaware	10,247	11,379	3,938	14,079	11,058	4,953	75.73
Maryland	42,169	59,278	32,622	64,862	55,864	22,820	74.55
District of Columbia	189	421	308	423	256	168	45.60
Virginia	124,574	231,011	61,744	196,480	179,900	97,633	87.92
West Virginia	50,545	112,419	49,240	88,124	85,282	50,918	93.29
North Carolina	373,269	279,735	202,189	388,760	296,728	208,059	91.07
South Carolina	318,639	133,272	10,723	296,670	179,915	83,376	81.38
Georgia	374,626	159,103	48,077	400,730	241,806	112,047	79.24
Florida	35,765	113,317	39,647	62,964	51,940	31,039	88.60
East South Central	817,809	481,831	432,191	1,016,188	719,835	483,194	87.98
Kentucky	145,323	59,756	85,175	249,345	191,431	112,659	86.69
Tennessee	152,666	187,412	97,896	223,902	187,352	131,366	89.24
Alabama	224,665	135,021	128,955	251,922	168,849	129,133	92.07
Mississippi	295,155	99,642	120,165	291,019	172,203	110,036	83.47
West South Central	1,543,218	1,149,800	381,467	1,433,857	1,155,858	548,473	79.71
Arkansas	209,238	173,802	90,504	256,118	193,923	121,057	87.95
Louisiana	176,061	59,141	40,910	161,650	96,217	58,894	84.22
Oklahoma	352,008	280,490	42,181	308,541	247,764	93,574	76.12
Texas	805,911	636,367	207,872	707,548	617,954	274,948	76.89
Mountain	166,560	551,370	153,131	491,557	407,173	235,550	84.28
Montana	-79,483	36,211	-3,604	69,987	59,284	48,462	85.08
Idaho	128,013	112,502	40,876	95,006	79,953	47,254	86.56
Wyoming	-370	16,910	11,247	53,039	35,685	20,423	84.92
Colorado	62,553	205,080	42,357	128,480	111,412	52,981	79.29
New Mexico	9,835	54,240	19,382	46,963	39,590	24,000	88.55
Arizona	34,164	58,339	23,103	35,170	32,775	17,236	81.59
Utah	20,749	61,887	24,429	52,309	42,327	21,750	91.01
Nevada	-8,901	6,201	-4,659	10,603	6,147	3,444	69.70
Pacific	408,725	1,095,186	508,274	569,769	633,549	413,295	83.75
Washington	144,497	168,432	104,344	131,866	139,614	109,777	88.53
Oregon	106,853	186,646	63,708	108,104	105,074	70,473	88.06
California	157,375	740,108	340,222	329,799	388,861	233,045	80.51

[a] Income of Entrepreneurs and Property Holders.

merchants, and, consequently, the same index has been used for the two items.[1]

The agricultural situation of the country from the standpoint of the farmer is well brought out in Table XXXV. Between 1919 and 1921, the total current agricultural income of farmers in the Continental United States dropped from $9,589,000,000 to $3,965,000,000, or a reduction of 59 per cent. The change, however, was not uniform throughout the country. It appears that the bulk of the loss was suffered by farmers in a limited area. While the current income of the farmers in the New England States was somewhat higher in 1921 than in 1919, that of farmers in the West North Central States was reduced in 1921 to a mere pittance. From $1,946,000,000 in 1919, it fell to $302,000,000, a drop of nearly 85 per cent. Some of the States in this division show an even greater reduction than that. In Nebraska, for instance, the net current agricultural income going to farmers was only about $8,000,000 in 1921 as compared with $225,000,000 received by farmers in 1919. The East North Central division and most of the southern States also came in for more than their share of the total reduction in this part of agricultural income.

The last column of the table is very characteristic, and in part explains why the farmers in some States apparently suffered more than in others. As already noted, the share of non-farmers is to a certain extent a fixed charge on the total current agricultural income. Consequently, the farmers' share is subject to a greater proportional change than the total income of all agricultural entrepreneurs and property holders. In other words, since changes in income affect primarily the share of the farmers, the larger the claim of non-farmers the greater the effect upon the farmers' income of a given change in the total. For instance, when the total current agricultural income of farmers and non-farmers, of which $5,000,000 constitutes the yearly share of non-farmers, changes from $20,000,000 to $10,000,000, the farmers' share does not change 50 per cent, but 66⅔ per cent. At the same time, the ratio of the portion received by the farmers to that received by non-farmers changes from 3:1 to 1:1 — provided, of course, that the share of non-farmers is continually paid in full.

[1] See p. 181.

In 1921. the farmers of the United States received only 76.03 per cent of the total current agricultural income of entrepreneurs and property owners. In the same year, the farmers of New England received close to 95 per cent of such total current income in that section of the country. This shows the New England farmers to be more favorably placed with respect to ownership of farm property and the capital necessary to carry on farm operations than the average farmer in the United States. The relatively high percentage of the total agricultural income of farmers and property owners in 1921 received by the farmers of New England is also partly due to the fact that, in that year, this class of income in this division was practically normal. The relative share of farmers in the total of such current agricultural income in 1921 was lowest in the West North Central States where it amounted to only 39.32 per cent. The total current agricultural income of farmers and property owners in Nebraska was so low in 1921 that there was very little left for the farmers after the non-farmers received their share in the form of rent and interest on mortgages. In that year, the Nebraska farmers received only 9.4 per cent of this part of the total net current agricultural income earned in the State. This, of course, is not the normal share of Nebraska farmers. However, it is quite apparent from the estimates for the other years that the participation of non-farmers in the current agricultural income is probably greater in Nebraska than in most of the other States. Even in 1919, when the net farm income was high, the farmers seem to have received only 75 per cent of the State total.

Iowa is another State in the West North Central division where the current agricultural income of the farmers dwindled down to almost nothing in 1921. From a total of $454,000,000 in 1919, it dropped in 1921 to only about $37,000,000, representing a reduction of nearly 88 per cent. At the same time, the total current agricultural income of farmers and non-farmers in Iowa, was reduced by only about 70 per cent. The share of the farmers in 1921 formed only 18 per cent of the total.

It seems that in the Middle West, Wisconsin was the only State where the farmers received more than 90 per cent of the total current agricultural income of farmers and non-farmers in 1921.

Michigan approached it with a percentage of almost 90. The other States, however, ranged very low in this respect.

In considering the distribution of their share of the current agricultural income among farmers and non-farmers, the question may well be asked whether or not in 1921 the non-farm interests were really paid in full. The data presented in this report point to the fact that in some sections of the country the farmers were not in a position to meet their obligations. This is also borne out by general information regarding the condition of the agricultural population in 1921. However, the fact that farmers failed to meet their obligations in that year did not in any way change the amount of their net income. They simply went further into debt. Some of them, as is well known, actually had to part with their farms on account of their inability to carry the burden of their indebtedness. Their current income for the year, whether they paid their debts or not, could be no more than the amount of receipts less expenses. Some of the expenses contracted in 1921 have undoubtedly been carried over to some future year. But this is nothing unusual. The replacements of farm machinery and harness and saddles, the maintenance and repairs of farm buildings, and the like, have in all probability also been neglected during the time of the depression. Nevertheless, they were expenses properly charged to the period when incurred.

CHAPTER X

ENTREPRENEURIAL AND PROPERTY INCOME AND INCOME FROM MISCELLANEOUS SOURCES

Properly speaking, all income falls into three divisions, namely — (1) the reward for the efforts of individuals,[1] or income from *Labor*, which in most cases is received in the form of wages and salaries; (2) the reward for the use of natural resources, or income from *Land;* and (3) the reward for the use of past labor conserved in conjunction with natural resources, — or the rent of Intermediate or Transition Goods commonly referred to as *Capital Goods.* It is, however, almost impossible to separate the income derived from the three sources. Our divisions are of necessity determined largely by the available material. They are as follows:

1. Wages and salaries.
2. Entrepreneurial and property income.
   a. Returns on loaned capital.
   b. Returns on rented or leased property.
   c. Entrepreneurial gains.
3. Miscellaneous incomes.

Wages and salaries have already been discussed in full in Chapters II to VI. The income from this source evidently does not cover the remuneration for all productive efforts of individuals but only the portion which is disbursed to employees in payment for the performance of their duties.

ENTREPRENEURIAL AND PROPERTY INCOME

The returns on loaned capital and leased property constitute the income received by individuals in the form of interest and rent. We see that these returns are so restricted as to exclude from these categories imputed returns on property invested in the business

[1] This may be taken to include broadly the *entrepreneur*, customarily listed as a separate factor of production.

by entrepreneurs, the latter type of income being included in the share of entrepreneurs.

Entrepreneurial gains, as treated in this study, are not confined to "pure" profits but include all returns on property invested in the business as well as rewards for those efforts of entrepreneurs which, if exerted in behalf of others, would be considered as *labor*, and which would command a wage or salary. Consequently, we see that entrepreneurial income takes in returns of three distinct economic types.

As entrepreneurs own more of the property or capital used in the business than they lease or borrow, it follows that, next to wages and salaries, the entrepreneurial gains normally make up the largest single item in the national income. In addition to the income of all farmers, this item covers the income of roughly 3,700,000 individual entrepreneurs in non-agricultural pursuits and also part of the income of individuals not normally recorded as entrepreneurs. The corporate form of organization, which controls most of the larger industries of the country, makes it possible for wage and salary earners to participate in entrepreneurial gains as stockholders of corporations.

How is the entrepreneurial income distributed geographically? In 1919 this item for the entire United States amounted to over $20,000,000,000. What portion was received by the inhabitants of each State? It is obvious that, with the exception of agriculture, the figures showing the profits of or the disbursements to entrepreneurs from the various industries in each State, even if such data were available, would not be of assistance to us in solving the problem. Such figures would only give an idea of the geographic production of income, which in many cases is entirely different from the geographic distribution of income. Suppose we knew the entrepreneurial income derived from manufacturing in each State. This would still leave us the problem of determining the customary residence of the people who receive the income. The stockholders of a steel plant located in Pittsburgh do not all reside in Pennsylvania, and it is not inconceivable that the bulk of the entrepreneurial income of plants operated in Ohio is received by stockholders in the State of New York. It, therefore, follows that, at least in the case of part of the entrepreneurial income, our index of distribution must be based on data bear-

ing geographically upon the individual income receivers rather than the industrial derivation of the income. Therefore, for purposes of distribution by States, the entrepreneurial income has been divided into two parts:

1. Income of individuals from holdings of corporation securities (exclusive of interest).
2. Income from the operation of business by individuals.

Dividends.

It is safe to assume that people with low incomes do not invest very heavily in the securities of corporations. It is, presumably, the exception rather than the rule to find one whose income is below $2,000 deriving any considerable portion of it from dividends.[1] If these premises are true, the recipients of practically all the dividends paid out to individuals are to be looked for in the higher income classes. That this is substantially true is shown by the Federal income tax returns, as tabulated in the *Statistics of Income* of the United States Bureau of Internal Revenue. Although the number of income returns between $1,000 and $2,000 in 1920 constituted about 37 per cent of the total, the amount of dividends reported on these returns was not quite 2 per cent of the total reported on all returns. The total dividends reported on personal returns for 1921 represented over 83 per cent of the estimated total dividends paid in that year to individuals by all corporations. Since the discrepancy between the two totals may be partly due to under-reporting on the returns received, the amount of dividends in the incomes which are not required to be reported must, in general, be rather small. It is therefore thought that the income tax data furnish a good index for the distribution by States of the income received by stockholders in the form of dividends.[2] Con-

[1] In the lower income classes is of course included an indeterminate number of women and minor children whose income is either wholly or partly derived from dividends. The amount of dividends disbursed to this class of stockholders is, however, relatively small.

[2] It would seem that the possible errors in the geographic distribution of the 17 per cent of the dividends received by individuals and unaccounted for on the income tax returns, can be of only minor significance. It stands to reason that investment in corporation securities is determined to some extent by local custom, which presumably influences investors in the lower income classes as well as in the higher. Local custom in the matter of investments, as reflected in the higher incomes, probably forms a particularly strong factor in the selection of investments for the benefit of widows and minor children. Hence, the index furnished by the income tax returns representing the bulk of the dividends received in each State, cannot lead us very far astray in our final estimates.

sequently, our estimates by States for this item represent the income tax figures adjusted to correspond with the totals computed as dividends actually paid to all individuals in the United States, based on the estimates made by W. I. King. The final totals are recorded in Table XXXVI.

Business Operated by Individuals.

The income derived from the operation of business by individuals is composed of two parts which, for the United States as a whole and under normal conditions, are roughly equal in size:

1. The agricultural income of farmers.
2. The income of individual entrepreneurs in all other industries.

The income of farmers has been discussed and disposed of in the preceding chapters, and we shall, therefore, attempt at this point to estimate the income of urban entrepreneurs.

In the *Statistics of Income* of the United States Bureau of Internal Revenue, we find figures for the income by States under the following two heads:

1. "Business."
2. "Partnerships and Personal Service Corporations."

It would seem that these correspond broadly with our classification of income derived from the operation of business by individuals. Unfortunately, the income tax figures cover only part of the income falling in this group. It seems safe to assume that the majority of so-called entrepreneurs receive incomes below $2,000, and since, among entrepreneurs as a class, there is probably a very large proportion of heads of families, a considerable portion of the incomes is exempt from taxation and, consequently, is not reported.

If it were true that the unreported income in the group under discussion bears the same proportion in all States to the part of the income reported, the figures furnished by the United States Bureau of Internal Revenue could still be used as an index of the distribution by States of the total gain from business conducted by individual entrepreneurs. However, it is quite obvious that this can hardly be the case. A very small difference in net income is sufficient to shift a return from the exempt to the non-exempt class and vice versa. A State like New York where incomes are a great deal

TABLE XXXVI.—INCOME OF INDIVIDUALS IN EACH STATE FROM INTEREST AND DIVIDENDS, 1919–1920–1921

DOLLARS (000's Omitted)

State and Geographic Division	Interest			Dividends		
	1919	1920	1921	1919	1920	1921
Continental United States	**2,816,862**	**2,951,726**	**3,027,093**	**3,579,765**	**3,617,900**	**2,965,968**
New England	**288,528**	**313,291**	**293,420**	**482,101**	**511,595**	**427,845**
Maine	19,880	22,655	21,897	20,798	22,765	19,034
New Hampshire	10,016	10,221	8,687	16,698	20,539	13,661
Vermont	8,550	8,867	7,613	10,573	11,421	8,266
Massachusetts	178,184	178,712	170,555	295,598	295,692	252,632
Rhode Island	22,860	27,380	27,813	45,062	52,682	49,921
Connecticut	49,018	65,456	56,855	93,379	108,496	84,331
Middle Atlantic	**1,080,958**	**1,132,607**	**1,170,773**	**1,405,456**	**1,361,690**	**1,216,312**
New York	670,129	697,110	685,233	900,118	840,126	760,438
New Jersey	121,953	144,488	166,635	145,810	134,672	127,849
Pennsylvania	288,876	291,009	318,905	359,528	386,892	328,025
East North Central	**452,613**	**471,496**	**517,433**	**745,208**	**759,731**	**587,185**
Ohio	85,610	91,968	72,773	240,073	262,482	170,055
Indiana	34,680	31,921	31,075	50,733	46,899	35,988
Illinois	210,701	197,625	255,474	270,340	259,382	234,166
Michigan	73,471	100,726	85,135	128,933	132,861	102,367
Wisconsin	48,151	49,256	72,976	55,129	58,107	44,609
West North Central	**265,424**	**286,616**	**277,175**	**239,829**	**248,027**	**174,256**
Minnesota	66,721	75,648	69,278	65,031	66,912	48,005
Iowa	52,670	69,222	68,471	35,914	37,628	24,689
Missouri	64,143	60,721	60,293	91,197	95,283	69,300
North Dakota	8,294	8,948	8,239	6,257	4,721	2,207
South Dakota	21,401	11,758	8,839	5,532	4,766	2,908
Nebraska	26,982	36,177	35,239	19,423	18,545	13,976
Kansas	23,213	24,142	26,816	16,475	20,118	13,171
South Atlantic	**222,452**	**229,206**	**194,776**	**258,131**	**262,425**	**206,932**
Delaware	9,149	7,886	8,060	27,658	14,508	17,308
Maryland	68,759	86,610	56,034	60,476	63,100	50,027
Dist. of Columbia	34,323	35,652	32,118	24,800	26,003	24,010
Virginia	23,758	20,273	22,903	32,141	31,227	26,422
West Virginia	11,956	16,778	14,884	29,098	38,978	29,573
North Carolina	15,473	11,807	11,808	28,105	31,216	21,869
South Carolina	19,190	13,278	10,718	14,119	13,189	7,862
Georgia	25,882	18,886	16,655	26,729	27,351	15,269
Florida	13,962	18,036	21,596	15,005	16,853	14,592
East South Central	**71,182**	**60,078**	**59,925**	**74,040**	**73,791**	**57,369**
Kentucky	25,809	18,991	19,504	30,522	30,632	25,152
Tennessee	18,549	18,121	17,327	23,885	21,724	18,865
Alabama	14,580	14,067	12,534	12,185	13,969	8,189
Mississippi	12,244	8,899	10,560	7,448	7,466	5,163
West South Central	**137,205**	**142,827**	**149,709**	**110,086**	**120,350**	**77,786**
Arkansas	13,231	9,728	10,831	11,170	10,247	6,324
Louisiana	26,627	23,881	26,825	28,284	28,893	20,445
Oklahoma	23,389	24,324	20,968	19,010	21,502	10,795
Texas	73,958	84,894	91,085	51,622	59,708	40,222
Mountain	**68,423**	**69,793**	**66,835**	**57,804**	**55,369**	**37,896**
Montana	13,050	10,163	10,643	8,900	6,846	4,319
Idaho	6,440	7,744	7,429	3,484	4,122	1,914
Wyoming	3,852	4,442	6,681	3,797	3,163	2,160
Colorado	27,713	29,844	26,264	27,295	25,977	18,751
New Mexico	4,010	3,291	3,732	2,895	2,364	1,911
Arizona	6,557	7,250	3,813	5,181	4,475	2,168
Utah	5,269	5,284	6,188	10,009	7,380	5,188
Nevada	1,532	1,775	2,085	1,423	1,042	1,485
Pacific	**230,077**	**245,812**	**297,047**	**201,930**	**224,976**	**180,387**
Washington	28,670	29,316	52,855	29,181	30,108	24,591
Oregon	37,381	18,764	24,286	18,256	16,205	11,061
California	164,026	197,732	219,906	154,493	178,663	144,735

higher than, say, in Mississippi, will not only have a greater proportion of reportable income on account of the inclusion of a number of very high individual incomes, but the chances are that it will also have a relatively greater number of reportable incomes. To take another example, everything else being the same, a State where incomes range from $500 to $2,500 is likely to have fewer incomes above $2,000 than the State where incomes range between $1,200 and $5,000. It therefore follows that, to make allowance for the unreported incomes, it is necessary to add to the figures reported amounts of entirely different proportions in the various States.

Unreported Incomes of Entrepreneurs.

To estimate the unreported portion of entrepreneurial income in each State is not an easy matter. With the data at hand, it is possible to arrive only at very rough approximations.

On the basis of the Census reports, careful, though necessarily approximate, estimates have been made of the total number of non-farmer entrepreneurs in each State at the middle of each of the three years covered by our study. The number of returns received from entrepreneurs has then been estimated from the income tax data of the United States Bureau of Internal Revenue. By subtracting the latter series of figures from the former, approximations were obtained for each State of the number of entrepreneurs *not* submitting returns. The next step was to estimate the total income received by those not submitting returns, by multiplying the number of such entrepreneurs by estimates of their average earnings in each year.

While the *Statistics of Income* present a very complete classification of income by sources, they give no indication of the occupation of the individuals submitting the returns. Assuming that all returns come either from employees or entrepreneurs, which is roughly true, an attempt was made to split the total number of returns into the two groups. To approximate the number of returns received in each State from employees, the total income reported as being derived from wages and salaries was divided by the average income per return in the income classes below $10,000. The estimated number of returns received from wage and salary earners was then subtracted from the total number of returns, the dif-

ference presumably being the number of returns received from entrepreneurs.

The average earnings of entrepreneurs not submitting returns were estimated to be slightly above the average earnings of all employees in each State, previously computed.

By adding to the totals reported in the *Statistics of Income* as income derived from "Business" and "Partnerships, etc.," the estimated income of non-farmer entrepreneurs not submitting returns, totals were obtained for each State which showed approximately the relative distribution of the income received by non-farmers from the operation of individual business.

That the results obtained by such a complicated and necessarily crude method are probably not far wrong is shown by the following comparison between the totals for the entire United States, arrived at by adding the individual State estimates for each year, and the national totals based on estimates made by W. I. King for individual industries:

TABLE K.—TOTAL NATIONAL INCOME FROM THE OPERATION BY INDIVIDUALS OF BUSINESS EXCLUSIVE OF AGRICULTURE

	1919	1920	1921
Totals based on W. I. King's Estimates for Individual Industries	$8,116,405,000	$8,326,405,000	$7,720,362,000
Totals obtained by adding State Estimates	8,455,651,000	8,858,489,000	7,696,279,000

Considering the fact that, in the estimates by industries, the separation between current income and surpluses or gains on inventories could not in each case be made with great precision, we may regard the two sets of estimates shown above as remarkably close to each other.

The final estimates of the current income derived in each State from the operation of business by individuals are shown in Table XXXVII. It is of value to note the relative changes in the income of individual entrepreneurs, exclusive of farmers, in the several States during the three years. While the national totals show distinctly the cyclical movement typical of general conditions

TABLE XXXVII.—TOTAL INCOME IN EACH STATE FROM THE OPERATION[a] OF BUSINESS BY INDIVIDUALS, 1919–1920–1921

DOLLARS (000's Omitted)

State and Geographic Division	Total Including Agriculture			Total Exclusive of Agriculture		
	1919	1920	1921	1919	1920	1921
Continental United States	**17,705,661**	**15,650,290**	**11,685,098**	**8,116,405**	**8,326,405**	**7,720,362**
New England	**772,039**	**840,601**	**787,209**	**591,431**	**633,952**	**600,437**
Maine	107,128	106,940	98,279	43,490	48,915	46,710
New Hampshire	42,013	45,627	46,845	26,034	24,998	25,644
Vermont	51,877	65,760	56,476	20,262	22,313	20,117
Massachusetts	401,830	441,679	409,577	363,684	394,011	368,495
Rhode Island	50,838	54,221	49,788	45,715	47,985	45,359
Connecticut	118,353	126,365	126,244	92,246	95,730	94,112
Middle Atlantic	**3,285,350**	**3,475,679**	**3,024,501**	**2,603,821**	**2,753,339**	**2,538,810**
New York	1,960,769	2,000,362	1,821,702	1,621,470	1,618,732	1,555,096
New Jersey	353,392	385,741	333,103	295,186	331,758	299,252
Pennsylvania	971,189	1,089,576	869,696	687,165	802,849	684,462
East North Central	**3,453,089**	**3,150,107**	**2,227,576**	**1,696,793**	**1,741,991**	**1,537,566**
Ohio	771,442	758,944	535,709	406,685	465,321	394,982
Indiana	467,107	389,780	247,774	179,185	199,245	178,004
Illinois	1,203,591	940,776	654,688	712,714	653,159	588,489
Michigan	507,411	533,026	390,147	248,488	267,993	229,024
Wisconsin	503,538	527,681	399,258	147,721	156,273	147,067
West North Central	**2,824,310**	**1,842,119**	**1,072,495**	**877,950**	**874,503**	**770,757**
Minnesota	444,624	308,871	199,412	147,441	153,581	136,871
Iowa	631,412	298,065	167,165	177,202	172,900	130,523
Missouri	579,833	468,050	325,121	244,675	254,064	237,579
North Dakota	186,462	126,442	62,021	30,437	35,940	30,681
South Dakota	250,302	120,898	55,573	48,251	40,653	36,538
Nebraska	324,250	193,535	95,607	99,254	89,070	87,723
Kansas	407,427	326,258	167,596	130,690	128,295	110,842
South Atlantic	**2,158,527**	**1,739,652**	**1,222,066**	**645,435**	**636,903**	**602,053**
Delaware	30,472	25,730	19,424	16,393	14,672	14,471
Maryland	191,560	186,146	149,362	126,698	130,282	126,542
Dist. of Columbia	38,603	39,253	53,416	38,180	38,997	53,248
Virginia	294,854	277,882	186,191	98,374	97,982	88,558
West Virginia	149,825	162,935	125,828	61,701	77,653	65,910
North Carolina	473,771	374,821	279,163	85,011	78,093	71,104
South Carolina	355,807	224,579	119,164	59,137	44,664	35,788
Georgia	505,948	338,569	203,376	105,218	96,763	91,329
Florida	117,887	109,737	86,142	54,723	57,797	55,103
East South Central	**1,351,965**	**1,025,321**	**779,475**	**335,777**	**305,486**	**296,281**
Kentucky	353,510	296,519	212,929	104,165	105,088	100,270
Tennessee	325,916	289,084	224,451	102,014	101,732	93,085
Alabama	318,742	223,663	187,577	66,820	54,814	58,444
Mississippi	353,797	216,055	154,518	62,778	43,852	44,482
West South Central	**2,014,449**	**1,746,640**	**1,070,221**	**580,592**	**590,782**	**521,748**
Arkansas	326,971	256,308	176,052	70,853	62,385	54,995
Louisiana	258,074	193,321	145,659	96,424	97,104	86,765
Oklahoma	425,971	373,190	206,373	117,430	125,426	112,799
Texas	1,003,433	923,821	542,137	295,885	305,867	267,189
Mountain	**716,008**	**622,155**	**465,183**	**224,541**	**214,982**	**229,633**
Montana	103,754	94,595	83,670	33,767	35,311	36,208
Idaho	124,731	104,206	71,649	29,725	24,253	24,395
Wyoming	67,929	50,300	37,566	14,890	14,815	17,143
Colorado	208,153	183,516	139,456	79,673	72,104	86,475
New Mexico	61,297	53,611	38,244	14,334	14,021	14,244
Arizona	56,506	52,945	36,791	21,336	20,170	19,555
Utah	76,546	69,422	46,828	24,237	27,005	25,078
Nevada	17,182	13,560	10,979	6,579	7,413	7,535
Pacific	**1,129,834**	**1,208,016**	**1,036,372**	**560,065**	**574,467**	**623,077**
Washington	249,836	246,058	252,243	117,970	106,444	142,466
Oregon	174,678	172,707	133,318	66,574	67,633	62,845
California	705,320	789,251	650,811	375,521	400,390	417,766

[a] Does not Include Profits due to Changes in Value of Inventories.

in the country during the period, — i.e., a peak in 1920 and a depression in 1921, — the movements in the different sections of the country are not at all similar. We find that at least in three divisions — the New England, Mountain, and Pacific — the total earnings of entrepreneurs in 1921 were not lower than in 1919. As a matter of fact, the Pacific division showed a distinct gain in income from this source in 1921 over 1919. It is, however, most interesting to observe the changes in individual States. Contrary to expectations, the 1920 income of individual entrepreneurs in New York was no higher than in 1919. The situation in Illinois was even more peculiar. Individual entrepreneurs in that State experienced a considerable reduction — 8 per cent — in their 1920 income, as compared with that of 1919. On the other hand, most of the other large States show 1920 to have been a more prosperous year for individual entrepreneurs than 1919. In Pennsylvania, for instance, the 1920 total was about 17 per cent above that of 1919; in Ohio, 14 per cent; and in Massachusetts, 8 per cent.

At least one of the reasons for the differences in the relative earnings of entrepreneurs, which applies particularly to New York and Illinois, is the comparative importance of wholesale trade in these States. It will be recalled that in the depression of 1920–1921, wholesale trade fell off considerably sooner than other business and industrial activities. As a matter of fact, the physical volume of wholesale trade seems to have reached its peak about January 1920; then there began a sharp decline, so that by January 1921 it had fallen over 20 per cent. It appears that, unlike other business, the volume of wholesale trade was higher in 1919 than in 1920. Consequently, in New York and Illinois, the gains made in 1920 by retailers were counterbalanced by the reduction in earnings of wholesalers. The situation in Illinois was undoubtedly complicated by the agricultural depression which began in 1920.

In passing, let us also call attention to the remarkable increase in entrepreneurial earnings in California and Washington. In these two States, the depression of 1921 does not seem to have interfered with the development of trade, as indicated by entrepreneurial earnings. It should, in addition, be noted in this connection that, in the case of California, 1921 showed an increase in practically all our subdivisions of income.

Income Received by Individuals in the Form of Interest.

The income received by individuals in the form of interest on investments has at least one peculiarity which makes it different from any of the other items composing the total income of the people of the United States. While the income from all other sources has a tendency to decrease in times of depression, the total amount of interest on investments does not diminish at such periods. A good share of interest received by individuals is on long-term bonds or notes, which have a definite period of time to run. The amount of such securities outstanding at any time cannot be readily reduced, even though the investors may themselves be pressed for money.

In times of depression, a great number of persons are compelled to dispose of their securities. This naturally causes a radical redistribution in the holdings and, consequently, in the amounts of income derived by different groups from interest. As depressions do not affect the entire country at the same time, it would follow that the geographic redistribution of interest is considerable.

The only data available relative to the geographic distribution of income from interest are those appearing in connection with the Federal income tax returns. Unfortunately, these figures do not include interest on tax-exempt securities, which constitutes a very important part of the total interest received by individuals. In computing the final estimates of this item, it has been assumed that, as in the case of dividends, the unreported part had the same geographic distribution as the portion accounted for on the income tax returns. It is to be regretted that such an assumption unavoidably introduces the possibility of error. The final estimates are shown in Table XXXVI.

As might be expected, the income from investments in the older and wealthier sections of the country is greater than in the newer and the poorer sections. Investments are primarily based on past income, and represent savings. Therefore, only where the income is high enough to make it possible to save, can the returns on investment be high. About two-thirds of the total amount of interest on investments is derived by those residing in the States included in the three eastern divisions heading the list in the table.

Rent.

The income on property obtained in the form of rents has been divided for purposes of this study into two parts:

1. Residential rent.
2. Rents on mercantile and industrial buildings and land, etc., rented from individuals.

On the basis of the data of the 1920 Census, it has been computed that from 45.5 per cent to 77.5 per cent of the urban homes in the different States are rented.[1] The average percentage for the Continental United States of all homes that are rented is about 63. It is obvious that under such conditions the rent bill for urban homes must be considerable, and that, even after deducting the usual expenses involved in the maintenance and ownership of real property, the net income from residential rent presents an item which cannot be neglected in the construction of our State estimates.

Rough estimates of income from residential rent for the United States have been made by W. I. King, who places this income at about $1,587,000,000 in 1919, and $1,922,000,000 and $2,347,000,000 in 1920 and 1921, respectively. However, no data can be found giving any indication of the size of this item in the individual States. From the Census figures, it is an easy matter to estimate the number of rented homes, but no statistics have ever been compiled showing the average rent per home in the different States.

Even as far back as 1848, John Stuart Mill stated that "no part of a person's expenditure is a better criterion of his means, or bears on the whole, more nearly the same proportion to them" than house rent.[2] Mill's observation has since been verified by others. In a recent study of the apportionment of family budgets of different sizes, W. I. King finds that, unlike other items of the budget, there is a strong tendency for the percentage spent on housing to be a constant. It is of course not true that the percentage of the total income spent for rent is the same for each individual or family. Nevertheless, it seems safe to assume on the strength of the above findings that, on the whole, when dealing with aggregates, the amount of income is a good indicator of the

[1] See Table LII, p. 298.
[2] *Principles of Political Economy*, Ashley edition, p. 834.

amount expended for rent. Going on this assumption, a relative index of urban residential rent has been computed for each State on the basis of preliminary estimates of the total income received during the three years by the urban population, and the percentages of the total urban homes which are rented.[1] The preliminary estimates of income entering into this index cover all current urban income, less the portion representing residential rent. It is obvious that on the assumption that expenses for rent bear a constant ratio to income, our preliminary estimates of income are as good indicators of residential rent as the final totals would be, if such were available at this stage. The introduction into the index of the percentages of rented homes is necessary in order to allow for the difference in the proportion of rented urban homes in the different States.

The indices described above were employed in distributing by States the national totals of income from residential rent, which are shown in a previous paragraph.

The income received by individuals from non-residential rent, which also includes agricultural rent received by non-farmers, was distributed on the basis of the data appearing in the *Statistics of Income* of the United States Bureau of Internal Revenue under the heading "Rents and Royalties."

Gains or Losses on Inventories.

One hears a great deal about the fluctuations in the earnings of wage earners. However, few people realize that the earnings of entrepreneurs and property holders fluctuate even more violently. For the period covered by this study, the deviations from the three-year average of the totals of income from wages and salaries received by all employees each year were 6 per cent, 12 per cent, and 6 per cent, respectively. For the same years, the deviations from the average total entrepreneurial and property income were 16 per cent, 22 per cent, and 37 per cent, respectively. Of course, this does not mean that, in general, the changes in the total income are not felt more by wage and salary earners than by entrepreneurs. Quite the contrary is true. The entrepreneurial and property incomes are usually comprised of two parts: the amount received

[1] See Table LII, p. 298.

currently, and the amount accrued, but not received, in the form of a book gain or loss on the value of the property or other inventories. Needless to say, in most cases the second part of entrepreneurial income does not affect the living conditions of individual entrepreneurs. On the other hand, the whole of wages and salaries is received as *current* income, and a change therein is usually of great immediate moment.

As pointed out in connection with our discussion of agricultural income, there are certain comparisons which can be better made on the basis of current income only — leaving out of consideration gains and losses on inventory. However, for other purposes it is highly desirable to have available complete data of income, and hence it is necessary to calculate the income due to surpluses and changes in the value of inventories.

In this, as in previously mentioned instances, reliable data are more abundant for the nation as a whole than for the individual States. Consequently, the national estimates prepared by W. I. King, which are based on a thorough study of the value of securities at the beginning and at the end of each year, have been used as the basis for the State estimates, the national totals being distributed in accordance with a set of indices built up from existing data.

Since, with the exception of agriculture, there is no record of the distribution of ownership of the total property devoted to each industry, it is impracticable to compute inventory changes by States separately for individual industries. Even for the industries covered by the Census and in the reports of other governmental agencies, only the physical location of the properties is given geographically. But, to know that the mining properties in Pennsylvania, for example, represent about 18 per cent of the total value of mines, quarries, and oil wells of the country, tells us very little of the share of the mining industries owned by residents of the State of Pennsylvania. Even assuming that changes in the value of inventories are proportional to the total value of the property, the location of the properties cannot help us in determining the amount of the income derived by individuals in each State from such inventory changes.

To arrive at a fair distribution by States of the total income

from surpluses or gains and losses on inventories, the entire field was divided into the following four groups:

1. Gains or losses on farm inventories.[1]
2. Surpluses or gains on inventories of all corporations, exclusive of agriculture.
3. Gains on inventories in non-corporate business, exclusive of agriculture.
4. Gain in the value of realty used for residential, business, and industrial purposes, not elsewhere included.

To distribute by States the surpluses and inventory gains of corporations, relative indices were built up for each of the three years showing the distribution of ownership of corporation securities, as indicated by the income tax data on dividends and interest. Obviously, the security holders owned the corporations, and changes in the value of the corporations formed either a gain or loss to the security holders.

The gains on inventories of non-corporate enterprises were estimated on the basis of an index representing the distribution of the total current income received by the inhabitants of each State, the assumption being that the capital invested in individual businesses which cater chiefly to the local population, would, on the whole, be proportional to the income of the people available for the purchase of consumption goods. It is, of course, true that in large industrial centers, like New York for instance, there are a great number of very large incomes, so that there is a surplus over the amount usually spent for consumption goods. But, then, the per capita investment in individual business is also likely to be higher in such places, and, consequently, our assumption would, in the main, hold true.

What is true of the investments in business operated by individuals serving the immediate population in each section of the country is also largely true of the value of realty used for residential and other purposes. The income of the people is undoubtedly the chief determining factor. It is quite obvious that, in a place where poor people congregate, the value of the realty cannot be very great per person. On the other hand, in rich districts,

[1] See Chapter IX, pp. 183-189.

not only will the residential property be of high value, but also the business buildings will be more substantial and attractive and, hence, more valuable.

In computing the index for the distribution of the gain in the value of realty used for residential purposes and realty rented from individuals for business and industrial purposes, the following three factors were combined for each State by careful weighting:

1. Total current income of urban population.
2. Total current income of farm population.
3. Total income from rents as reported on the income tax returns.

The final estimates of the total surplus and inventory gains on all property are recorded in the summary tables, numbers XXXIX, XL, and XLI.

Total Entrepreneurial and Property Income.

Table XXXVIII presents the final estimates for the three years of the income of all entrepreneurs and property holders in each State. It may be useful to sum up briefly the items entering into these totals, which are as follows:

1. Income of farmers.
2. Income of other entrepreneurs from non-corporate enterprises.
3. Interest received by individuals.
4. Dividends received by individuals.
5. Rents received by individuals.
6. Surpluses and gains on inventory values.

Although most of the entrepreneurial and property income from agriculture goes to farmers, and is included in item number 1 above, part of it, as will be recalled, has been shown to go to non-farmers, and has been distributed by States with items 2 to 5 — income of non-farmer entrepreneurs, interest, dividends, and rent. A fact worthy of note in this connection is the extent of corporate enterprise in agriculture. According to the statistics of the United States Bureau of Internal Revenue,[1] over 6,000 agricultural corporations filed returns for 1922. The fair value

[1] *Statistics of Income*, United States Internal Revenue, 1920, p. 32.

TABLE XXXVIII.—TOTAL INCOME OF ALL ENTREPRENEURS AND OTHER PROPERTY HOLDERS IN EACH STATE, 1919–1920–1921

Dollars (000's Omitted)

State and Geographic Division	Totals Including Surpluses and Inventory Gains			Current Income (Totals, Exclusive of Inventory Gains)		
	1919	1920	1921	1919	1920	1921
Continental United States	**26,924,107**	**25,063,297**	**44,413,083**	**27,983,037**	**26,841,334**	**22,722,055**
New England	**1,671,318**	**1,236,589**	**4,462,254**	**1,821,207**	**2,027,671**	**1,923,779**
Maine	157,723	142,326	335,756	164,253	173,766	162,932
New Hampshire	72,969	62,916	202,038	82,190	92,270	85,725
Vermont	65,188	104,945	151,215	78,220	94,399	80,930
Massachusetts	958,408	654,545	2,528,054	1,034,226	1,117,666	1,066,953
Rhode Island	133,165	70,445	408,367	143,489	166,463	165,737
Connecticut	283,865	201,412	836,824	318,829	383,107	361,502
Middle Atlantic	**6,275,852**	**5,413,745**	**14,966,538**	**6,749,027**	**7,246,281**	**6,953,193**
New York	3,771,643	2,934,982	8,868,830	4,103,072	4,292,087	4,209,493
New Jersey	736,540	714,362	1,815,064	758,990	830,753	823,033
Pennsylvania	1,767,669	1,764,401	4,282,644	1,886,965	2,123,441	1,920,667
East North Central	**5,248,551**	**5,030,263**	**8,728,622**	**5,541,399**	**5,369,779**	**4,372,785**
Ohio	1,320,829	929,732	2,260,955	1,297,704	1,374,289	1,020,034
Indiana	744,517	499,621	672,558	645,893	581,644	423,337
Illinois	1,933,205	1,673,154	3,282,409	2,126,989	1,798,879	1,619,700
Michigan	700,385	1,008,595	1,491,974	816,468	923,652	728,925
Wisconsin	549,615	919,161	1,020,726	654,285	691,315	580,789
West North Central	**4,179,138**	**3,993,750**	**2,979,070**	**3,783,538**	**2,869,054**	**1,972,850**
Minnesota	730,863	854,292	780,788	641,622	519,619	394,374
Iowa	1,106,574	570,245	296,175	826,414	511,531	340,610
Missouri	799,938	788,428	921,603	838,323	752,080	592,640
North Dakota	107,756	309,268	134,757	210,837	151,155	82,374
South Dakota	427,499	315,701	51,506	298,618	154,183	79,814
Nebraska	623,684	356,586	338,984	433,124	310,528	194,212
Kansas	382,824	799,230	456,257	534,600	469,958	288,826
South Atlantic	**2,851,342**	**2,292,774**	**3,632,656**	**2,988,933**	**2,608,104**	**2,037,374**
Delaware	57,974	29,467	122,887	75,361	56,741	53,607
Maryland	340,753	292,989	714,970	375,312	406,100	320,132
Dist. of Columbia	134,176	103,360	367,713	132,402	144,773	160,906
Virginia	343,265	444,765	533,043	402,483	386,490	298,246
West Virginia	193,678	272,916	443,519	224,172	264,747	220,063
North Carolina	554,106	416,108	559,329	556,482	454,293	354,977
South Carolina	479,755	196,879	149,873	426,178	276,973	162,357
Georgia	605,494	291,527	420,762	626,149	442,247	303,164
Florida	142,141	244,763	320,560	170,394	175,740	163,922
East South Central	**1,451,610**	**979,007**	**1,780,013**	**1,635,654**	**1,305,720**	**1,069,495**
Kentucky	336,141	223,432	545,533	452,424	396,103	311,193
Tennessee	329,113	372,146	499,617	405,556	364,510	314,594
Alabama	361,367	263,570	415,024	377,925	293,905	246,498
Mississippi	424,991	119,859	319,839	399,749	251,202	197,210
West South Central	**2,976,517**	**2,543,306**	**2,723,587**	**2,650,172**	**2,482,929**	**1,699,796**
Arkansas	328,847	286,263	305,577	386,181	305,102	228,201
Louisiana	397,349	230,901	455,239	359,555	303,115	253,973
Oklahoma	683,463	635,149	470,628	577,237	546,800	311,995
Texas	1,566,858	1,390,993	1,492,143	1,327,199	1,327,912	905,627
Mountain	**591,959**	**1,065,656**	**1,167,104**	**950,266**	**859,539**	**689,231**
Montana	-28,484	107,242	140,477	142,573	126,621	117,318
Idaho	196,164	171,596	139,672	145,960	126,578	91,877
Wyoming	21,041	46,724	92,810	84,313	66,740	57,508
Colorado	215,591	385,453	422,651	296,596	281,313	228,068
New Mexico	34,112	90,706	87,507	75,258	65,955	51,870
Arizona	87,215	125,291	116,627	81,507	78,725	54,114
Utah	69,482	115,686	139,998	101,092	91,891	69,518
Nevada	-3,162	22,958	27,362	22,967	19,716	18,938
Pacific	**1,677,820**	**2,508,207**	**3,973,239**	**1,862,841**	**2,072,257**	**2,003,552**
Washington	406,376	404,803	761,269	360,548	363,647	429,748
Oregon	271,146	343,986	363,627	263,556	237,498	207,829
California	1,000,298	1,759,418	2,848,343	1,236,737	1,471,112	1,365,975

TABLE XXXIX.—TOTAL INCOME DERIVED BY INDIVIDUALS IN EACH STATE FROM SPECIFIED SOURCES, 1919

DOLLARS (000's Omitted)

STATE AND GEOGRAPHIC DIVISION	ALL SOURCES	CURRENT INCOME			SURPLUSES AND GAINS ON INVENTORIES[c]
		WAGES AND SALARIES	ENTREPRENEURIAL AND PROPERTY INCOME[a]	MISCELLANEOUS INCOMES[b]	
Continental United States	66,195,700	34,769,362	27,983,037	4,502,231	-1,058,930
New England	5,355,117	3,313,256	1,821,207	370,543	-149,889
Maine	427,580	235,075	164,253	34,782	-6,530
New Hampshire	260,759	164,273	82,190	23,517	-9,221
Vermont	175,578	94,744	78,220	15,646	-13,032
Massachusetts	3,057,076	1,902,544	1,034,226	196,124	-75,818
Rhode Island	454,983	288,326	143,489	33,492	-10,324
Connecticut	979,141	628,294	318,829	66,982	-34,964
Middle Atlantic	17,509,177	10,154,284	6,749,027	1,079,041	-473,175
New York	9,241,601	5,016,170	4,103,072	453,788	-331,429
New Jersey	2,377,239	1,464,335	758,990	176,364	-22,450
Pennsylvania	5,890,337	3,673,779	1,886,965	448,889	-119,296
East North Central	14,596,747	8,281,806	5,541,399	1,066,390	-292,848
Ohio	3,989,379	2,384,508	1,297,764	284,042	23,065
Indiana	1,780,646	899,235	645,893	136,894	98,624
Illinois	4,989,044	2,734,692	2,126,989	321,147	-193,784
Michigan	2,407,180	1,507,358	816,468	199,437	-116,083
Wisconsin	1,430,498	756,013	654,285	124,870	-104,670
West North Central	7,971,594	3,236,437	3,783,538	556,019	395,600
Minnesota	1,510,046	661,740	641,622	117,443	89,241
Iowa	1,818,461	592,756	826,414	119,131	280,160
Missouri	1,900,781	968,579	838,323	132,264	-38,385
North Dakota	240,332	111,709	210,837	20,867	-103,081
South Dakota	576,122	122,948	298,618	25,675	128,881
Nebraska	994,081	311,792	433,124	58,605	190,560
Kansas	931,771	466,913	534,600	82,034	-151,776
South Atlantic	6,310,287	3,026,348	2,988,933	432,597	-137,591
Delaware	154,257	85,509	75,361	10,774	-17,387
Maryland	955,090	542,310	375,312	72,027	-34,559
Dist. of Columbia	437,608	284,939	132,402	18,493	1,774
Virginia	913,918	503,820	402,483	66,833	-59,218
West Virginia	640,929	397,203	224,172	50,048	-30,494
North Carolina	981,805	350,504	556,482	77,195	-2,376
South Carolina	733,866	212,057	426,178	42,074	53,577
Georgia	1,113,237	441,323	626,149	66,420	-20,655
Florida	379,577	208,703	170,394	28,733	-28,253

TABLE XXXIX.—TOTAL INCOME DERIVED BY INDIVIDUALS IN EACH STATE FROM SPECIFIED SOURCES, 1919—*Continued*

DOLLARS (000's Omitted)

STATE AND GEOGRAPHIC DIVISION	ALL SOURCES	CURRENT INCOME			SURPLUSES AND GAINS ON INVENTORIES [c]
		WAGES AND SALARIES	ENTREPRENEURIAL AND PROPERTY INCOME [a]	MISCELLANEOUS INCOMES [b]	
East South Central	**2,998,710**	**1,331,490**	**1,635,654**	**215,610**	**-184,044**
Kentucky	831,353	430,620	452,424	64,592	-116,283
Tennessee	765,691	374,494	405,556	62,086	-76,445
Alabama	766,338	353,470	377,925	51,501	-16,558
Mississippi	635,328	172,906	399,749	37,431	25,242
West South Central	**5,271,687**	**1,979,618**	**2,650,172**	**315,552**	**326,345**
Arkansas	577,951	208,258	386,181	40,846	-57,334
Louisiana	817,520	360,266	359,555	59,905	37,794
Oklahoma	1,178,630	425,838	577,237	69,329	106,226
Texas	2,697,586	985,256	1,327,199	145,472	239,659
Mountain	**1,816,791**	**1,074,510**	**950,266**	**150,322**	**-358,307**
Montana	177,105	181,521	142,573	24,068	-171,057
Idaho	321,897	107,087	145,960	18,646	50,204
Wyoming	107,566	77,380	84,313	9,145	-63,272
Colorado	576,339	315,317	296,596	45,431	-81,005
New Mexico	129,402	85,240	75,258	10,050	-41,146
Arizona	240,596	137,491	81,507	15,890	5,708
Utah	219,918	127,564	101,092	22,872	-31,610
Nevada	43,968	42,910	22,967	4,220	-26,129
Pacific	**4,365,590**	**2,371,613**	**1,862,841**	**316,157**	**-185,021**
Washington	1,044,184	573,761	360,548	64,047	45,828
Oregon	590,566	280,449	263,556	38,971	7,590
California	2,730,840	1,517,403	1,238,737	213,139	-238,439

[a] Includes Interest, Dividends, Contract Rent, and Income from Business Operations by Individuals.

[b] Includes Income from Urban Cows, Gardens, and Poultry; Imputed Rent of Owned Urban Homes and Farmers' Homes; and Imputed Interest on Value of Durable Consumption Goods in Hands of Consumers.

[c] Includes Surpluses or Gains on Inventories in Business and Industry and Gains in Value of Residential Realty.

TABLE XL.—TOTAL INCOME DERIVED BY INDIVIDUALS IN EACH STATE FROM SPECIFIED SOURCES, 1920

DOLLARS (000's Omitted)

STATE AND GEOGRAPHIC DIVISION	ALL SOURCES	CURRENT INCOME			SURPLUSES AND GAINS ON INVENTORIES[c]
		WAGES AND SALARIES	ENTREPRENEURIAL AND PROPERTY INCOME[a]	MISCELLANEOUS INCOMES[b]	
Continental United States	**72,380,365**	**41,560,157**	**26,841,334**	**5,756,911**	**−1,778,037**
New England	**5,855,167**	**4,134,927**	**2,027,671**	**483,651**	**−791,082**
Maine	472,572	285,639	173,766	44,607	−31,440
New Hampshire	291,804	198,652	92,270	30,236	−29,354
Vermont	236,472	111,621	94,399	19,906	10,546
Massachusetts	3,353,710	2,441,830	1,117,666	257,335	−463,121
Rhode Island	460,061	345,666	166,463	43,950	−96,018
Connecticut	1,040,548	751,519	383,107	87,617	−181,695
Middle Atlantic	**19,072,103**	**12,258,491**	**7,246,281**	**1,399,867**	**−1,832,536**
New York	9,649,309	6,124,529	4,292,087	589,798	−1,357,105
New Jersey	2,659,669	1,715,302	830,753	230,005	−116,391
Pennsylvania	6,763,125	4,418,660	2,123,441	580,064	−359,040
East North Central	**16,395,804**	**9,996,982**	**5,369,779**	**1,368,559**	**−339,516**
Ohio	4,093,695	2,799,140	1,374,289	364,823	−444,557
Indiana	1,813,639	1,136,634	581,644	177,384	−82,023
Illinois	5,420,874	3,340,511	1,798,879	407,209	−125,725
Michigan	3,092,700	1,824,778	923,652	259,327	84,943
Wisconsin	1,974,896	895,919	691,315	159,816	227,846
West North Central	**8,471,843**	**3,779,339**	**2,869,054**	**698,754**	**1,124,696**
Minnesota	1,770,205	766,911	519,619	149,002	334,673
Iowa	1,419,038	699,652	511,531	149,141	58,714
Missouri	2,117,708	1,159,932	752,080	169,348	36,348
North Dakota	461,635	126,367	151,155	26,000	158,113
South Dakota	483,850	137,726	154,183	30,423	161,518
Nebraska	783,552	354,294	310,528	72,672	46,058
Kansas	1,435,855	534,457	469,958	102,168	329,272
South Atlantic	**6,336,442**	**3,498,719**	**2,608,104**	**544,949**	**−315,330**
Delaware	131,746	89,210	56,741	13,069	−27,274
Maryland	1,021,707	636,223	406,100	92,495	−113,111
Dist. of Columbia	444,319	317,415	144,773	23,544	−41,413
Virginia	1,074,823	549,214	386,490	80,844	58,275
West Virginia	861,901	523,980	264,747	65,005	8,169
North Carolina	919,973	405,661	454,293	98,204	−38,185
South Carolina	499,409	249,370	276,973	52,660	−80,094
Georgia	870,656	496,240	442,247	82,889	−150,720
Florida	511,908	230,906	175,740	36,239	69,023

TABLE XL.—TOTAL INCOME DERIVED BY INDIVIDUALS IN EACH STATE FROM SPECIFIED SOURCES, 1920—*Continued*

DOLLARS (000's Omitted)

STATE AND GEOGRAPHIC DIVISION	ALL SOURCES	CURRENT INCOME			SURPLUSES AND GAINS ON INVENTORIES [c]
		WAGES AND SALARIES	ENTREPRENEURIAL AND PROPERTY INCOME [a]	MISCELLANEOUS INCOMES [b]	
East South Central	2,804,167	1,555,750	1,305,720	269,410	−326,713
Kentucky	843,942	538,676	396,103	81,834	−172,671
Tennessee	883,568	433,540	364,510	77,882	7,636
Alabama	724,602	396,810	293,905	64,222	−30,335
Mississippi	352,055	186,724	251,202	45,472	−131,343
West South Central	5,233,444	2,292,405	2,482,929	397,733	60,377
Arkansas	564,597	229,018	305,102	49,316	−18,839
Louisiana	742,918	434,694	303,115	77,323	−72,214
Oklahoma	1,200,800	479,203	546,800	86,448	88,349
Texas	2,725,129	1,149,490	1,327,912	184,646	63,081
Mountain	2,501,335	1,248,172	859,539	187,507	206,117
Montana	336,561	199,542	128,621	29,777	−21,379
Idaho	311,359	116,885	126,578	22,878	45,018
Wyoming	156,891	98,571	66,740	11,596	−20,016
Colorado	817,918	374,985	281,313	57,480	104,140
New Mexico	200,925	97,995	65,955	12,224	24,751
Arizona	306,897	161,600	78,725	20,006	46,566
Utah	291,996	148,083	91,891	28,227	23,795
Nevada	78,788	50,511	19,716	5,319	3,242
Pacific	5,710,060	2,795,372	2,072,257	406,481	435,950
Washington	1,086,081	603,322	363,647	77,956	41,156
Oregon	700,560	308,761	237,498	47,813	106,488
California	3,923,419	1,883,289	1,471,112	280,712	288,306

[a] Includes Interest, Dividends, Contract Rent, and Income from Business Operations by Individuals.

[b] Includes Income from Urban Cows, Gardens, and Poultry; Imputed Rent of Owned Urban Homes and Farmers' Homes; and Imputed Interest on Value of Durable Consumption Goods in Hands of Consumers.

[c] Includes Surpluses or Gains on Inventories in Business and Industry and Gains in Value of Residential Realty.

TABLE XII.—TOTAL INCOME DERIVED BY INDIVIDUALS IN EACH STATE FROM SPECIFIED SOURCES, 1921

DOLLARS (000's Omitted)

STATE AND GEOGRAPHIC DIVISION	ALL SOURCES	CURRENT INCOME			SURPLUSES AND GAINS ON INVENTORIES [c]
		WAGES AND SALARIES	ENTREPRENEURIAL AND PROPERTY INCOME [a]	MISCELLANEOUS INCOMES [b]	
Continental United States	**84,426,667**	**34,700,877**	**22,722,055**	**5,312,707**	**21,691,028**
New England	**8,129,278**	**3,231,649**	**1,923,779**	**435,375**	**2,538,475**
Maine	616,055	238,993	162,932	41,306	172,824
New Hampshire	389,944	160,705	85,725	27,201	116,313
Vermont	261,569	92,361	80,930	17,993	70,285
Massachusetts	4,688,916	1,927,457	1,066,953	233,405	1,461,101
Rhode Island	733,091	285,126	165,737	39,598	242,630
Connecticut	1,439,703	527,007	361,502	75,872	475,322
Middle Atlantic	**26,496,647**	**10,252,722**	**6,953,193**	**1,277,387**	**8,013,345**
New York	14,802,057	5,387,336	4,209,493	545,891	4,659,337
New Jersey	3,403,385	1,383,625	823,033	204,696	992,031
Pennsylvania	8,291,205	3,481,761	1,920,667	526,800	2,361,977
East North Central	**17,821,653**	**7,840,634**	**4,372,785**	**1,252,397**	**4,355,837**
Ohio	4,653,438	2,066,060	1,020,034	326,423	1,240,921
Indiana	1,721,832	888,349	423,337	160,925	249,221
Illinois	6,579,785	2,910,080	1,619,700	387,296	1,662,709
Michigan	2,990,032	1,268,181	728,925	229,877	763,049
Wisconsin	1,876,566	707,964	580,789	147,876	439,937
West North Central	**7,020,690**	**3,380,261**	**1,972,850**	**661,359**	**1,006,220**
Minnesota	1,592,231	671,477	394,374	139,966	386,414
Iowa	1,058,327	619,691	340,610	142,461	−44,435
Missouri	2,134,004	1,054,598	592,640	157,803	328,963
North Dakota	273,698	114,188	82,374	24,753	52,383
South Dakota	201,737	120,953	79,814	29,278	−28,308
Nebraska	727,072	317,910	194,212	70,178	144,772
Kansas	1,033,621	481,444	288,826	96,920	166,431
South Atlantic	**7,091,482**	**2,959,841**	**2,037,374**	**498,985**	**1,595,282**
Delaware	202,483	67,656	53,607	11,940	69,280
Maryland	1,348,076	546,246	320,132	86,860	394,838
Dist. of Columbia	702,520	310,442	160,906	24,365	206,807
Virginia	1,091,827	481,798	298,246	76,986	234,797
West Virginia	886,882	384,574	220,063	58,789	223,456
North Carolina	981,324	335,674	354,977	86,321	204,352
South Carolina	404,883	208,984	162,357	46,026	−12,484
Georgia	923,159	428,338	303,164	74,059	117,598
Florida	550,328	196,129	163,922	33,639	156,638

TABLE XLI.—TOTAL INCOME DERIVED BY INDIVIDUALS IN EACH STATE FROM SPECIFIED SOURCES, 1921—*Continued*

DOLLARS (000's Omitted)

East South Central	3,380,325	1,354,599	1,069,495	245,713	710,518
Kentucky	1,103,548	481,103	311,193	76,912	234,340
Tennessee	958,765	387,480	314,594	71,668	185,023
Alabama	801,028	329,630	246,498	56,374	168,526
Mississippi	516,984	156,386	197,210	40,759	122,629
West South Central	5,169,189	2,076,081	1,699,796	369,521	1,023,791
Arkansas	551,934	201,081	228,201	45,276	77,376
Louisiana	893,168	369,453	253,973	68,476	201,266
Oklahoma	968,289	419,220	311,995	78,441	158,633
Texas	2,755,798	1,086,327	905,627	177,328	586,516
Mountain	2,419,148	1,075,875	689,231	176,169	477,873
Montana	325,544	157,548	117,318	27,519	23,159
Idaho	266,721	105,571	91,877	21,478	47,795
Wyoming	194,189	89,911	57,508	11,468	35,302
Colorado	823,172	345,045	228,088	55,476	194,563
New Mexico	188,314	88,869	51,870	11,938	35,637
Arizona	254,923	120,835	54,114	17,461	62,513
Utah	293,545	127,803	69,518	25,744	70,480
Nevada	72,740	40,293	18,938	5,085	8,424
Pacific	6,898,255	2,529,215	2,003,552	395,801	1,969,687
Washington	1,316,189	476,978	429,748	77,942	331,521
Oregon	677,473	268,073	207,829	45,773	155,798
California	4,904,593	1,784,164	1,365,975	272,086	1,482,368

[a] Includes Interest, Dividends, Contract Rent, and Income from Business Operations by Individuals.

[b] Includes Income from Urban Cows, Gardens, and Poultry; Imputed Rent of Owned Urban Homes and Farmers' Homes; and Imputed Interest on Value of Durable Consumption Goods in Hands of Consumers.

[c] Includes Surpluses or Gains on Inventories in Business and Industry and Gains in Value of Residential Realty.

of the capital stock of these corporations was nearly $1,000,000,000. The net income of these corporations in 1920 was $71,000,000.[1]

The summary figures showing entrepreneurial and property income (Table XXXVIII), present some very interesting facts about the industrial conditions of the country in 1919, 1920, and 1921. First of all, comparing the national totals in the two main sections of the table, we find that, while the current income of entrepreneurs, or the income disbursed, was highest in 1919, the total share of entrepreneurs, including changes in surplus and inventory values, was highest in 1921. In other words, it appears that, while the property holders had reason to complain about the current

[1] *Statistics of Income*, United States Bureau of Internal Revenue, 1920, p. 9.

income they received in 1921, their total net income was actually increasing at a very rapid rate,—so much so, that in that year it was just about twice as much as the amount actually taken out of business. While the same condition as shown for the country as a whole applies in a general way to most of the States, some show individual differences in this respect. Thus, in the agricultural States, the 1921 inventory gains were not as high as in the other States. In the West North Central States, owing to losses on agricultural inventories, the total gains amounted to only about one-third of the current income. In Iowa and South Dakota, the total net income was smaller than the current income, showing that the net changes in inventory values were negative amounts. The same is true of South Carolina.

A Comparison of the Geographical Distributions of Total Entrepreneurial and Property Income and Total Income from Wages and Salaries.

What was the relative importance of wages and salaries as compared with the entrepreneurial income in the different sections of the country? The following percentages, representing total wages and salaries and total current entrepreneurial and property income in each of the geographic divisions, are based on the 1919 figures, on the assumption that 1919 is the most representative of the three years:

TABLE L.—PERCENTAGE OF TOTAL WAGES AND SALARIES AND PERCENTAGE OF TOTAL CURRENT ENTREPRENEURIAL AND PROPERTY INCOME FROM BUSINESS AND INDUSTRY IN EACH OF THE GEOGRAPHIC DIVISIONS, 1919.

Geographic Divisions	Wages and Salaries	Current Entrepreneurial and Property Income
Continental United States	100.0	100.0
New England	9.5	6.5
Middle Atlantic	29.2	24.1
East North Central	23.8	20.0
West North Central	9.3	13.5
South Atlantic	8.7	10.7
East South Central	3.8	5.6
West South Central	5.7	9.5
Mountain	3.1	3.4
Pacific	6.8	6.6

It appears that the geographic distribution of income from wages and salaries is not at all the same as that of entrepreneurial and property income. As might be expected, the agricultural sections of the Middle West and the South get higher shares in the total entrepreneurial and property income than in the total wage and salary bill of the country. The reverse is true in the manufacturing sections of the United States where, although individually entrepreneurs get higher incomes than in agricultural districts, their number is relatively small, as compared with the number of wage and salaried workers. New England, for instance, accounts for 9.5 per cent of the total wages and salaries, but its inhabitants receive only 6.5 per cent of the total entrepreneurial and property income. In the relative importance of the income from the two sources, the Mountain and Pacific States typify almost perfectly average conditions for the United States as a whole. In these States, the percentages of the national total representing wages and salaries are practically the same as those representing entrepreneurial and property income.

The complete correspondence in the Mountain division between the percentage representing total population, and that representing total wages and salaries, has already been pointed out in the chapter summing up wages and salaries (see p. 113). It therefore appears that the Mountain States represent the United States' average conditions with respect to the relationship between the total population, the total income of entrepreneurs and property holders, and the total income from wages and salaries.

The comparison of the percentages given in the above table does not, of course, cast any light upon the relative economic welfare of entrepreneurs and wage earners in the different parts of the country. To measure that, other factors, such as the number of wage earners and the number of entrepreneurs, would have to be taken into consideration.

In passing, let us also note the effect of the 1920-1921 depression upon the entrepreneurial and property income of the population in the different sections of the country. A glance at the figures of Table XXXVIII shows that the depression was to a large extent agricultural. The income figures for both the New England and the Middle Atlantic States show 1920 to have been consider-

ably higher than 1919. Moreover, the current income of the entrepreneurs and property holders in these two divisions in 1921 was also higher than in 1919. In the other divisions, with the exception of the Pacific, 1919 was by far the highest year with respect to current entrepreneurial and property income. The slump in agricultural prices already began to tell in 1920, but the brunt of the depression was not felt until 1921. The non-agricultural income, of course, tends to temper considerably the differences in the figures for the three years, but even so, the divergence in the total entrepreneurial and property income between 1919 and 1921 in some of the States is enormous. For the entire West North Central division, the income dropped from $3,783,000,000 in 1919 to $1,973,000,000 in 1921, or 48 per cent. In South Dakota alone, it dropped from $299,000,000 to about $80,000,000, or 73 per cent.

MISCELLANEOUS INCOMES

In this report, as well as in the other reports of the National Bureau of Economic Research dealing with the income of the people of the United States, only money income, or income upon which it is possible to place a money value, has been considered. No attempt has been made to compute the value of the free goods which the American people enjoy, nor has it been practicable to compute the income derived from the work of housewives or other members of the household performed in the interest of the family or home, and for which no pecuniary remuneration is received. The question as to which items should, or should not, be included in the computation of the national income is, of course, not easy to settle. The answer depends largely upon what the totals are expected to show and upon the use to which they are to be put. Even if it were possible to calculate with exactitude every item contributing to the income of the people, no two investigators would probably arrive at the same final results. There would be some items which would be included by one and not by the other. There is, however, one point on which there can be no disagreement, and that is, that income, though measured in money, does not necessarily coincide with the amount of money actually received by the various individuals concerned. The services of persons or

of goods constitute income just as much as if there were a money transaction in the matter.

In primitive society, where practically all production, such as there was, was for home consumption, and the exchange of goods or services was a relatively minor factor in the economic life of the people, money had no place. Nevertheless, the people had income. Even in modern times, the use of money in some communities is rather limited, and yet such communities may obtain relatively greater income than some of the more industrialized communities where money income is received exclusively. As the economic life of the people becomes more complicated, the portion of the total income of the people which is received in the form of money or negotiable credits becomes greater. However, it seems that there will always be miscellaneous items of income received from other than the usual channels of business and industry, accruing in the form of commodities or services, for which, whenever practicable, allowance will have to be made in the estimates of total income.

In the following paragraphs, an attempt is made to cover briefly several of the miscellaneous items upon which a money value is commonly placed, which have been included in the final totals of this report in addition to the money income discussed under wages and salaries, and entrepreneurial and property receipts.

Urban Gardens and Poultry.

In small places it is quite customary for the people to cultivate vegetable gardens or to keep poultry. While the produce from such gardens and poultry is chiefly for home consumption, the supplementary income derived therefrom is not negligible. According to W. I. King's estimates, in 1919 the income from urban poultry and gardens amounted to nearly $200,000,000. With the fall in the price of agricultural products in the subsequent years, the income from the urban production of these products in 1920 and 1921 was smaller, but still sufficient to justify an attempt to distribute it by States. There are, of course, no data indicating the value of garden and poultry products produced off the farm. It has, however, been assumed that the amount produced in each State would vary roughly with the population having the opportunity to sup-

plement their income in this manner. Hence, the national totals have been distributed in accordance with the non-farm population in each State residing in places with less than 25,000 inhabitants. The figures were derived from the 1920 Census.

Urban Income from Dairy Cows.

Another item supplementing the urban income in small places consists of profits from keeping dairy cows. According to the *Census of Agriculture,* there were about 1,250,000 dairy cows not on the farms on January 1, 1920. These were chiefly kept by inhabitants of villages and small towns. W. I. King estimates the profits from these cows to be about $100,000,000 a year, varying with the price of dairy products.

The distribution by States of the estimated income derived from dairy products produced off the farm is made on the basis of the estimated value of dairy cows in each State which were not on the farms. The data used were derived from the *Census of Agriculture* and the reports of the Department of Agriculture.

The Imputed Rent of Owned Urban Homes.

It will be recalled that the totals presented in Table XXXVIII included as part of the property income of the people a considerable amount of contract residential rent. This rent item covered income received by owners of real property leased or rented for residential purposes. Should we not also make allowance for residential property occupied by the owners themselves? The difference between owned homes and rented homes is really only a matter of occupancy, and the person residing in his own home receives an income just as truly as if he rented the home to someone else.

Judging from the figures of the 1920 *Census of Population,* about 37 per cent of the urban population of the United States live in owned homes.[1] This percentage is, of course, the average for the entire country. In some States it is much smaller; in others it is larger. In Iowa, for instance, the percentage of owned urban homes is about 55 per cent; in New York on the other hand, it is only 23 per cent of the total.

There is another element that must be considered in connection with the ownership of homes in the different States. Only about

[1] See Table LII, p. 298.

half of the homes recorded as owned are owned fully by those living in them. Nearly half of the so-called owned homes are encumbered to a greater or lesser degree. The proportion of encumbered homes presents a wide variation among States. At the time of the last Census, the per cent of the total number of owned urban homes in Nevada that were encumbered was 22; in New Jersey it was 66, and in Connecticut 70.

What is the rental value of owned homes in each State? What additional income do the inhabitants of each State receive from the ownership of these homes? It is obvious that just as much as there is variation in the extent of ownership of urban homes, so is there a variation in the average rental value of the homes in the different States. As already found in the case of our attempt to estimate the income from residential contract rent, there seems to be no specific data that will throw light upon the average amount of rent saved by owners of homes in the different parts of the country. As in the case of contract rent, we must resort to the assumption that the cost of housing and, hence, residential rent vary with income; that in places where the average income is normally high, the average rental value of homes is also high. Consequently, in imputing the rental value of owned homes, the estimates by States have been based on indices which take into consideration the total equity of owners in owned urban homes and the total urban income of the population for each State.

Rental Value of Farmers' Homes.

In calculating the agricultural income of the country, no consideration was given to the fact that in addition to being a place of business, the farm is also a home. Farmers receive a considerable share of their income in the form of commodities grown on the farm. In addition to about 60 per cent of his food that comes directly from the farm, the farmer also gets his rent. The farm products consumed by farmers and their families were included at farm prices when we computed the total agricultural income for each State, and it would appear that we should also make allowance for the services of his house.

It is, of course, difficult to compute with great accuracy the rental value of farmers' homes in the different States. The ac-

commodations received by farmers in the way of homes vary enormously, and are so intimately tied up with the business end of the property that it is almost impossible to place a value on the part used by farmers either for personal or business purposes. W. I. King, in his national estimates, approximated a value of the rent of farmers' homes for each year. These estimates were distributed by States in accordance with the total value of farm buildings in each State, as reported by the Census.

The Imputed Interest on Durable Consumption Goods.

The logic of including imputed rent of owned homes can hardly be disputed, especially when we attempt to arrive at comparative figures for different parts of the country. Should not also the use of other personal property be put on an income basis and made part of the final totals of income received by individuals?

In his national estimates, W. I. King makes allowance for this additional item in the form of imputed interest on the value of durable consumption goods in the hands of consumers.[1] This item is not commonly valued in terms of money, and there may be some question as to the advisability of giving it a place in our estimates by States, especially in view of the fact that, owing to the lack of data, the distribution can only be very rough indeed. It would seem that the inclusion of this item, if it is accurately computed, would not change materially the relative size of the income in each State. The accumulation of durable consumption goods is the result of past and present income, and, manifestly, the more prosperous sections of the country would have greater stocks of such goods than the poorer States.

A rough distribution of this item by States was made on the basis of the value of stocks of durable goods such as clothing, furniture, motor vehicles, etc., as reported for each State by the 1922 *Census of Wealth*. As the estimates are not highly reliable, the figures have been omitted from all the final analytical tables dealing with current income. The estimates of the imputed interest on the value of durable consumption goods are, however, included in the final figures showing the total net income received in each State, which also include surpluses and changes in values of inventories.

[1] The National totals of this item, in current dollars, are $2,739,959,000, $3,717,293,000, and $3,014,944,000, for 1919, 1920, and 1921, respectively.

CHAPTER XI

SUMMARY AND ANALYSIS
THE DISTRIBUTION OF THE TOTAL NET INCOME

The figures presented in Tables XXXIX, XL, and XLI are final totals based on the estimates covered in detail in the preceding chapters. Altogether, over fifty items entering into the income of the American people were handled separately in making the distribution by States. The final totals, then, represent the combination for each State of these numerous component parts making up the total income. As may be surmised, and as pointed out in connection with the various items, the material upon which the estimates were based was not all of uniform quality. For some of the items the data were highly reliable; for others, however, the data were deficient.

Fortunately, the weakness of some few of the items entering into our estimates is not a measure of the relative accuracy of the final results. The separate items are not linked together in the form of a chain, where the weakest link practically represents the strength of the whole, but the combination is rather in the form of a cable where every additional strand adds strength to the whole. An error in any one item becomes of less significance when the item is included in the entire total. It may also be suggested that the use of many separately computed items in arriving at the final totals offers a distinct advantage on account of the probability of errors cancelling each other.

Another important merit of the method involving the calculation of separate estimates for a large number of component items lies in the fact that, as more data become available, and with the further development of the method, the accuracy of the final totals may be improved progressively by correcting individual items.

The Total Net Income.

Table XLII gives a comparison between the amounts of total net income received by the inhabitants of each State in each of the

TABLE XLII.—TOTAL INCOME FROM ALL SOURCES RECEIVED BY INDIVIDUALS IN EACH STATE, 1919–1920–1921

Dollars (000's Omitted)

State and Geographic Division	Current Purchasing Value			1913 Purchasing Value		
	1919	1920	1921	1919	1920	1921
Continental United States	**66,195,700**	**72,380,365**	**84,426,667**	**36,994,672**	**35,283,751**	**49,007,859**
New England	**5,355,117**	**5,855,167**	**8,129,278**	**2,995,442**	**2,867,410**	**4,613,344**
Maine	427,580	472,572	616,055	237,281	228,959	356,101
New Hampshire	260,759	291,804	389,944	144,465	141,584	220,557
Vermont	175,578	236,472	261,569	97,598	114,403	154,592
Massachusetts	3,057,076	3,353,710	4,688,916	1,713,608	1,647,205	2,650,603
Rhode Island	454,983	460,061	733,091	255,178	226,185	413,942
Connecticut	979,141	1,040,548	1,439,703	547,312	509,074	817,549
Middle Atlantic	**17,509,177**	**19,072,103**	**26,496,647**	**9,844,815**	**9,385,330**	**15,088,897**
New York	9,241,601	9,649,309	14,802,057	5,221,244	4,772,161	8,453,488
New Jersey	2,377,239	2,659,669	3,403,385	1,331,041	1,304,399	1,927,172
Pennsylvania	5,890,337	6,763,125	8,291,205	3,292,530	3,308,770	4,708,237
East North Central	**14,596,747**	**16,395,804**	**17,821,653**	**8,152,065**	**7,993,931**	**10,326,399**
Ohio	3,989,379	4,093,695	4,653,438	2,213,862	1,986,266	2,660,628
Indiana	1,780,646	1,813,639	1,721,832	989,248	878,276	1,006,331
Illinois	4,989,044	5,420,874	6,579,785	2,805,987	2,665,130	3,790,199
Michigan	2,407,180	3,092,700	2,990,032	1,347,805	1,511,584	1,735,364
Wisconsin	1,430,498	1,974,896	1,876,566	795,163	952,675	1,133,877
West North Central	**7,971,594**	**8,471,843**	**7,020,690**	**4,445,221**	**4,104,906**	**4,176,806**
Minnesota	1,510,046	1,770,205	1,592,231	839,381	856,413	941,035
Iowa	1,818,461	1,419,038	1,058,327	1,017,036	689,858	634,869
Missouri	1,900,781	2,117,708	2,134,004	1,064,863	1,034,037	1,252,350
North Dakota	240,332	461,635	273,698	133,074	220,772	170,635
South Dakota	576,122	483,850	201,737	320,602	232,620	126,086
Nebraska	994,081	783,552	727,072	553,189	378,894	435,112
Kansas	931,771	1,435,855	1,033,621	517,076	692,312	616,719
South Atlantic	**6,310,287**	**6,336,442**	**7,091,482**	**3,511,345**	**3,067,107**	**4,187,388**
Delaware	154,257	131,746	202,483	86,759	64,772	116,638
Maryland	955,090	1,021,707	1,348,076	535,965	501,082	775,202
Dist. of Columbia	437,608	444,319	702,520	242,308	215,689	393,128
Virginia	913,918	1,074,323	1,091,827	506,326	518,487	644,907
West Virginia	640,929	861,901	886,882	354,496	416,176	512,352
North Carolina	981,805	919,973	981,324	547,882	444,002	606,879
South Carolina	733,866	499,409	404,883	408,611	240,216	253,052
Georgia	1,113,237	870,656	923,159	618,122	418,786	563,589
Florida	379,577	511,908	550,328	210,876	247,507	321,641
East South Central	**2,998,710**	**2,804,167**	**3,380,325**	**1,669,205**	**1,353,884**	**2.045,250**
Kentucky	831,353	843,942	1,103,548	462,634	408,196	659,622
Tennessee	765,691	883,568	958,765	426,094	427,257	573,081
Alabama	766,338	724,602	801,028	425,743	348,702	489,028
Mississippi	635,328	352,055	516,984	354,734	169,829	323,519
West South Central	**5,271,687**	**5,233,444**	**5,169,189**	**2,939,052**	**2,530,471**	**3,134,039**
Arkansas	577,951	564,597	551,934	322,158	272,620	337,574
Louisiana	817,520	742,918	893,168	456,970	361,341	520,756
Oklahoma	1,178,630	1,200,800	968,259	658,253	580,658	581,206
Texas	2,697,586	2,725,129	2,755,798	1,503,071	1,315,852	1,685,603
Mountain	**1,816,791**	**2,501,335**	**2,419,148**	**1,006 947**	**1,204,694**	**1,442,760**
Montana	177,105	336,561	325,544	97,632	161,498	191,609
Idaho	321,897	311,359	266,721	178,040	140,047	164,338
Wyoming	107,566	156,891	194,189	59,750	75,501	118,653
Colorado	576,339	817,918	823,172	320,188	396,086	481,106
New Mexico	129,402	200,925	188,314	71,453	96,275	113,374
Arizona	240,596	306,897	254,923	133,664	147,760	155,821
Utah	219,918	291,996	293,545	121,973	140,721	175,146
Nevada	43,968	78,768	72,740	24,238	37,806	42,813
Pacific	**4,365,590**	**5,710,060**	**6,898,255**	**2,430,580**	**2,776,018**	**3,992,976**
Washington	1,044,184	1,086,081	1,316,159	578,816	524,930	769,251
Oregon	590,566	700,560	677,473	329,557	329,090	409,845
California	2,730,840	3,923,419	4,904,593	1,522,207	1,911,998	2,813,880

three years — 1919, 1920, and 1921. On account of the great advances between the beginning and the end of the year in the values of inventories as measured in terms of consumption goods, the total net income for 1921 is shown to be the highest of the three years for most of the States. Exceptions to this condition are presented by the agricultural States, where the heavy losses in agriculture outweigh the inventory gains on non-agricultural property. States where the total income in 1921, including inventory gains, was lower than in 1919 follow: Iowa, South Dakota, Nebraska, South Carolina, Georgia, Mississippi, Oklahoma, and Idaho. In some of these States the reduction in the total income in 1921 was startling. In South Dakota, for instance, the 1921 income represented only 39 per cent of the amount received by the population in 1919. In Iowa, and in South Carolina, the 1921 income amounted to 62 per cent of that in 1919. These figures become even more striking when we consider that, for the country as a whole, the income in 1921, including inventory gains, was 1.33 times as great as in 1919, and that in New York the ratio of the 1921 total to that of 1919 was 1.62. In other words, taking as a base conditions in 1919, the income of the people of South Dakota suffered a reduction of about 61 per cent, while the income of the people of the entire United States increased 33 per cent, and that of the people of New York rose 62 per cent.

The opposite movement of agricultural and non-agricultural inventory values in 1921 is also responsible, to a large extent, for the radical redistribution of income in that year as compared with 1919. The share in the total national income received by the people of New York in 1919 was a little more than 14 per cent; in 1920 it was about 13.5 per cent, but in 1921 it represented 17.2 per cent. Pennsylvania's relative share also increased considerably, and the same was true in the case of Massachusetts and most of the other industrial States, excepting Ohio and Michigan. The agricultural States, however, invariably show a great reduction in the percentage of the total income received by their inhabitants in 1921 as compared with 1919.

Adjustment for Purchasing Value.

Comparison usually involves one important requirement, and that is that the quantities compared be represented in the same

units. It is rather difficult to compare two distances if one is expressed in yards and the other in meters unless they are both converted to a common unit. In comparing income we also must have values expressed in terms of the same unit of measurement. The unit used in measuring income is the dollar, which, unfortunately, is not a fixed quantity. Its value may fluctuate and in recent years has fluctuated rather violently, and it can hardly be accepted as true that the value of $100 at one time or place is necessarily twice as great as that of $50 in another time or place. With a variable dollar, it is obvious that, in order to have fair comparisons of income, we must adjust our totals.

While it is impracticable to make adjustments for the differences in the value of a dollar in different places, it is possible to do so for the changes taking place from time to time. In the last three columns of Table XLII, we have the total income from all sources expressed in terms of dollars of 1913 purchasing power. To obtain these figures, the totals presented in the first three columns of the table, which are in terms of dollars of current purchasing power, were divided by yearly indices representing average prices of consumption goods purchased by the various classes of the population. The indices used were calculated separately for each State by combining the following four yearly price indices [1] in accordance with weights based upon the estimated total income in each State of the classes of consumers indicated:

1. Index of prices of goods consumed by farmers.
2. Index of prices of goods consumed by urban employees.
3. Index of prices of goods consumed by families spending $5,000 annually on consumption goods.
4. Index of prices of goods consumed by families spending $25,000 annually on consumption goods.

The effect of converting the totals for each year into dollars of the same purchasing power is quite apparent. Although, when measured in current dollars, the income received by the people in the various States seems to be higher in 1920 than in 1919, the opposite is really the case. In terms of purchasing power, the 1920 income was only a little over 95 per cent of that in 1919.

[1] See p. 27, Preliminary Statement.

The Net Total Income from All Sources on a Per Capita Basis.

When dealing with geographic units of various sizes, such as our States, the total income received by the population contained in each area offers only a limited scope of comparative information. Even in comparing the income for the same States in different years we are likely to be comparing States of different size, as the population does not remain stationary. The economic welfare of the inhabitants cannot be measured by the total income received by those residing within a geographic area, but by the amount of income there is per unit of population. In order to eliminate the population variable from our figures, the total income for each State has been converted to a per capita basis.[1] These per capita incomes, expressed in dollars of current as well as 1913 purchasing value, are shown in Table XLIV. It seems to be the distinction of the District of Columbia to have had the highest per capita income in two of the three years under consideration, 1919 and 1921. This holds true both when we measure the income in terms of current dollars and when we measure it in 1913 dollars. Owing to large gains in surplus and inventory values, and also to the reduction of the population, the per capita income of the District in 1921 was, in terms of 1913 purchasing value, 75 per cent higher than in 1919 and over 90 per cent higher than in 1920. In 1920 the list was headed by California, which showed a per capita total net income of $1,127 of current purchasing value. This amount was 65 per cent above the average per capita total income for the entire country, and 5.7 times as great as the lowest per capita income (Mississippi) in that year.

When measured in current dollars, the per capita income of the people of South Dakota in 1919 was, next to that of the District of Columbia, higher than in any other State. In 1913 purchasing value, however, the New York per capita income for that year was apparently as high as in South Dakota, so that both States may lay claim to second place in this respect. The reason for the purchasing value of the per capita income in the two States being

[1] The more exact measure of welfare is the income per *ammain*. "An ammain is the gross demand for articles of consumption having a total money value equal to that demanded by the average male in the given class at the age when his total requirements for expense of maintenance reach a maximum." *U. S. Public Health Reports*, Nov. 26, 1920. See also *Income in the United States*, Vol. II, p. 233.

TABLE XLIII.—TOTAL POPULATION IN EACH STATE AT THE MIDDLE OF EACH YEAR, 1919–1920–1921
(000's Omitted)

State and Geographic Division	All Population [a]			Non-Farm Population [b]			Farm Population [c]
	1919	1920	1921	1919	1920	1921	
Continental United States	105,007	106,422	108,370	73,393	74,808	76,756	31,614
New England	7,357	7,446	7,566	6,731	6,820	6,940	626
Maine	767	769	772	569	571	574	198
New Hampshire	442	444	445	366	368	369	76
Vermont	353	352	352	228	227	227	125
Massachusetts	3,827	3,878	3,947	3,708	3,759	3,828	119
Rhode Island	601	608	616	586	593	601	15
Connecticut	1,367	1,395	1,434	1,274	1,302	1,341	93
Middle Atlantic	22,108	22,417	22,845	20,215	20,524	20,952	1,893
New York	10,319	10,453	10,637	9,518	9,652	9,836	801
New Jersey	3,124	3,188	3,280	2,980	3,044	3,136	144
Pennsylvania	8,665	8,776	8,928	7,717	7,828	7,980	948
East North Central	21,306	21,646	22,116	16,393	16,733	17,203	4,913
Ohio	5,707	5,812	5,959	4,568	4,673	4,820	1,139
Indiana	2,918	2,942	2,973	2,011	2,035	2,066	907
Illinois	6,441	6,530	6,653	5,343	5,432	5,555	1,098
Michigan	3,624	3,714	3,842	2,775	2,865	2,993	849
Wisconsin	2,616	2,648	2,689	1,696	1,728	1,769	920

TABLE XLIII.—TOTAL POPULATION IN EACH STATE AT THE MIDDLE OF EACH YEAR, 1919–1920–1921 — *Continued*
(000's Omitted)

STATE AND GEOGRAPHIC DIVISION	ALL POPULATION[a]			NON-FARM POPULATION[b]			FARM POPULATION[c]
	1919	1920	1921	1919	1920	1921	
West North Central	12,497	12,591	12,714	7,325	7,419	7,542	5,172
Minnesota	2,371	2,403	2,448	1,474	1,506	1,551	897
Iowa	2,395	2,413	2,437	1,410	1,428	1,452	985
Missouri	3,398	3,410	3,422	2,187	2,199	2,211	1,211
North Dakota	643	651	660	248	256	265	395
South Dakota	634	639	647	272	277	285	362
Nebraska	1,291	1,302	1,316	707	718	732	584
Kansas	1,765	1,773	1,784	1,027	1,035	1,046	738
South Atlantic	13,910	14,073	14,297	7,493	7,656	7,880	6,417
Delaware	222	224	226	171	173	175	51
Maryland	1,442	1,458	1,480	1,163	1,179	1,201	279
District of Columbia	445	431	412	444	430	411	·1
Virginia	2,296	2,322	2,357	1,231	1,257	1,292	1,065
West Virginia	1,451	1,476	1,512	973	998	1,034	478
North Carolina	2,541	2,578	2,629	1,040	1,077	1,128	1,501
South Carolina	1,675	1,693	1,717	600	618	642	1,075
Georgia	2,881	2,911	2,952	1,196	1,226	1,267	1,685
Florida	957	980	1,012	675	698	730	282

East South Central	8,869	8,918	8,979	3,686	3,735	3,796	5,183
Kentucky	2,410	2,423	2,439	1,105	1,118	1,134	1,305
Tennessee	2,330	2,346	2,366	1,058	1,074	1,094	1,272
Alabama	2,338	2,359	2,386	1,002	1,023	1,050	1,336
Mississippi	1,791	1,790	1,788	521	520	518	1,270
West South Central	10,166	10,320	10,530	4,938	5,092	5,302	5,228
Arkansas	1,743	1,762	1,787	596	615	640	1,147
Louisiana	1,791	1,806	1,826	1,005	1,020	1,040	786
Oklahoma	2,009	2,048	2,102	992	1,031	1,085	1,017
Texas	4,623	4,704	4,815	2,345	2,426	2,537	2,278
Mountain	3,299	3,372	3,478	2,131	2,204	2,310	1,168
Montana	540	558	584	314	332	358	226
Idaho	426	437	453	225	236	252	201
Wyoming	192	197	205	125	130	138	67
Colorado	932	947	968	666	681	702	266
New Mexico	359	362	366	198	201	205	161
Arizona	327	341	361	236	250	270	91
Utah	445	453	464	305	313	324	140
Nevada	78	77	77	62	61	61	16
Pacific	5,495	5,639	5,845	4,481	4,625	4,831	1,014
Washington	1,345	1,368	1,398	1,062	1,085	1,115	283
Oregon	778	789	806	564	575	592	214
California	3,372	3,482	3,641	2,855	2,965	3,124	517

[a] These estimates are based on the National Totals as estimated by the National Bureau of Economic Research and the relative increase in population in each state as shown by the Censuses of Population of 1910 and 1920.

[b] The non-farm population represents all the population not residing on farms. It is consequently different from "Urban Population," as reported by the Census.

[c] The farm population is taken as reported by the *Census of Agriculture*, 1920 (Vol. V, p. 894). It is assumed that no material changes in numbers have taken place during the three years.

TABLE XLIV.—PER CAPITA TOTAL INDIVIDUAL INCOME FROM ALL SOURCES IN EACH STATE, 1919–1920–1921

State and Geographic Division	Dollars of Current Purchasing Value			Dollars of 1913 Purchasing Value		
	1919	1920	1921	1919	1920	1921
Continental United States	630	680	779	352	332	452
New England						
Maine	557	615	798	309	296	461
New Hampshire	590	657	876	327	319	496
Vermont	497	672	743	276	325	439
Massachusetts	799	865	1,188	448	425	672
Rhode Island	757	757	1,190	425	372	672
Connecticut	716	746	1,004	400	365	579
Middle Atlantic						
New York	896	923	1,392	506	457	795
New Jersey	761	834	1,038	426	409	588
Pennsylvania	680	771	929	380	377	527
East North Central						
Ohio	699	704	781	388	342	446
Indiana	610	616	579	339	299	338
Illinois	775	830	989	436	408	570
Michigan	664	833	778	372	407	452
Wisconsin	547	746	698	304	360	422
West North Central						
Minnesota	637	737	650	354	356	384
Iowa	759	588	434	425	286	261
Missouri	559	621	624	313	303	366
North Dakota	374	709	415	207	339	299
South Dakota	909	757	312	506	364	195
Nebraska	770	602	552	428	291	331
Kansas	528	810	579	293	390	346
South Atlantic						
Delaware	695	588	896	391	289	516
Maryland	662	701	911	372	344	524
Dist. of Columbia	983	1,031	1,705	545	500	954
Virginia	398	463	463	221	223	274
West Virginia	442	584	587	244	282	339
North Carolina	386	357	373	216	172	231
South Carolina	438	295	236	244	142	147
Georgia	386	299	313	215	144	191
Florida	397	522	544	220	253	318
East South Central						
Kentucky	345	348	452	192	197	270
Tennessee	329	377	405	183	182	242
Alabama	328	307	336	182	148	205
Mississippi	365	197	289	198	95	181
West South Central						
Arkansas	332	320	309	185	155	189
Louisiana	456	411	489	255	200	290
Oklahoma	587	586	461	327	284	277
Texas	584	579	572	325	280	350
Mountain						
Montana	328	603	557	181	289	328
Idaho	756	712	589	418	341	353
Wyoming	560	796	947	311	382	578
Colorado	618	864	850	344	418	497
New Mexico	360	555	515	199	268	310
Arizona	736	900	706	409	433	432
Utah	494	645	633	274	311	377
Nevada	564	1,023	945	311	491	556
Pacific						
Washington	776	794	941	430	384	550
Oregon	759	888	841	424	430	508
California	810	1,127	1,347	451	549	773

the same, while the current value in dollars was different, lies in the difference in the composition of the population of the two States and, consequently, in the difference in the average prices of the consumption goods purchased with the income in the respective States.

It is interesting to note that in 1921 the per capita total income of South Dakota was practically at the bottom of the list, showing a drop in the purchasing value of the income of over 61 per cent from 1919.

The range of the per capita net total incomes of the different States was quite great in each of the three years. The greatest range, however, was in 1921, and the smallest in 1919. In terms of percentages of the lowest per capita income among the States for each year, the ranges or "spreads" between the lowest and the highest per capita incomes were as follows:

1919	200%
1920	480%
1921	550%

Logically, we should expect the "normal" year to have a minimum spread in per capita income for the various States, and it would therefore seem that, of the three years, 1919 was actually the most nearly normal.

The wide variations among the different States in the per capita estimates of total income are apparently due chiefly to the fluctuations in the value of inventories. If the income due to inventory changes is taken out of the totals, the per capita figures for the various States fall within narrower margins.

The Share of the Farm Population in the Total Net Income.

If income were distributed equally on the basis of population, the farm population of the United States would get $3 out of every $10 received by the entire American people. In Rhode Island, the farm population would get 25¢, in Oklahoma $5, and in Arkansas $6.50 out of every $10 of income received by the people in their respective States. Do actual conditions come anywhere near such a distribution? In accordance with this hypothetical distribution, i.e., that based upon the number of people, the share of the entire farm population in 1921 should have been over $25,000,000,000.

In Arkansas, the farm population should have received about $360,000,000, and in Oklahoma, about $484,000,000. How near do these amounts come to the actual income of the farm population?

It is not easy to separate with any degree of precision the income received by the farm population from that received by the non-farm population in each State. Table XLV merely presents the results of a very rough analysis. The share of the farm population, as shown in this table, is composed of the following items:

1. The income of farmers from agriculture, including gains or losses in the value of inventories.
2. A rough estimate of the income of farmers from non-agricultural sources, such as the return on outside investments, etc.
3. The rental value of farmers' homes.
4. The estimated imputed interest on investment in durable consumption goods.[1]

The great disparity between the total income of the farm population and that of the non-farm population, as shown in the table, is due to the fact that farm prices are used in estimating the value of that large proportion of the farmer's income consisting of commodities grown on the farm itself. Non-farmers, when purchasing similar commodities, pay considerably higher than farm prices. In the main, however, the differences in the size of the incomes of the farm and non-farm population in the various States are real.

It is worth noting that the income of the farm population, being chiefly entrepreneurial in character, is subject to greater fluctuations than is that of the non-farm population. The income of the non-farm population is steadied by the presence of a large amount of wages and salaries which have a more even distribution in time than have entrepreneurial gains. The diversity of industry also helps to steady the non-farm income. The two factors then, — namely, the predominance of entrepreneurial activity and the lack of diversity of industry, — are mainly responsible for the fact that

[1] The estimate of this item for the total population in each State has been split into two parts in accordance with the relative size of the farm and non-farm population in the State, the farm population being given a weight of 1 and the non-farm population a weight of 2.

TABLE XLV.—SHARES OF THE TOTAL INCOME FROM ALL SOURCES RECEIVED BY FARM AND NON-FARM POPULATION IN EACH STATE, 1919–1920–1921

DOLLARS (000's Omitted)

State and Geographic Division	1919		1920		1921	
	Farm Population	Non-Farm Population	Farm Population	Non-Farm Population	Farm Population	Non-Farm Population
Continental United States	**10,477,031**	**55,718,669**	**11,704,105**	**60,676,260**	**5,008,862**	**79,417,865**
New England	**191,862**	**5,163,255**	**367,069**	**5,488,098**	**360,540**	**7,768,738**
Maine	69,381	358,199	75,438	397,134	85,862	530,193
New Hampshire	14,084	246,675	29,419	262,385	45,340	344,604
Vermont	32,212	143,366	80,849	155,623	57,008	204,561
Massachusetts	41,815	3,015,261	100,089	3,253,621	88,167	4,600,749
Rhode Island	5,967	449,016	11,709	448,352	9,782	723,309
Connecticut	28,403	950,738	69,565	970,983	74,381	1,365,322
Middle Atlantic	**634,940**	**16,874,237**	**1,253,319**	**17,818,784**	**787,882**	**25,708,765**
New York	326,523	8,915,078	658,864	8,99,0445	442,058	14,359,999
New Jersey	58,946	2,318,293	125,888	2,533,781	68,862	3,334,523
Pennsylvania	249,471	5,640,866	468,567	6,294,558	276,962	8,014,243
East North Central	**1,827,746**	**12,769,001**	**2,136,344**	**14,259,460**	**798,769**	**17,022,884**
Ohio	432,898	3,556,481	278,576	3,815,119	219,450	4,433,988
Indiana	381,477	1,399,169	181,714	1,831,925	– 256	1,722,088
Illinois	480,606	4,508,438	482,894	4,937,980	54,143	6,525,642
Michigan	203,203	2,203,977	501,099	2,591,601	191,558	2,798,474
Wisconsin	329,562	1,100,936	692,061	1,282,836	333,874	1,542,692
West North Central	**2,580,276**	**5,391,318**	**2,433,770**	**6,038,073**	**144,680**	**6,876,010**
Minnesota	431,145	1,078,901	554,815	1,215,390	106,437	1,485,794
Iowa	703,691	1,114,770	298,760	1,120,278	–91,177	1,149,504
Missouri	358,874	1,541,907	384,535	1,733,173	–56,910	2,190,914
North Dakota	122,613	117,719	262,153	199,482	74,284	199,414
South Dakota	324,229	251,893	233,639	250,211	– 2,481	204,218
Nebraska	392,701	601,380	207,801	575,751	31,045	696,027
Kansas	247,023	684,748	492,067	943,788	83,482	950,139
South Atlantic	**1,548,808**	**4,761,479**	**1,360,148**	**4,976,294**	**680,911**	**6,410,571**
Delaware	14,744	139,513	16,686	115,060	8,948	193,535
Maryland	68,341	886,749	89,470	932,237	61,275	1,286,801
Dist. of Columbia	254	437,354	497	443,822	391	702,129
Virginia	165,176	748,742	278,909	795,914	106,300	985,527
West Virginia	65,135	575,794	130,134	731,767	65,891	820,991
North Carolina	412,586	569,219	328,603	591,370	245,493	735,831
South Carolina	351,029	382,837	171,799	327,610	43,341	361,542
Georgia	418,247	694,990	211,103	659,553	91,614	831,545
Florida	53,296	326,281	132,947	378,961	57,658	492,670
East South Central	**933,881**	**2,064,829**	**619,306**	**2,184,861**	**558,148**	**2,822,177**
Kentucky	183,583	647,770	103,083	740,859	125,151	978,397
Tennessee	183,062	582,629	223,859	659,709	131,928	826,837
Alabama	248,972	517,366	164,972	559,630	155,457	645,571
Mississippi	318,264	317,064	127,392	224,663	145,612	371,372
West South Central	**1,802,028**	**3,469,659**	**1,450,127**	**3,783,317**	**640,954**	**4,528,235**
Arkansas	238,633	339,318	209,884	354,715	121,757	430,177
Louisiana	212,239	605,281	104,145	638,773	76,862	816,306
Oklahoma	413,233	765,397	348,750	852,050	98,786	869,603
Texas	937,923	1,759,663	787,348	1,937,781	343,549	2,412,249
Mountain	**319,048**	**1,497,743**	**729,970**	**1,771,365**	**300,706**	**2,118,442**
Montana	–50,423	227,528	67,752	268,809	19,760	305,784
Idaho	153,305	168,592	140,918	170,441	65,059	201,662
Wyoming	11,928	95,638	32,613	124,278	24,566	169,623
Colorado	99,907	476,432	260,155	567,763	80,722	742,450
New Mexico	24,442	104,960	71,576	129,349	34,131	154,183
Arizona	48,559	192,037	75,916	230,981	36,131	218,792
Utah	33,425	186,493	77,242	214,754	38,050	255,495
Nevada	–2,095	46,063	13,798	64,990	2,287	70,453
Pacific	**638,442**	**3,727,148**	**1,354,052**	**4,356,008**	**736,272**	**6,161,983**
Washington	190,081	854,103	220,202	865,879	149,385	1,166,804
Oregon	136,598	453,968	218,400	482,160	92,986	584,487
California	311,763	2,419,077	915,450	3,007,969	493,901	4,410,692

TABLE XLVI.— DISTRIBUTION OF TOTAL CURRENT* INCOME BY FARM AND NON-FARM POPULATION IN EACH STATE, 1919

State and Geographic Division	Total Amount Dollars (000's Omitted)				Per Capita or per Family (Dollars)			
	Entire Population	Non-Farm Population	Farm Population		Per Capita Entire Population	Per Capita Non-Farm Population	Per Capita Farm Population	Per Farmer (and Family)
			Farmers (and Families)	Agricultural Employees				
Continental United States	64,514,671	53,075,634	9,948,326	1,490,711	614	723	362	1,559*
New England	5,260,058	5,006,091	192,364	61,603	715	744	406	1,268
Maine	414,381	336,934	66,525	10,922	540	592	392	1,402
New Hampshire	255,379	232,886	17,152	5,341	578	636	296	858
Vermont	179,603	137,201	33,778	8,624	509	602	339	1,184
Massachusetts	3,002,722	2,942,313	41,159	19,250	785	794	510	1,355
Rhode Island	441,225	433,343	5,448	2,434	734	739	521	1,404
Connecticut	966,748	923,414	28,302	15,032	707	725	464	1,311
Middle Atlantic	17,264,769	16,404,687	718,919	141,163	781	812	507	1,731
New York	9,258,694	8,828,445	357,725	72,524	897	928	537	1,892
New Jersey	2,271,831	2,190,608	61,179	20,044	727	735	565	2,130
Pennsylvania	5,734,244	5,385,634	300,015	48,595	662	698	368	1,517
East North Central	14,260,618	12,160,436	1,835,449	264,733	669	742	427	1,713
Ohio	3,802,534	3,370,548	379,897	52,089	666	738	379	1,497
Indiana	1,599,921	1,263,284	299,860	36,777	548	628	371	1,479
Illinois	4,991,251	4,394,227	510,129	86,895	775	822	544	2,182
Michigan	2,405,624	2,097,144	272,367	36,113	664	756	363	1,403
Wisconsin	1,461,288	1,035,233	373,196	52,859	559	610	463	1,997
West North Central	7,267,946	4,875,477	2,024,133	368,336	582	666	463	1,864
Minnesota	1,352,021	987,854	310,478	53,689	570	670	406	1,755
Iowa	1,477,907	927,022	474,486	76,399	617	657	559	2,249
Missouri	1,857,876	1,465,567	348,059	44,250	547	670	324	1,335
North Dakota	332,550	131,330	161,705	39,515	517	529	510	2,105
South Dakota	435,034	192,550	208,516	33,968	686	708	669	2,823
Nebraska	772,514	490,356	234,048	48,110	598	694	483	1,901
Kansas	1,040,044	680,798	286,841	72,405	589	663	487	1,751

South Atlantic	6,188,836	4,513,023	1,559,130	116,683	.445	602	261	1,357
Delaware	164,962	147,154	14,697	3,111	.743	861	348	1,470
Maryland	947,604	860,627	68,105	18,872	657	740	312	1,460
District of Columbia	424,950	424,473	454	23	955	956	534	2,454
Virginia	934,655	706,616	204,724	23,315	407	.574	214	1,112
West Virginia	647,489	548,688	91,651	7,150	446	.564	207	1,063
North Carolina	932,862	519,847	399,602	13,413	367	500	275	1,486
South Carolina	653,357	332,888	303,951	16,518	390	555	298	1,583
Georgia	1,092,184	659,970	410,859	21,355	379	552	256	1,329
Florida	390,773	312,760	65,087	12,926	408	463	277	1,247
East South Central	3,056,463	1,960,708	1,046,480	49,275	345	532	211	998
Kentucky	911,558	633,694	258,028	19,836	378	574	213	957
Tennessee	805,653	561,278	231,905	12,470	346	531	192	920
Alabama	751,216	484,000	258,484	8,732	321	483	200	1,012
Mississippi	588,036	281,736	298,063	8,237	328	541	241	1,099
West South Central	4,768,689	3,120,209	1,473,884	174,596	469	632	315	1,487
Arkansas	612,855	334,688	263,141	15,026	352	562	243	1,134
Louisiana	738,518	549,694	165,685	23,139	412	547	240	1,231
Oklahoma	1,035,030	674,645	316,984	43,401	515	680	354	1,659
Texas	2,382,286	1,561,182	728,074	93,030	515	666	360	1,679
Mountain	2,090,628	1,460,933	506,889	122,806	634	686	539	2,112
Montana	334,580	238,324	72,858	23,398	620	759	427	1,283
Idaho	261,336	143,446	97,951	19,939	613	638	587	2,369
Wyoming	165,914	101,429	54,332	10,153	864	811	958	3,535
Colorado	630,559	468,515	132,558	29,486	677	704	609	2,245
New Mexico	165,913	105,381	48,337	12,195	462	532	375	1,644
Arizona	225,402	177,122	36,091	12,189	689	751	533	3,732
Utah	238,911	175,894	53,832	9,185	537	577	449	2,122
Nevada	68,013	50,822	10,930	6,261	872	820	1,064	3,650
Pacific	4,356,664	3,574,070	591,078	191,516	793	798	772	2,602
Washington	965,783	791,737	136,985	37,061	718	745	614	2,104
Oregon	561,600	426,669	111,911	23,020	722	756	630	2,265
California	2,829,281	2,355,664	342,182	131,435	839	825	916	3,036

* Total Income exclusive of Surpluses and Inventory Gains; also excludes Imputed Interest on Durable Consumption Goods.

TABLE XLVII.—DISTRIBUTION OF TOTAL CURRENT INCOME[a] BY FARM AND NON-FARM POPULATION IN EACH STATE, 1920

State and Geographic Division	Total Amount Dollars (000's Omitted)				Per Capita or per Family (Dollars)			
	Entire Population	Non-Farm Population	Farm Population		Per Capita Entire Population	Per Capita Non-Farm Population	Per Capita Farm Population	Per Farmer (and Family)
			Farmers (and Families)	Agricultural Employees				
Continental United States	70,441,109	61,024,258	7,753,614	1,663,237	662	816	298	1,215
New England	6,313,930	6,021,844	220,736	71,350	848	877	467	1,454
Maine	477,246	403,276	61,488	12,482	621	706	374	1,296
New Hampshire	301,349	273,107	22,034	6,208	679	742	372	1,102
Vermont	212,706	158,095	46,038	9,573	607	696	444	1,614
Massachusetts	3,640,227	3,566,095	51,283	22,849	939	949	625	1,688
Rhode Island	523,408	514,100	6,625	2,683	861	867	615	1,708
Connecticut	1,157,994	1,107,171	33,268	17,555	830	850	545	1,541
Middle Atlantic	19,931,097	19,004,891	767,136	159,070	889	926	489	1,847
New York	10,579,956	10,089,899	403,696	85,361	1,012	1,045	612	2,138
New Jersey	2,602,595	2,521,313	57,545	23,737	816	828	566	2,004
Pennsylvania	6,748,546	6,393,679	305,895	48,972	769	817	374	1,547
East North Central	15,881,988	14,078,070	1,502,857	301,061	734	841	367	1,403
Ohio	4,316,052	3,943,357	314,151	58,544	743	844	327	1,239
Indiana	1,784,274	1,540,557	204,827	38,890	606	757	269	1,010
Illinois	5,286,688	4,878,811	310,666	97,211	810	898	371	1,329
Michigan	2,848,157	2,524,482	281,121	42,554	767	881	381	1,448
Wisconsin	1,646,817	1,190,863	392,092	63,862	622	689	496	2,098
West North Central	6,929,218	5,461,295	1,060,847	407,076	550	736	284	977
Minnesota	1,342,213	1,111,781	171,226	59,206	559	738	257	968
Iowa	1,278,386	1,042,503	149,532	86,351	530	730	240	709
Missouri	1,971,074	1,694,571	229,426	47,077	578	771	228	880
North Dakota	288,785	146,721	97,310	44,754	444	573	360	1,267
South Dakota	305,771	179,916	87,974	37,881	479	649	347	1,191
Nebraska	695,427	529,566	115,313	50,548	534	738	284	937
Kansas	1,047,562	756,237	210,066	81,259	591	731	395	1,283

South Atlantic	6,300,330	5,013,433	1,157,737	129,160	448	655	201	1,007
Delaware	149,954	134,632	11,799	3,523	669	778	299	1,180
Maryland	1,077,776	997,225	59,754	20,797	739	846	288	1,281
District of Columbia	470,966	470,649	292	25	1,093	1,095	355	1,578
Virginia	964,341	748,812	189,750	25,779	415	596	202	1,031
West Virginia	821,260	723,572	89,500	8,188	556	725	204	1,038
North Carolina	888,534	563,373	309,660	15,501	345	523	217	1,151
South Carolina	542,964	336,178	188,606	18,180	321	544	192	982
Georgia	964,701	687,451	253,900	23,440	331	561	165	821
Florida	419,744	351,541	54,476	13,727	428	504	242	1,042
East South Central	2,959,543	2,151,759	755,977	51,807	332	576	156	721
Kentucky	967,667	746,124	201,796	19,747	399	667	170	748
Tennessee	826,436	616,100	196,898	13,438	352	574	165	781
Alabama	711,957	525,385	176,675	9,897	302	513	140	691
Mississippi	453,483	264,150	180,608	8,725	253	508	149	666
West South Central	4,933,404	3,537,167	1,203,654	192,583	478	695	267	1,214
Arkansas	553,006	332,967	202,301	17,738	314	542	192	872
Louisiana	759,226	630,220	101,050	27,956	420	618	164	751
Oklahoma	1,061,746	758,449	257,842	45,455	518	736	298	1,350
Texas	2,559,426	1,815,531	642,461	101,434	544	748	327	1,482
Mountain	2,180,616	1,614,314	425,682	140,620	647	732	485	1,774
Montana	339,513	252,475	62,717	24,321	608	760	386	1,105
Idaho	252,290	147,188	83,469	21,633	577	624	523	2,019
Wyoming	170,226	119,994	37,226	13,006	864	923	746	2,422
Colorado	677,439	526,094	116,283	35,062	715	773	569	1,969
New Mexico	169,885	114,368	41,321	14,196	469	569	344	1,405
Arizona	247,461	198,853	33,965	14,643	726	795	537	3,512
Utah	251,084	196,072	44,145	10,867	554	626	392	1,740
Nevada	72,718	59,270	6,556	6,892	944	972	832	2,189
Pacific	5,010,983	4,141,485	658,988	210,510	889	895	857	2,901
Washington	1,000,733	813,967	145,726	41,040	732	750	659	2,237
Oregon	565,071	432,202	109,618	23,251	716	752	621	2,218
California	3,445,179	2,895,316	403,644	146,219	989	977	1,064	3,581

* Total Income exclusive of Surpluses and Inventory Gains; also excludes Imputed Interest on Durable Consumption Goods.

TABLE XLVIII.—DISTRIBUTION OF TOTAL CURRENT* INCOME BY FARM AND NON-FARM POPULATION IN EACH STATE, 1921

State and Geographic Division	Total Amount Dollars (000's Omitted)				Per Capita or per Family			
	Entire Population	Non-Farm Population	Farm Population		Per Capita Entire Population	Per Capita Non-Farm Population	Per Capita Farm Population	Per Farmer (and Family)
			Farmers (and Families)	Agricultural Employees				
Continental United States	**59,720,695**	**53,837,177**	**4,475,942**	**1,407,576**	**551**	**701**	**186**	**701**
New England	**5,321,273**	**5,047,814**	**203,679**	**69,780**	**703**	**727**	**437**	**1,342**
Maine	421,522	354,240	55,670	11,612	546	617	341	1,173
New Hampshire	257,565	228,789	22,888	5,888	579	620	379	1,145
Vermont	181,373	132,842	39,460	9,071	515	585	387	1,384
Massachusetts	3,084,579	3,016,587	45,448	22,544	781	788	574	1,496
Rhode Island	463,963	456,271	4,896	2,796	753	759	508	1,262
Connecticut	912,271	859,085	35,317	17,869	636	641	570	1,636
Middle Atlantic	**17,693,699**	**16,995,337**	**539,382**	**158,980**	**775**	**811**	**422**	**1,299**
New York	9,796,835	9,420,405	292,973	83,457	921	958	470	1,552
New Jersey	2,270,664	2,210,416	38,125	22,123	692	705	419	1,327
Pennsylvania	5,626,200	5,364,516	208,284	53,400	630	672	276	1,053
East North Central	**12,773,714**	**11,705,693**	**803,658**	**264,363**	**578**	**680**	**217**	**750**
Ohio	3,232,299	3,016,111	165,411	50,777	542	626	190	652
Indiana	1,382,270	1,259,977	86,955	35,338	465	610	135	429
Illinois	4,706,273	4,523,962	93,966	88,345	707	814	166	402
Michigan	2,097,538	1,880,889	180,384	36,265	546	628	255	929
Wisconsin	1,355,334	1,024,754	276,942	53,638	504	579	359	1,482
West North Central	**5,675,507**	**4,940,160**	**414,424**	**320,923**	**446**	**655**	**142**	**382**
Minnesota	1,130,129	1,002,873	81,838	45,418	462	647	142	463
Iowa	1,036,307	901,313	66,424	68,570	425	621	137	315
Missouri	1,715,593	1,565,940	106,056	43,597	501	708	124	407
North Dakota	209,362	135,679	39,515	34,168	317	512	187	514
South Dakota	216,613	162,164	28,317	26,132	335	569	150	383
Nebraska	548,182	490,299	21,035	36,848	417	670	99	171
Kansas	819,321	681,892	71,239	66,190	459	652	186	435

South Atlantic	5,211,162	4,420,439	684,657	106,066	364	561	123	596
Delaware	125,850	116,733	5,842	3,275	557	667	178	584
Maryland	906,974	859,985	27,511	19,478	613	716	168	589
District of Columbia	483,737	483,498	213	26	1,174	1,176	268	1,151
Virginia	814,687	682,449	109,352	22,886	346	528	124	594
West Virginia	637,090	564,827	64,910	7,353	421	540	151	753
North Carolina	720,503	485,714	223,085	11,704	274	431	156	829
South Carolina	387,732	281,192	93,529	13,011	226	438	99	487
Georgia	759,668	617,439	126,202	16,027	257	487	84	408
Florida	374,921	328,602	34,013	12,306	370	450	164	652
East South Central	2,530,842	1,961,858	525,549	43,435	282	517	110	501
Kentucky	829,510	687,593	124,914	17,003	340	606	109	463
Tennessee	733,597	570,118	142,604	11,875	310	529	121	566
Alabama	597,643	451,925	138,213	7,505	250	430	109	541
Mississippi	370,092	243,222	119,818	7,052	207	470	100	442
West South Central	3,951,016	3,192,433	604,214	154,369	375	602	145	610
Arkansas	449,877	305,650	130,802	13,425	252	478	126	564
Louisiana	646,559	561,620	64,547	20,392	354	540	108	479
Oklahoma	768,531	628,674	105,347	34,510	366	579	137	551
Texas	2,086,049	1,696,489	303,518	86,042	433	669	171	700
Mountain	1,848,327	1,480,993	257,322	110,012	740	641	315	1,072
Montana	287,439	218,684	52,527	16,228	492	611	305	925
Idaho	207,530	138,743	51,368	17,419	458	551	342	1,242
Wyoming	153,469	120,664	22,209	10,596	749	874	487	1,444
Colorado	599,136	511,960	58,697	28,479	619	729	328	993
New Mexico	147,576	109,970	26,058	11,548	403	536	233	886
Arizona	181,972	153,122	18,665	10,185	504	567	319	1,930
Utah	209,182	175,977	23,868	9,337	451	543	237	941
Nevada	62,023	51,873	3,930	6,220	805	850	628	1,312
Pacific	4,715,155	4,092,450	443,057	179,648	807	847	614	1,951
Washington	948,825	797,753	116,933	34,139	679	716	533	1,795
Oregon	498,153	401,613	75,787	20,753	618	678	451	1,534
California	3,268,177	2,893,084	250,337	124,756	898	926	726	2,221

* Total Income exclusive of Surpluses and Inventory Gains; also excludes Imputed Interest on Durable Consumption Goods.

CHART 8

THE PER CENT OF THE TOTAL CURRENT NATIONAL INCOME GOING TO THE INHABITANTS OF EACH STATE 1919-1920-1921

STATES ARRAYED ON THE BASIS OF THE 1919 PERCENTAGES

Rank of State 1919	Per Cent of Total Current National Income			State
	1919	1920	1921	
1	14.350	15.020	16.404	New York
2	8.888	9.580	9.421	Pennsylvania
3	7.737	7.505	7.880	Illinois
4	5.893	6.127	5.412	Ohio
5	4.654	5.168	5.165	Massachusetts
6	4.385	4.891	5.472	California
7	3.729	4.043	3.512	Michigan
8	3.692	3.633	3.493	Texas
9	3.520	3.695	3.802	New Jersey
10	2.880	2.798	2.873	Missouri
11	2.480	2.533	2.315	Indiana
12	2.291	1.815	1.735	Iowa
13	2.265	2.338	2.269	Wisconsin
14	2.096	1.905	1.892	Minnesota
15	1.691	1.370	1.272	Georgia
16	1.612	1.487	1.372	Kansas
17	1.604	1.507	1.287	Oklahoma
18	1.498	1.644	1.528	Connecticut
19	1.497	1.421	1.589	Washington
20	1.469	1.530	1.518	Maryland
21	1.449	1.369	1.364	Virginia
22	1.446	1.261	1.207	North Carolina
23	1.413	1.376	1.389	Kentucky
24	1.249	1.173	1.228	Tennessee
25	1.196	.987	.918	Nebraska
26	1.164	1.011	1.001	Alabama
27	1.145	1.078	1.083	Louisiana
28	1.013	.771	.649	South Carolina
29	1.004	1.166	1.067	West Virginia
30	.977	.962	1.003	Colorado
31	.950	.785	.753	Arkansas
32	.911	.644	.620	Mississippi
33	.871	.802	.834	Oregon
34	.684	.743	.777	Rhode Island
35	.674	.434	.363	South Dakota
36	.666	.669	.810	Dist. of Columbia
37	.642	.678	.706	Maine
38	.606	.596	.628	Florida
39	.519	.482	.481	Montana
40	.515	.410	.351	North Dakota
41	.405	.358	.348	Idaho
42	.396	.428	.431	New Hampshire
43	.370	.356	.350	Utah
44	.349	.351	.305	Arizona
45	.278	.303	.304	Vermont
46	.257	.242	.257	Wyoming
47	.257	.241	.247	New Mexico
48	.256	.213	.211	Delaware
49	.105	.103	.104	Nevada

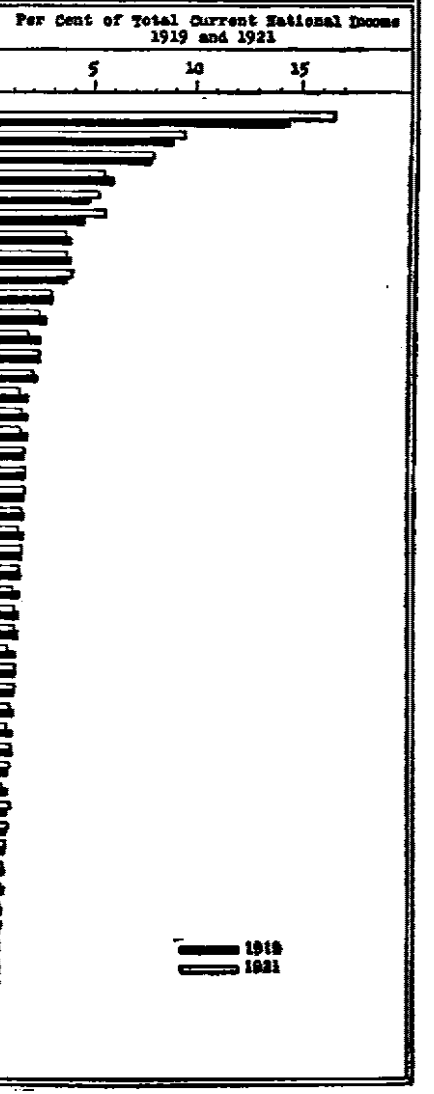
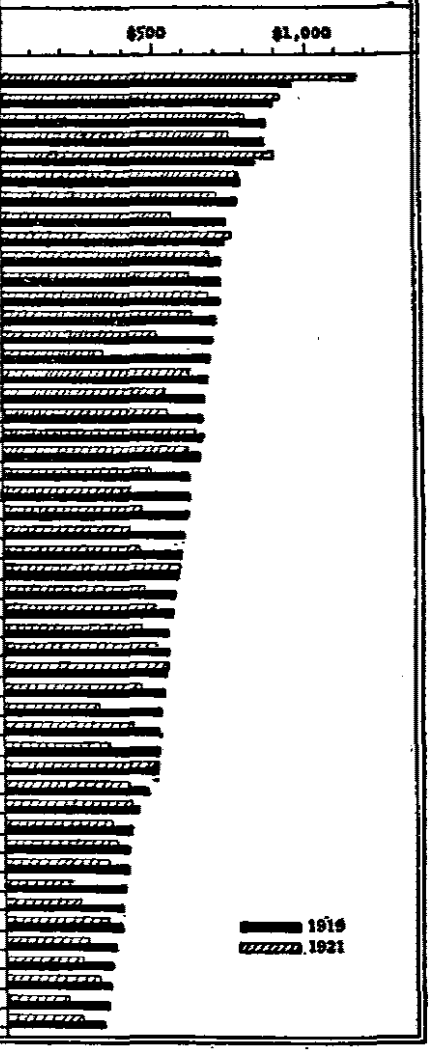


CHART 8

THE PER CAPITA CURRENT INCOME IN EACH STATE
ENTIRE POPULATION
1919-1920-1921
STATES ARRAYED ACCORDING TO THE SIZE OF PER CAPITA CURRENT INCOME IN 1919

Rank of State 1919	Per Capita Current Income (Dollars) 1919	1920	1921	State
1	955	1,093	1,174	Dist. of Columbia
2	897	1,012	921	New York
3	872	944	805	Nevada
4	864	864	749	Wyoming
5	839	989	898	California
6	765	939	781	Massachusetts
7	775	810	707	Illinois
8	743	669	557	Delaware
9	734	861	753	Rhode Island
10	727	816	692	New Jersey
11	722	716	618	Oregon
12	718	732	679	Washington
13	707	830	636	Connecticut
14	689	726	504	Arizona
15	686	479	335	South Dakota
16	677	715	619	Colorado
17	666	743	548	Ohio
18	664	767	546	Michigan
19	662	769	630	Pennsylvania
20	657	739	613	Maryland
21	620	608	492	Montana
22	617	530	425	Iowa
23	613	577	458	Idaho
24	598	536	417	Nebraska
25	589	691	659	Kansas
26	578	679	579	New Hampshire
27	570	559	462	Minnesota
28	559	622	504	Wisconsin
29	548	606	465	Indiana
30	547	578	501	Missouri
31	540	621	546	Maine
32	537	554	451	Utah
33	517	444	317	North Dakota
34	515	564	433	Texas
35	515	518	366	Oklahoma
36	509	607	515	Vermont
37	462	469	403	New Mexico
38	446	556	431	West Virginia
39	412	489	354	Louisiana
40	408	428	370	Florida
41	402	415	346	Virginia
42	380	321	226	South Carolina
43	379	331	257	Georgia
44	378	399	340	Kentucky
45	367	345	274	North Carolina
46	352	314	252	Arkansas
47	346	352	310	Tennessee
48	328	253	207	Mississippi
49	321	302	250	Alabama



in 1921 the total income of the farm population in some States actually fell below zero.

THE DISTRIBUTION OF THE CURRENT INCOME

So far in our analysis, we have given attention to the distribution of the total income received by the American people from *all* sources. The complete accounting for all the items making up income, of course, increases the precision of the totals in measuring conditions between specified dates, and is for many purposes the only significant way of measuring income. As already noted, however, there are certain comparisons which can better be made if changes in business surpluses or in the value of inventories are entirely ignored. For example, a great gain may occur in the wealth of a given class of people without having a corresponding effect on their demand for merchandise. In 1921, owing to relative changes in the value of securities and real estate as compared to consumption goods, the people of the nation gained nearly $22,000,000,000. Only a fraction of this amount, however, was realized through sales; hence it is highly erroneous to assume that the demand for new goods increased by $22,000,000,000. That major proportion of the property of the people of the country which did not change hands during the year probably affected but little the consumption of the owners. People do not vary their expenditures promptly with fluctuations in their income but rather spend in accordance with their habitually realized income, especially when declines or increases in their total income represent merely book and not realized losses or gains.

In addition to the fact that the volume of merchandise purchases is not affected proportionately by changes in the values of inventories, there is also the consideration that a large part of the population is not affected by such property gains or losses. The majority of the people of the United States receive the bulk of their income currently (chiefly as wages and salaries), and the distribution of property holders, especially those with large holdings, is not the same throughout the country. Hence, the inclusion of changes in the value of property introduces a variable which makes the data for the several States less representative of typical conditions with respect to the bulk of the population.

In the following and concluding sections of the analysis, *current income* will be used in all comparisons. The current income will represent roughly the amount that the people have to spend or to save currently; in other words, the amount that is, so to speak, disbursed to them during the year in the form of actual money, commodities, or services on which a pecuniary value is ordinarily placed. In the following tables, in addition to the surplus and inventory gains, the imputed interest on the value of consumption goods in the hands of consumers has also been eliminated from the totals.

The Total Current Income by States.

Chart 8 shows graphically the distribution by the different States of the total current income in 1919 and 1921. In addition to the graphic presentation, the chart also contains the numerical data in the form of percentages of the national totals for 1919, 1920, and 1921. This chart shows in a striking manner the relative unimportance of the income of some of the smaller States as compared with that of the few larger States. The people of New York receive about 15 per cent of the total current income of the country; the people of Nevada only one-tenth of 1 per cent. The seven States at the top of the list in 1919, New York, Pennsylvania, Illinois, Ohio, Massachusetts, California, and Michigan, account for 50 per cent of the total national current income. The seven States at the bottom receive scarcely 2 per cent.

The division of the total current income of the people in each State between the farm and non-farm population is shown in Tables XLVI, XLVII, and XLVIII. In these tables we also have the per capita current incomes in the different States. The per capita figures are here given for four groups of the population, namely, the entire population, the non-farm population, the farm population, and farmers. In computing these per capita incomes, the population figures shown in Table XLIII were used. It will be noticed that the figures representing the farm population were assumed not to have changed in the three years from those reported in the 1920 *Census of Agriculture*. The number of farmers in each State is also based on the figures of the 1920 Census. From the total number of farms in each State was subtracted the number of

CHART 10

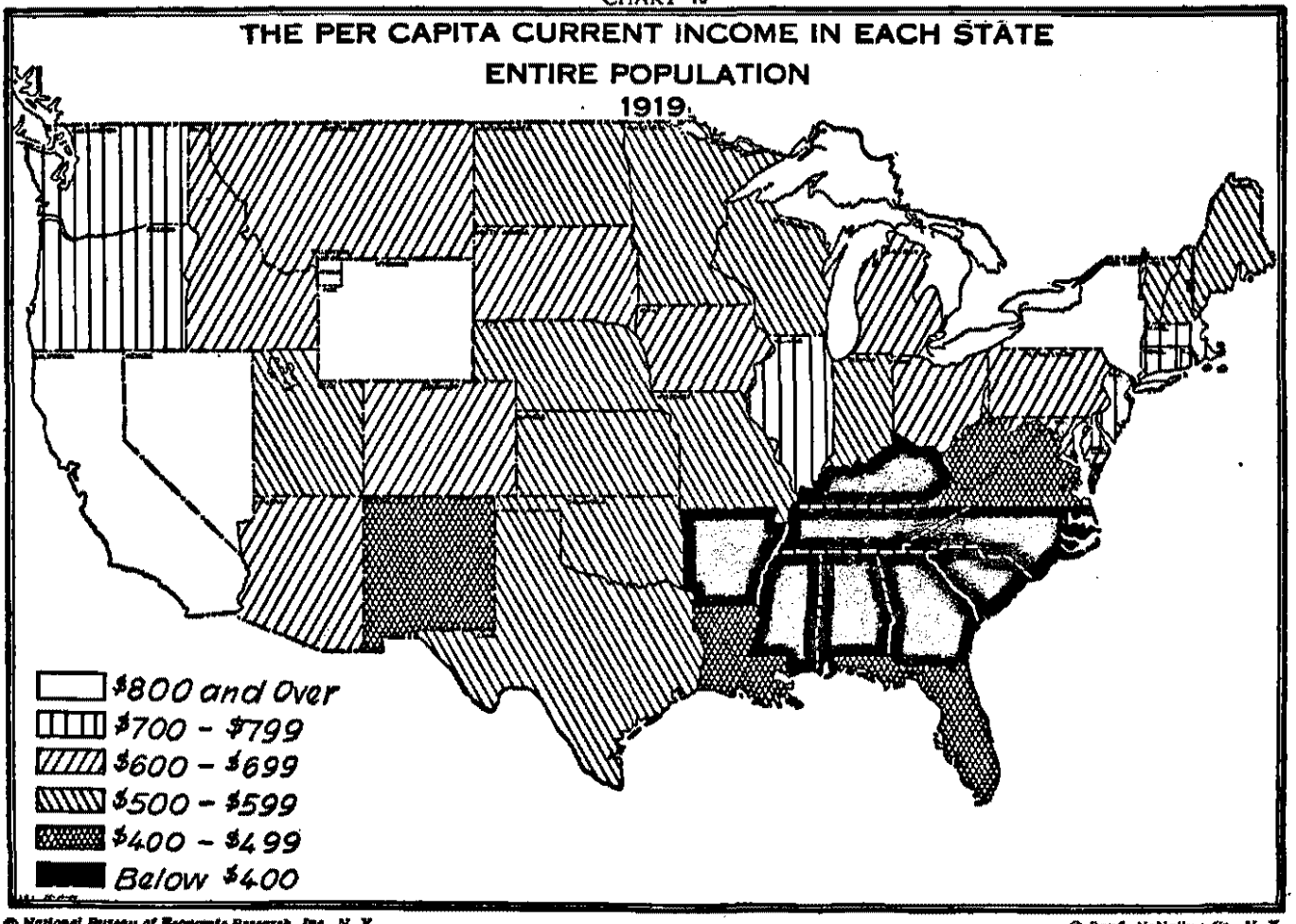
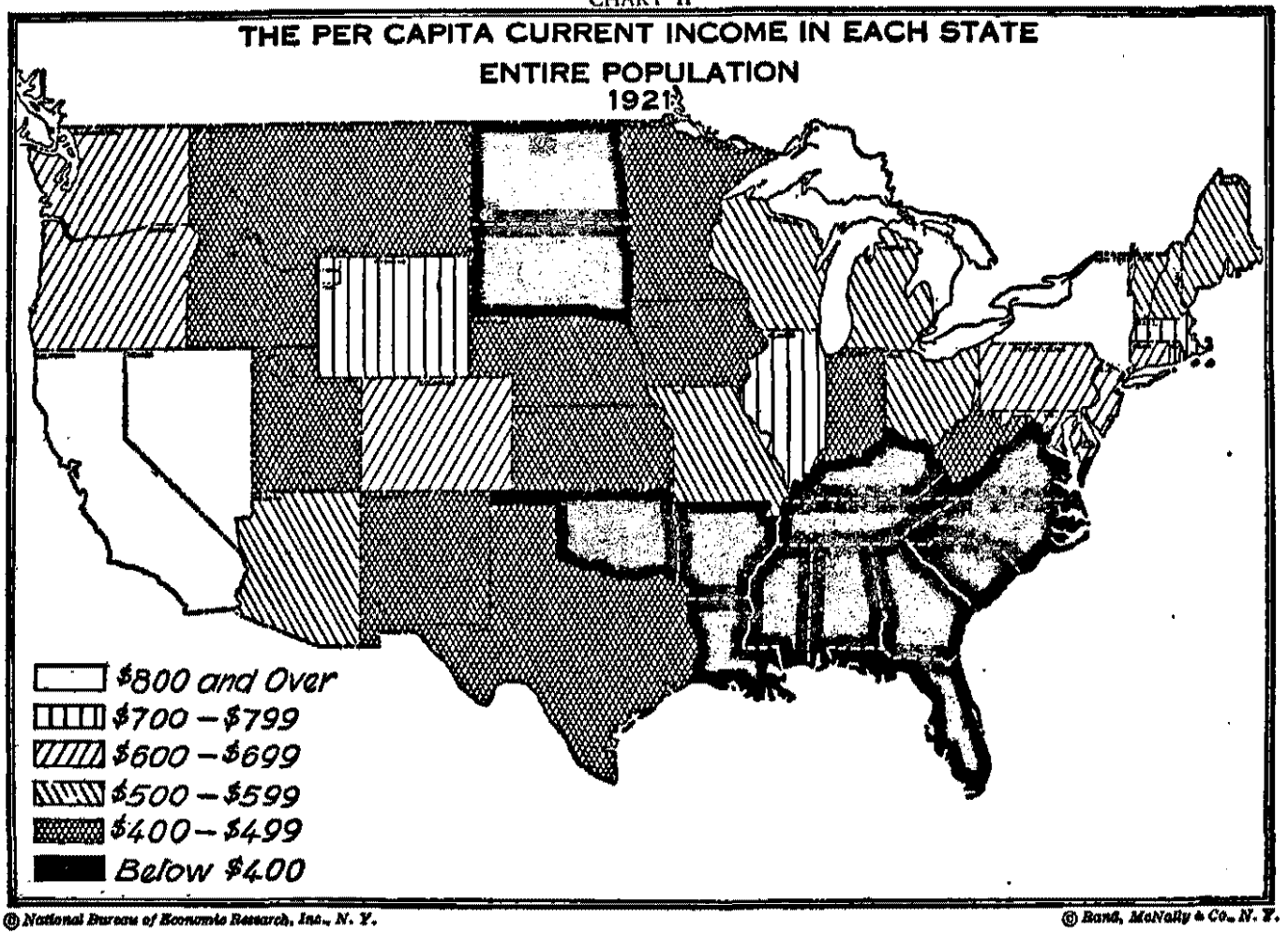


CHART 11



farms operated by managers. The difference presumably gives the number of farmer entrepreneurs. In this case too, the same figures have been used for each of the three years.

The Per Capita Current Income of the Entire Population.

Chart 9 shows a comparison for different States of the per capita current income received in each State by the *entire* population. As has been the practice in connection with previous analyses, 1919 is used as the most nearly normal of the three years, and, consequently, the States are arrayed in accordance with the values for that year. The District of Columbia, with the largest proportion of persons gainfully employed,[1] leads the list in each of the three years. Nevada, which in Chart 8, showing the per cent of total income, was at the bottom of the list, is found to be third highest with regard to per capita current income in 1919. As in the case of average earnings per employee, the southern States appear at the bottom of the array, Mississippi and Alabama being last.

Although the figures represented are in terms of dollars of current purchasing power, the difference in the lengths between the solid black and the shaded bars in the diagram of Chart 9 shows distinctly the effect of the 1921 depression upon the income of the people in the several States.[2] The agricultural States, as we have already learned, show the greatest decrease in 1921. The most noteworthy feature which appears from the present chart is that, in a few districts, the per capita current income in 1921 was greater than in 1919. The District of Columbia, New York, California, and Rhode Island are instances of this phenomenon.

The change in the per capita current income between 1919 and 1921 in the different sections of the country is disclosed with particular force in Charts 10 and 11. In these outline maps of the United States the shading from white to black indicates gradations in per capita incomes from $800 and over down to $400 and below. In 1919 the black area was confined to eight States in the southeastern part of the United States. In 1921, however, the area of lowest per capita income spread to comprise twelve States in the

[1] It should of course be remembered that the District of Columbia is also practically all urban.

[2] With the exception of goods consumed by farmers, the price level of consumption goods in 1921 was about the same as in 1919.

South and also the two Dakotas. Most of the other States also shifted to darker shadings, indicating a marked decrease in income.

The Per Capita Current Income of the Non-farm Population.

The composition of the population being widely different in the various States, comparisons of averages or other generalizations referring to all the inhabitants can only be of limited significance. The purchasing value of the dollar is considerably higher on the farm than in the city and, consequently, the per capita income of the farm population may well be somewhat lower than that of the city population without indicating any particular difference in the economic well-being between the two classes of people. It therefore follows that to compare two States with different proportions of farm population would be somewhat misleading, particularly if we are interested in learning the relative economic status of the people in the two States.

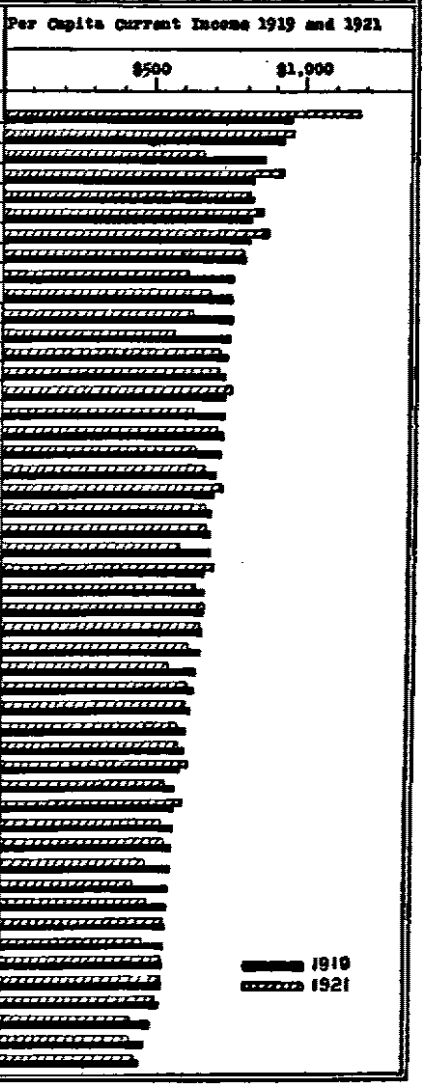
Chart 12 gives a comparison of the current per capita incomes of the non-farm populations in the different States. Although the per capita figures still represent heterogeneous classes of society in each State, the elimination of the farm population greatly adds to the significance of the comparison. It will be noticed that the differences, both relative and absolute, between the per capita current incomes in the *highest* and *lowest* States are smaller for non-farm population than are those found in Chart 9, for the entire population. In other words, there appears to be greater uniformity throughout the country in the per capita income of the non-farm population than in that for the entire population. The highest per capita income of the non-farm population in 1919 (District of Columbia) was about twice as great as the lowest. However, for the entire population, as shown in Chart 9, the highest per capita in 1919 was three times as great as the lowest. The same is found to be the case in the other two years when the highest per capita incomes expressed as percentages of the lowest were 217 per cent and 260 per cent for non-farm population, as compared with 432 per cent and 567 per cent for the entire population. Not only do we find greater uniformity in the income of the non-farm population than in that of the entire population when we consider all the States in one year, but this is also true when we compare

CHART 12

THE PER CAPITA CURRENT INCOME IN EACH STATE
NON-FARM POPULATION
1919-1920-1921

STATES ARRAYED ACCORDING TO SIZE OF PER CAPITA CURRENT INCOME IN 1919

Rank of State 1919	Per Capita Current Income (Dollars) 1919	1920	1921	State
1	956	1,095	1,176	Dist. of Columbia
2	928	1,045	958	New York
3	861	778	667	Delaware
4	825	977	926	California
5	822	898	814	Illinois
6	820	972	850	Nevada
7	811	923	874	Wyoming
8	794	949	788	Massachusetts
9	759	760	611	Montana
10	756	752	678	Oregon
11	756	881	628	Michigan
12	751	795	567	Arizona
13	745	750	716	Washington
14	740	846	716	Maryland
15	739	867	759	Rhode Island
16	738	844	626	Ohio
17	735	828	705	New Jersey
18	725	852	641	Connecticut
19	708	649	569	South Dakota
20	704	773	729	Colorado
21	698	817	672	Pennsylvania
22	694	738	670	Nebraska
23	680	736	579	Oklahoma
24	670	771	706	Missouri
25	670	738	647	Minnesota
26	666	748	669	Texas
27	663	731	652	Kansas
28	657	730	621	Iowa
29	638	624	551	Idaho
30	636	742	620	New Hampshire
31	628	757	616	Indiana
32	610	689	579	Wisconsin
33	602	696	585	Vermont
34	592	706	617	Maine
35	577	626	543	Utah
36	574	667	606	Kentucky
37	574	596	528	Virginia
38	564	725	546	West Virginia
39	562	542	478	Arkansas
40	555	544	438	South Carolina
41	552	561	487	Georgia
42	547	618	540	Louisiana
43	541	508	470	Mississippi
44	532	569	536	New Mexico
45	531	574	529	Tennessee
46	529	573	512	North Dakota
47	500	523	431	North Carolina
48	483	513	430	Alabama
49	463	504	450	Florida



the three years for each State separately. In the diagram of Chart 12, the bars representing 1921 more uniformly approach the size of those standing for the 1919 percentages than in the diagram of Chart 9.

In the matter of the rank of the different States, Chart 12 is also at variance with Chart 9. For instance, New Jersey in 1919 ranks tenth in per capita income of the entire population, but it drops to seventeenth place in the per capita income of the non-farm population. Connecticut drops from the thirteenth to the eighteenth place; Rhode Island from the ninth to the fifteenth, and Florida from the fortieth to the forty-ninth. On the other hand, Montana, which ranks twenty-first in the per capita income of the entire population (Chart 9), ranks ninth in the per capita non-farm population. Michigan shifts from the eighteenth place for the entire population to the eleventh for the non-farm population and, in the same manner, Oklahoma rises from the thirty-fifth place to the twenty-third.

The Per Capita Current Income of the Farm Population.

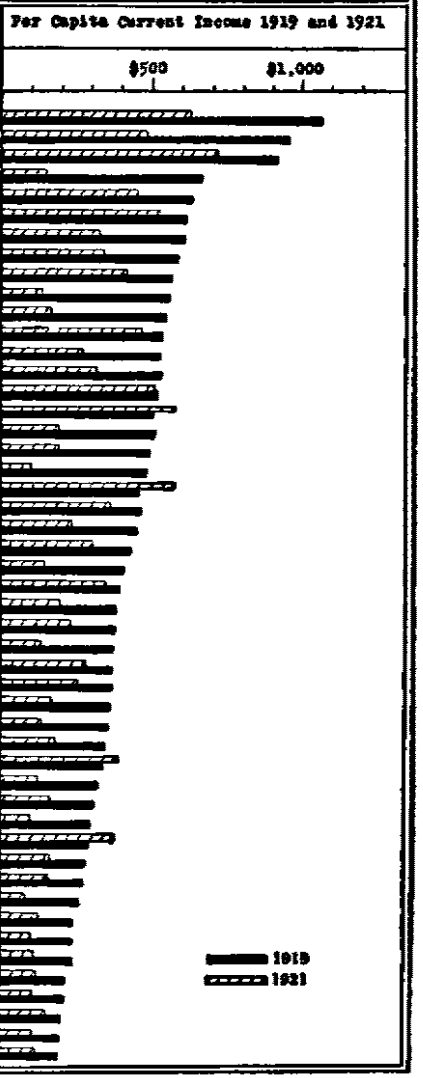
In Chart 13 the current income of the farm population is subjected to the same treatment as that of the entire population and the non-farm population in Charts 9 and 12. This chart depicts graphically the comparative current income of the farm population in the various States. Perhaps the most striking feature of this chart is the complete disparity in most of the States between the income of the farm population in 1919 and that in 1921. (As in the preceding graphs, the figures represented in Chart 13 are in terms of dollars of current purchasing power, and consequently, owing to the fact that the average prices of goods consumed by farmers were lower in 1921 than in 1919, the differences between farm incomes in the two years are somewhat exaggerated.[1]) While in the diagram of Chart 12 the bars representing 1921 in general approach very closely the size of those in 1919, the discrepancy between the 1919 and 1921 values in Chart 13 is very great indeed. In Nebraska, for example, the per capita income of the farm population in 1921 dwindled down to about one-fifth of what it was in

[1] It has not been found feasible at this time to compute with accuracy the current income of the different classes of the population in each State in terms of dollars of 1913 purchasing power. The indices of the prices of goods consumed by farmers in all States combined are 1.845, 2.001, and 1.557 for 1919, 1920, and 1921, respectively (1913 = 1.00).

CHART B.

THE PER CAPITA CURRENT INCOME IN EACH STATE
FARM POPULATION
1919-1920-1921
STATES ARRAYED ACCORDING TO SIZE OF PER CAPITA CURRENT INCOME IN 1919

Rank of State 1919	Per Capita Current Income (Dollars) 1919	1920	1921	State
1	1,064	832	628	Nevada
2	958	746	487	Wyoming
3	916	1,064	726	California
4	669	347	150	South Dakota
5	630	621	451	Oregon
6	614	659	533	Washington
7	609	569	328	Colorado
8	587	523	342	Idaho
9	565	566	419	New Jersey
10	559	240	137	Iowa
11	544	371	166	Illinois
12	537	612	470	New York
13	534	355	268	Dist. of Columbia
14	533	537	319	Arizona
15	521	615	508	Rhode Island
16	510	625	574	Massachusetts
17	510	360	187	North Dakota
18	487	395	186	Kansas
19	483	284	99	Nebraska
20	464	545	570	Connecticut
21	453	496	359	Wisconsin
22	449	392	237	Utah
23	427	386	305	Montana
24	406	257	142	Minnesota
25	392	374	341	Maine
26	379	327	190	Ohio
27	375	344	233	New Mexico
28	371	269	135	Indiana
29	368	374	276	Pennsylvania
30	363	381	255	Michigan
31	360	327	171	Texas
32	354	298	137	Oklahoma
33	348	299	178	Delaware
34	339	444	387	Vermont
35	324	228	124	Missouri
36	312	288	168	Maryland
37	298	192	99	South Carolina
38	296	372	379	New Hampshire
39	277	242	164	Florida
40	275	217	156	North Carolina
41	256	165	84	Georgia
42	243	192	126	Arkansas
43	241	149	100	Mississippi
44	240	164	108	Louisiana
45	214	202	124	Virginia
46	213	170	109	Kentucky
47	207	204	151	West Virginia
48	200	140	109	Alabama
49	192	165	121	Tennessee



1919. Similar reductions are seen all the way along the line. It is, however, curious to note that in New England the per capita income of the farm population was, on the whole, somewhat higher in 1921 than in 1919.

Aside from the discrepancy in the per capita income between the years, we also note that in the case of the farm population the variation in the per capita income in the different States is tremendously large. In 1919 the highest per capita income was about 550 per cent of the lowest; in 1921 the highest was over 725 per cent of the lowest; in 1920 the variation was a little lower. The chief reason for such wide dispersion in the per capita income of the farm population is the difference in agricultural yield per individual, due to differences in fertility, climatic conditions, and the use of capital. Another reason, however, and not the least important, is the difference in per capita ownership by the farm population of farm property and working capital in the various States. The State with a great proportion of tenant farmers or mortgaged farms would naturally show a low per capita income for the farm population, for a considerable portion of the farm income would be distributed among non-farmers.

A characteristic feature, already touched upon in our chapter on agricultural production, is brought out in the graph in connection with the States where dairying and the production of poultry products are of great importance. The per capita income in Wisconsin during the three years is remarkable for its steadiness, especially when compared with the other States in the Middle West adjacent to it. The variation in per capita income of the farm population of Wisconsin, like that of a few other States with a large proportion of agricultural products serving the immediate consumers, such as New York, Pennsylvania, and California, reflects the changes in the general price level of consumers' goods rather than those of agricultural products. Unlike most of the other States where 1919 was the highest year, the per capita income in the group of States typified by Wisconsin was higher in 1920 than in either of the other two years.

Current Income per Farmer.

The differences in the income of the farm population in the different States and years are best shown in Charts 14 and 15.

CHART 14

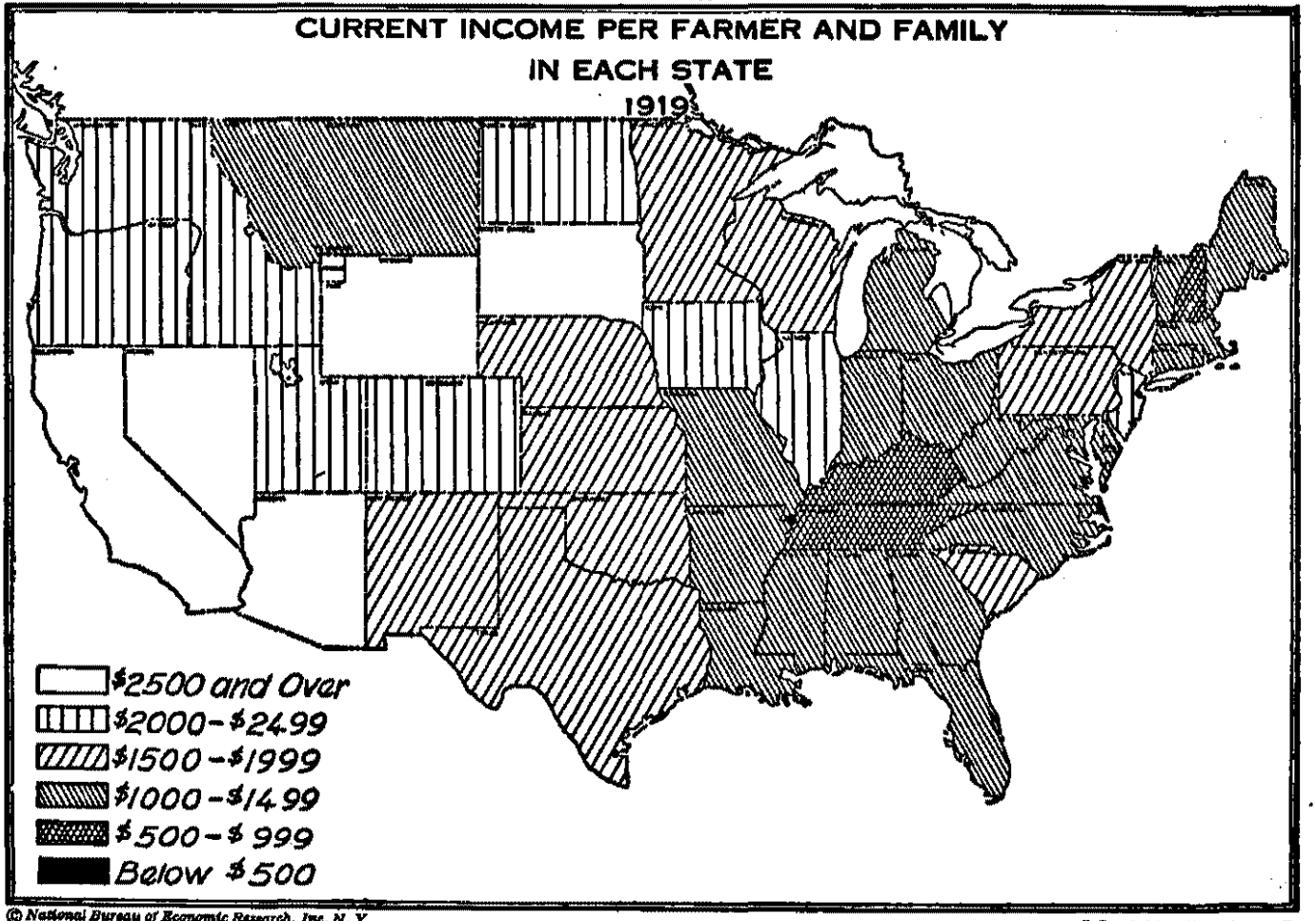
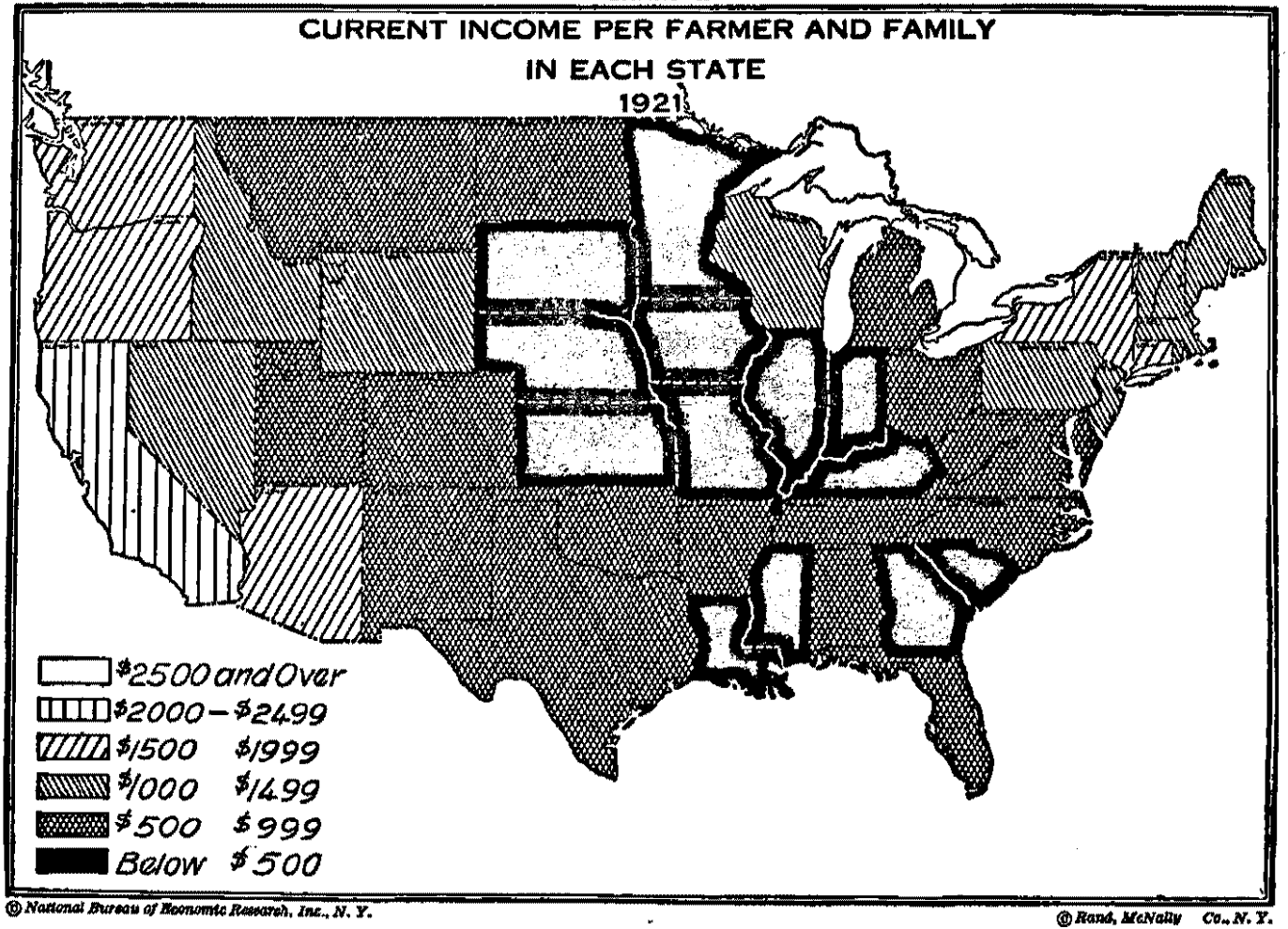


CHART 15



In these charts we have outline maps of the United States shaded in accordance with six classes of income per farmer and family. The gradation in shading is here carried out in the same manner as in similar charts appearing previously, i.e., the darker the shading, the lower the income. A glance at the two maps is sufficient to enable one to grasp the appalling economic reverses which overcame the farmers of the country in 1921. In 1919 there was not a single State where the average income per farmer was below $500. Only three States showed average incomes below $1,000 and in five States the average income per farmer was above $2,500. In 1921, however, the darker shades on the map dominated, nine States in the corn and wheat sections of the country and four States in the cotton belt showing incomes per farmer below $500. The farmers in two-thirds of the States, representing about three-fourths of the area of the country, and comprising 85 per cent of the farm population, received average incomes of less than $1,000. Only in one State was the average income per farmer above $2,000, and the number of States with average incomes per farmer above $1,500 was limited to six.

The Share of the Farm Population in the Current Income of Each State.

In a previous chapter we had occasion to see that agricultural wages play only a minor part in the total wages and salaries received by all employees. The explanation advanced at that point was that in agriculture the greater share of the work is performed by the farmers themselves and their families. Let us now see how the combined current income of farmers and farm employees compares with the total current income of the entire population of each State. Table XLIX shows for each State the per cent of the total current income in the State received by the farm population in each of the three years. For comparative purposes, a column has also been added to show the per cent of the total population in each State living on farms. We learn that in the Continental United States the farm population, comprising about 30 per cent of the total, receives less than 18 per cent of the total current income of the country. In 1921 the farm population received scarcely 10 per cent.

With the exception of a very few States, the disparity between the percentages representing income and those representing population is very great indeed. In Maryland 19.3 per cent of the population receives only from 9.2 per cent to 5.2 per cent of the total income. In West Virginia, the farm population, comprising 32.7 per cent of the total, obtains from 15.3 per cent to 11.3 per cent of the total income of the State.

To make a fair comparison between the income of the farm population and that of the non-farm population, we must, of course, consider the relative amount of capital involved, and allowance should also be made for the relatively larger purchasing value of farm incomes than those of urban incomes.[1] However, we may get a general idea of the situation in each part of the country by merely studying the percentages given in Table XLIX. Where does the average income of the farm population most nearly approach that of the non-farm population? Following the previously established practice of selecting 1919 as the most typical of the three years, a ratio has been computed for each division of the percentage which the farm income is of the total income in that year to the percentage which the farm population is of the total population as of January 1, 1920. It is obvious that the closer these ratios approach to unity, the closer is the per capita income of the farm population to that of the entire or non-farm population.

The following is an array of these ratios for the several geographic divisions:

TABLE M.—RATIO OF PERCENTAGE OF FARM INCOME TO PERCENTAGE OF FARM POPULATION

Rank	Geographic Division	Ratio
1	Pacific	.99
2	Mountain	.86
3	West North Central	.80
4	West South Central	.68
5	East North Central	.64
6	East South Central	.62
7	Middle Atlantic	.59
8	South Atlantic	.59
9	New England	.56
	Continental United States	.59

[1] See p. 258.

TABLE XLIX.—PER CENT OF TOTAL CURRENT INCOME IN EACH STATE RECEIVED BY FARM POPULATION, 1919–1920–1921

State and Geographic Division	Per Cent of State Total			
	Current Income			Population Living on Farms in 1920*
	1919	1920	1921	
Continental United States	17.7	13.4	9.9	29.9
New England	4.8	4.6	5.1	8.5
Maine	18.7	15.5	16.0	25.7
New Hampshire	8.8	9.4	11.2	17.2
Vermont	23.6	26.0	26.8	35.5
Massachusetts	2.0	2.0	2.2	3.1
Rhode Island	1.8	1.8	1.7	2.5
Connecticut	4.5	4.4	5.8	6.8
Middle Atlantic	5.0	4.6	3.9	8.5
New York	4.6	4.6	3.8	7.7
New Jersey	3.6	3.1	2.7	4.6
Pennsylvania	6.1	5.3	4.7	10.9
East North Central	14.7	11.1	8.4	22.9
Ohio	11.4	8.6	6.7	19.8
Indiana	21.0	13.7	8.8	31.0
Illinois	12.0	7.7	3.9	16.9
Michigan	12.8	11.4	10.3	23.1
Wisconsin	29.2	27.7	24.4	35.0
West North Central	32.9	21.2	13.0	41.2
Minnesota	26.9	17.2	11.3	37.6
Iowa	37.3	18.5	13.0	41.0
Missouri	21.1	14.0	8.7	35.6
North Dakota	60.5	49.2	35.2	61.0
South Dakota	55.7	41.2	25.1	56.9
Nebraska	36.5	23.9	10.6	45.1
Kansas	34.5	27.8	16.8	41.7

South Atlantic	27.1	20.4	15.2	45.9
Delaware	10.8	10.2	7.2	23.0
Maryland	9.2	7.5	5.2	19.3
Dist. of Columbia	0.1	0.1	0.1	0.2
Virginia	24.4	22.4	16.2	46.1
West Virginia	15.3	11.9	11.3	32.7
North Carolina	44.3	36.6	32.6	58.7
South Carolina	49.0	38.1	27.5	63.8
Georgia	39.6	28.7	18.7	58.2
Florida	20.0	16.2	12.4	29.1
East South Central	35.9	27.3	24.5	58.3
Kentucky	30.5	22.9	17.1	54.0
Tennessee	30.3	25.5	21.1	54.4
Alabama	35.6	26.2	24.4	56.9
Mississippi	52.1	41.8	34.3	71.0
West South Central	34.6	28.3	19.2	51.0
Arkansas	45.4	39.8	32.1	65.5
Louisiana	25.6	17.0	13.1	43.7
Oklahoma	34.8	28.6	18.2	50.2
Texas	34.5	29.1	18.7	48.8
Mountain	30.1	26.0	19.9	35.0
Montana	28.8	25.6	23.9	41.1
Idaho	45.1	41.7	33.1	46.5
Wyoming	38.9	29.5	21.4	34.6
Colorado	25.7	22.3	14.6	28.3
New Mexico	36.5	32.7	25.5	44.8
Arizona	21.4	19.6	15.9	27.1
Utah	26.4	21.9	15.9	31.2
Nevada	25.3	18.5	16.4	20.9
Pacific	18.0	17.4	13.2	18.2
Washington	18.0	18.7	15.9	20.9
Oregon	24.0	23.5	19.4	27.3
California	16.7	16.0	11.5	15.1

[a] *Census of Agriculture*, 1920, Vol. V, p. 894.

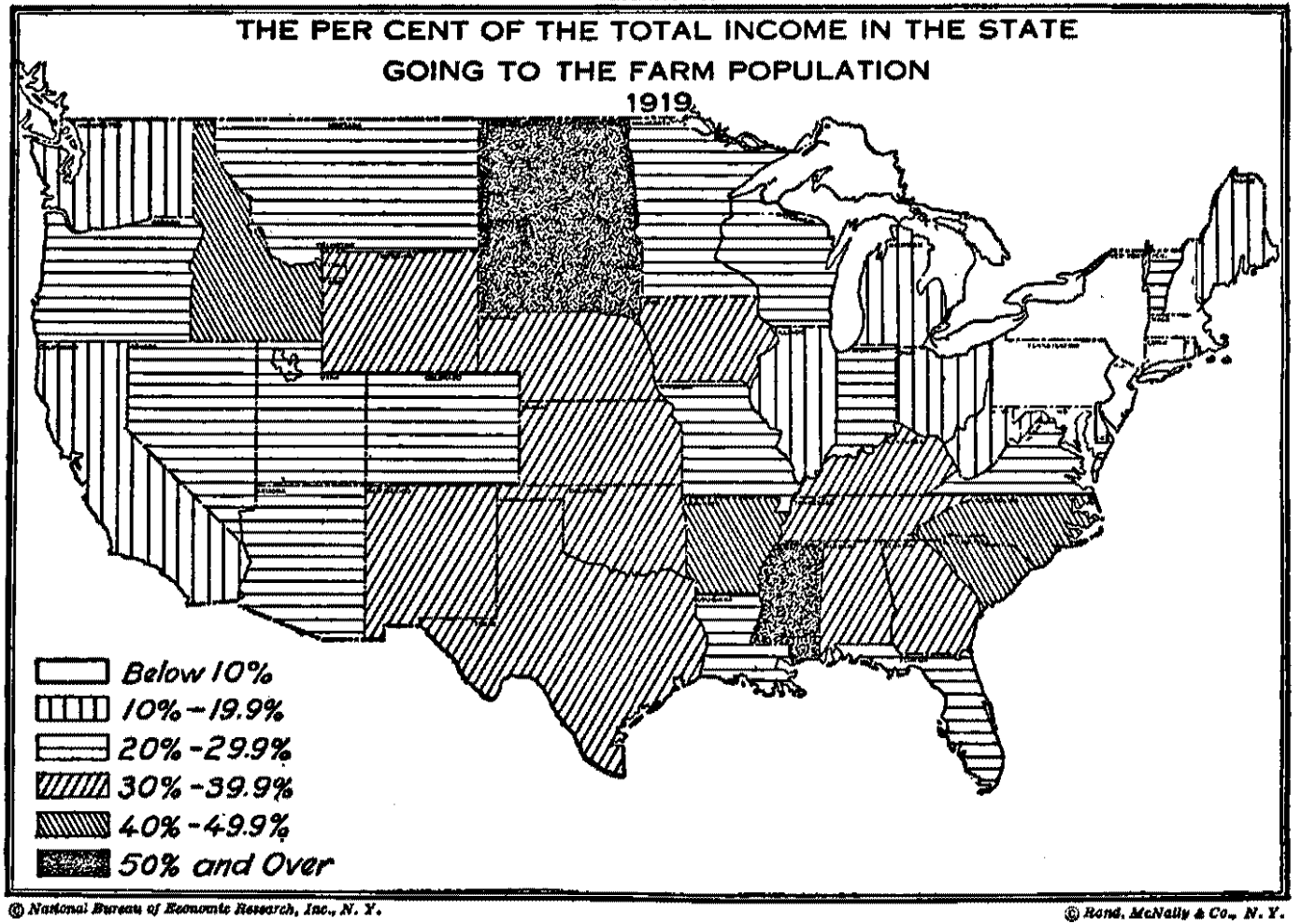
In the Pacific States there is apparently the greatest correspondence, if 1919 figures are typical, between the income of the farm population and that of the non-farm population; in New England, we have the greatest divergence. Viewing individual States, we find that in Nevada, Wyoming, and California, the percentage of total income received by the farm population is greater than the percentage of total population living on farms. In North and South Dakota, the percentage representing total income in 1919, and the percentage representing total population, were nearly the same. In other words, in the above five States, the per capita income of the farm population is either higher than or nearly the same as the per capita income of the entire or non-farm population. This fact is also shown in Table XLVI.

Chart 16 gives a graphic picture of the relative importance of the income received by the farm population in the total current income of each State. Only in the Dakotas and Mississippi does the income of the agricultural population surpass 50 per cent of the total, and only four other States show an agricultural income above 40 per cent of the total. In the majority of States the income of the farm population makes up between 20 and 40 per cent of the total.

THE INCOME OF THE BULK OF THE PEOPLE

For certain purposes a greater refinement of data may be necessary than is shown in the tables presented thus far. To know merely the total income of the people living in the various States may, in some cases, mislead the investigator, and obscure the problem at hand. For instance, given two hypothetical States, A and B, with approximately the same number of inhabitants, the first having a total income of $100,000,000 and the other of $125,000,000, — in which of the two States are the people more prosperous? Without any further information, one would, of course, be inclined to conclude that in the State with the larger income (the population of the two being equal) the people enjoy greater economic prosperity than in the one with the smaller total income. Such a conclusion may, however, be far from the truth, if the distribution of the income in the two States is radically different. With 100,000 people in each of the two hypothetical States, it is

CHART 16



conceivable that in State A each individual gets $1,000, while in State B 100 individuals receive $40,000,000, or $400,000 apiece, and the other 99,900 individuals receive $85,000,000, or only about $910 each. In other words, if we desire to know the economic welfare of the majority of the people, the total income by itself or the per capita average of such total is not sufficient. Then again, our problem may be of more immediate and practical application. It is desired to know approximately the amount the people of the two hypothetical States spend on consumption goods. We may assume that in the State with equal distribution there is more money for consumption goods, particularly the goods to be purchased locally, than in the State where a great share of the income goes to a few rich, as the portion of the income saved or spent elsewhere will be greater for the wealthy than for the income distributed among the entire population.

Higher Incomes Eliminated.

Tables L and LI are the result of an attempt to eliminate the higher incomes in the several States and study only the income of the bulk of the population. These tables give estimates by States for each of the three years of the total income of those depending upon family incomes smaller than $10,000 each, also of those depending upon family incomes less than $5,000. The amounts recorded are the differences between the totals of current income for the entire population shown in Tables XLVI, XLVII, and XLVIII, and estimates of the total income received in each State by those with incomes $10,000 and above and those with incomes $5,000 and above. The latter estimates are based upon the Statistics of Income of the U. S. Bureau of Internal Revenue.[1]

It should be borne in mind that the estimates presented in Tables L and LI are in current dollars. The purchasing value of the dollar being different in each of the three years, our classifications, *Incomes smaller than* $10,000 and *Incomes smaller than* $5,000, are, strictly speaking, not identical throughout the period.

In addition to the estimates of the total income received by

[1] The Internal Revenue figures were raised 10 per cent in order to allow roughly for under-reporting and income omitted from reports for various reasons; 10 per cent seems to be a very conservative estimate, and it is quite probable that, if anything, it is too low. Consequently, the totals as shown in Tables L and LI may be somewhat high.

those within the classes specified, estimates have also been made of the total population comprised in these classes. The population has been estimated on the basis of the number of returns in the higher income classes ($10,000 and above, and $5,000 and above), and the estimated number of persons per return in each year.[1]

The population comprised in the income classes below $10,000 and below $5,000 is shown in Tables L and LI for each of the three years as percentages of the total in each State. These percentages, together with those representing the total income within the specified classes, which are also recorded in the tables, present some very interesting facts relative to the distribution of income in each section of the country.

Current Income of the Population in Income Classes Below $10,000.

Starting with Table L, we learn that in 1919, 99.3 per cent of the total population in the country received only about 90.1 per cent of the total current income, so that about 0.7 per cent of the population, falling into the income classes $10,000 and above, received almost 10 per cent of the total current income of the country. In the New England division the share of those with incomes above $10,000 was even greater, 0.9 per cent of the population receiving 12.5 per cent of the income. The Middle Atlantic States present an advance in this respect even above New England, 15.2 per cent of the income being received by 1.1 per cent of the population.

Still considering entire geographic divisions, the Mountain States seem to present the least concentration of income in the highest income classes. In this division, 95.7 per cent of the income is received by 99.6 per cent of the population, i.e., in these States the number of people with incomes $10,000 and above is quite small, and, what is more important, these higher incomes absorb a relatively smaller portion of the total income than in any of the other divisions.

[1] The number of persons per return for all income classes was estimated to be 2.82 in 1919, 2.78 in 1920, and 2.76 in 1921. To arrive at these estimates, the number of returns from heads of families, computed from the income tax figures, was multiplied by 4.2, the number of persons per urban family (*Census of Population*, 1920, Vol. II, p. 1273). The products were added to the number of returns received from single men and single women. Slight adjustments were made in the final figures so as to take care of the fact that in higher income classes there are slightly fewer people gainfully employed per family than in the lower income classes.

TABLE L.—TOTAL CURRENT INCOME IN EACH STATE RECEIVED BY THE POPULATION DEPENDING UPON FAMILY INCOMES SMALLER THAN $10,000 EACH, 1919–1920–1921

State and Geographic Division	1919			1920			1921		
	Amount Dollars (000's Omitted)	Per Cent of Total in State		Amount Dollars (000's Omitted)	Per Cent of Total in State		Amount Dollars (000's Omitted)	Per Cent of Total in State	
		Income	Population		Income	Population		Income	Population
Continental United States	**58,158,856**	**90.1**	**99.3**	**64,522,985**	**91.6**	**99.3**	**55,350,294**	**92.7**	**99.5**
New England	**4,603,503**	**87.5**	**99.1**	**5,680,311**	**90.0**	**99.1**	**4,834,931**	**90.9**	**99.3**
Maine	389,433	94.0	99.6	449,118	94.1	99.5	397,089	94.2	99.6
New Hampshire	238,424	93.4	99.5	283,856	94.2	99.5	244,760	95.0	99.7
Vermont	167,173	93.1	99.6	200,708	93.9	99.6	173,260	95.5	99.7
Massachusetts	2,563,691	85.4	99.0	3,231,969	88.8	98.9	2,780,232	90.1	99.1
Rhode Island	383,721	87.0	99.1	461,815	88.2	99.0	411,489	88.7	99.1
Connecticut	861,061	89.1	99.1	1,052,845	90.9	99.1	828,101	90.8	99.3
Middle Atlantic	**14,643,155**	**84.8**	**98.9**	**17,596,150**	**88.3**	**98.9**	**15,805,318**	**89.3**	**99.1**
New York	7,486,411	80.9	98.5	9,131,219	86.3	98.6	8,600,780	87.8	98.8
New Jersey	2,028,334	89.3	99.2	2,348,059	90.2	99.1	2,062,072	90.8	99.2
Pennsylvania	5,128,410	89.4	99.3	6,116,872	90.6	99.2	5,142,466	91.4	99.4
East North Central	**13,077,438**	**91.7**	**99.3**	**14,666,458**	**92.3**	**99.3**	**11,879,486**	**93.0**	**99.5**
Ohio	3,478,503	91.5	99.3	3,977,360	92.2	99.3	3,001,739	92.9	99.5
Indiana	1,521,850	95.1	99.6	1,695,793	95.0	99.6	1,323,324	95.7	99.7
Illinois	4,487,162	89.9	99.1	4,787,521	90.6	99.1	4,294,103	91.2	99.3
Michigan	2,197,572	91.4	99.5	2,648,529	93.0	99.4	1,965,761	93.7	99.6
Wisconsin	1,392,351	95.3	99.6	1,557,255	94.6	99.6	1,294,559	95.5	99.7
West North Central	**6,809,949**	**93.7**	**99.5**	**6,457,589**	**93.2**	**99.4**	**5,444,170**	**95.9**	**99.7**
Minnesota	1,266,842	93.7	99.5	1,249,568	93.1	99.5	1,067,909	94.5	99.7
Iowa	1,396,363	94.5	99.4	1,162,102	90.9	99.2	1,022,023	98.6	99.8
Missouri	1,677,715	90.3	99.5	1,821,324	92.4	99.4	1,608,924	93.8	99.6
North Dakota	325,936	98.0	99.8	283,427	98.2	99.9	207,043	98.9	99.9
South Dakota	420,954	96.8	99.7	294,346	96.3	99.7	213,681	98.7	99.9
Nebraska	725,312	94.0	99.4	645,535	92.8	99.4	526,736	96.1	99.8
Kansas	996,827	95.8	99.7	1,001,287	95.6	99.6	797,854	97.4	99.8

South Atlantic	5,736,307	92.7	99.6	5,869,696	93.2	99.6	4,904,144	94.1	99.7
Delaware	136,708	82.9	99.1	137,022	91.4	99.2	116,886	92.9	99.3
Maryland	824,580	87.0	99.0	955,597	88.7	99.0	817,386	90.1	99.2
District of Columbia	381,104	89.7	98.9	426,056	90.5	98.8	441,114	91.2	98.0
Virginia	878,496	94.0	99.7	912,974	94.7	99.7	784,211	96.3	99.8
West Virginia	614,831	95.0	99.7	769,463	93.7	99.6	604,785	94.9	99.7
North Carolina	878,837	94.2	99.8	842,250	94.8	99.8	673,835	93.5	99.9
South Carolina	622,113	95.2	99.7	521,402	96.0	99.8	378,968	97.7	99.9
Georgia	1,034,520	94.7	99.7	917,418	95.1	99.8	733,094	96.5	99.9
Florida	365,118	93.4	99.6	387,514	92.3	99.5	353,865	94.4	99.7
East South Central	2,885,306	94.4	99.7	2,816,000	95.2	99.8	2,443,723	96.6	99.9
Kentucky	863,709	94.8	99.7	917,156	94.8	99.7	797,083	96.1	99.1
Tennessee	747,801	92.8	99.7	775,079	93.8	99.7	702,967	95.8	99.8
Alabama	720,901	96.0	99.8	684,602	96.2	99.8	580,644	97.2	99.9
Mississippi	552,895	94.0	99.7	439,163	86.8	99.9	363,029	98.1	99.9
West South Central	4,430,866	92.9	99.6	4,652,560	94.3	99.7	3,810,854	96.5	99.8
Arkansas	585,253	95.5	99.8	529,088	95.7	98.5	436,717	97.1	99.9
Louisiana	663,837	89.9	99.5	702,403	92.5	99.6	613,238	94.8	99.8
Oklahoma	972,935	94.0	99.6	988,174	93.1	99.6	740,313	96.3	99.8
Texas	2,208,841	92.7	99.5	2,432,895	95.1	99.7	2,020,586	96.9	99.8
Mountain	2,001,372	95.7	99.6	2,122,013	97.3	99.7	1,801,935	97.5	99.8
Montana	324,482	97.0	99.7	332,605	98.0	99.8	282,620	98.3	99.9
Idaho	254,439	97.4	99.7	248,570	98.5	99.9	205,815	99.2	99.9
Wyoming	157,905	95.2	99.4	165,976	97.5	99.7	149,772	97.6	99.7
Colorado	590,045	93.6	99.4	652,406	96.3	99.5	574,041	95.8	99.1
New Mexico	161,823	97.5	99.8	167,145	98.4	99.9	145,797	98.8	99.9
Arizona	215,451	95.6	99.6	241,530	97.6	99.7	180,037	98.9	99.9
Utah	230,816	96.6	99.7	242,034	96.4	99.7	202,981	97.0	99.8
Nevada	66,411	97.7	99.7	71,747	98.7	99.8	60,872	98.2	99.8
Pacific	3,970,960	91.2	99.1	4,662,208	93.0	99.1	4,425,733	93.9	99.3
Washington	907,748	94.0	99.4	981,941	98.1	99.6	926,502	97.6	99.8
Oregon	521,150	92.8	99.5	533,159	94.4	99.5	474,430	95.2	99.6
California	2,542,062	89.8	98.9	3,147,108	91.3	98.9	3,024,801	92.6	99.1

For individual States, North Dakota shows the minimum "spread" between the percentages of income and population at the point of incomes of $10,000 each. In 1919 only 2 per cent of the total income in that State went to the 0.2 per cent of the total population who received incomes of $10,000 and above. The greatest disparity between the percentage of total income and that of total population (at the point of incomes of $10,000 each) is found in New York, where 98.5 per cent of the population received only 80.9 per cent of the total current income, which means that 1.5 per cent of the population with incomes $10,000 and above got over 19 per cent of the total current income in the State. This would seem to indicate that, although the per capita income of the entire population in the State of New York is comparatively high, the per capita income of the majority falling within the lower income classes may not make as favorable a showing.

It is of interest to note that in 1920, and especially in 1921, the lower incomes almost invariably comprised a greater share of the total current income than in 1919, or that there was a greater approach to an even distribution of income in the second and third years, chronologically, than in the first. In 1920, which presumably was a prosperous year, the lower incomes apparently gained proportionately more than the higher ones, and during the 1921 depression the reduction in the higher incomes was greater than in the lower. In 1921 only 0.5 per cent of the total population received incomes $10,000 and above. The total amount comprised in the higher incomes was only 7.3 per cent of the total current income, as compared with 9.9 per cent in 1919. A considerable portion of the apparent reduction in the higher incomes subsequent to 1919 may, of course, be due to the fact that the large income tax payers increasingly found methods of avoidance which resulted in greater underreporting on their income tax returns. Unfortunately, there is no way of measuring this. The greatest relative reduction in the higher incomes in 1921 seems to have taken place in Delaware, where the per cent of total current income received by those with incomes of $10,000 and above changed to 7.1 per cent from 17.1 in 1919. In New York, also, we see a very great reduction in the current income in the higher income classes, as compared with that in the lower income classes. As a matter of fact, the situation

in New York was very peculiar. In the face of a considerable reduction in the current income of the higher income classes, there was an increase over 1919 in the current income received by those depending upon incomes smaller than $10,000. Somewhat the same situation obtained in California, Massachusetts, and the District of Columbia, and, to a lesser degree, in New Jersey and Pennsylvania.

Current Income of the Population in Income Classes Below $5,000.

We have seen that less than 1 per cent of the population is included in income classes $10,000 and above; but even incomes between $5,000 and $10,000 are comparatively rare, particularly in some States. Table LI presents a study of the income of the people in each State with incomes smaller than $5,000. Fully 98 per cent of the total population apparently falls within this class. It would seem that, normally, this class receives about 85 per cent of the total current income, the individual States presenting considerable variation in this respect. During the three years, this class accounted for only about 75 per cent of the total current income in New York, and for about 95 per cent in New Mexico. As in the case of incomes $10,000 and above, New York had proportionately a greater number of people with incomes more than $5,000 than any other State. But even here, only 3.5 per cent of the population fell in this class in 1919. The smallest number of incomes $5,000 and above was in Alabama, only 0.6 per cent of the population in the State enjoying such incomes in 1919.

Distribution of Income by Specified Income Classes by Geographic Divisions.

That there is quite a different distribution by States of the income falling within different income classes is evident. The effect of the comparatively small number of large incomes in the different sections of the country is illustrated by the figures in Table N giving a comparison for 1919 of the percentage distribution by geographic divisions of the total current income received by the population included in the income classes discussed in connection with Tables L and LI.

TABLE LI.—TOTAL CURRENT INCOME IN EACH STATE RECEIVED BY THE POPULATION DEPENDING UPON FAMILY INCOMES SMALLER THAN $5,000 EACH, 1919–1920–1921

State and Geographic Division	1919			1920			1921		
	Amount Dollars (000's Omitted)	Per Cent of Total in State		Amount Dollars (000's Omitted)	Per Cent of Total in State		Amount Dollars (000's Omitted)	Per Cent of Total in State	
		Income	Population		Income	Population		Income	Population
Continental United States	**54,959,107**	**85.2**	**98.1**	**61,108,309**	**86.8**	**98.0**	**52,708,018**	**88.3**	**98.5**
New England	**4,365,285**	**85.0**	**97.8**	**5,428,991**	**86.0**	**97.6**	**4,593,009**	**86.3**	**97.9**
Maine	370,243	89.4	98.5	429,872	90.1	98.5	380,066	90.2	98.7
New Hampshire	227,156	89.0	98.4	272,498	90.4	98.4	234,620	91.1	98.7
Vermont	159,000	88.5	98.6	192,599	90.1	98.6	166,743	91.9	98.9
Massachusetts	2,429,998	80.9	97.5	3,092,137	84.9	97.3	2,635,562	85.4	97.6
Rhode Island	364,128	82.5	97.7	442,460	84.5	97.7	393,064	84.7	97.9
Connecticut	814,760	84.3	97.7	999,425	86.3	97.5	782,954	85.8	98.0
Middle Atlantic	**13,765,320**	**79.7**	**97.3**	**16,615,238**	**83.4**	**97.1**	**14,907,798**	**84.3**	**97.5**
New York	6,972,309	75.3	96.5	8,548,467	80.8	96.3	8,075,634	82.4	96.8
New Jersey	1,909,084	84.0	97.7	2,222,264	85.4	97.3	1,930,669	85.0	97.6
Pennsylvania	4,883,927	85.2	98.1	5,844,507	86.6	98.6	4,901,495	87.1	98.3
East North Central	**12,380,566**	**86.8**	**98.0**	**13,879,871**	**87.4**	**98.0**	**11,318,459**	**88.6**	**98.3**
Ohio	3,312,989	87.1	98.1	3,799,616	88.0	98.1	2,866,953	88.7	98.6
Indiana	1,459,131	91.2	98.6	1,629,450	91.3	98.7	1,276,328	86.1	98.1
Illinois	4,175,590	83.7	97.1	4,486,074	84.9	97.1	4,050,618	92.3	97.8
Michigan	2,099,669	87.3	98.3	2,540,128	89.2	98.2	1,885,769	89.9	98.8
Wisconsin	1,333,187	91.2	98.7	1,424,603	86.5	98.5	1,238,801	91.4	98.8
West North Central	**6,376,665**	**87.7**	**98.1**	**6,050,902**	**87.3**	**98.1**	**5,212,942**	**91.9**	**99.1**
Minnesota	1,205,696	89.2	98.5	1,186,477	88.4	98.4	1,026,311	90.8	99.0
Iowa	1,268,031	85.8	97.2	1,027,028	80.3	96.9	958,188	92.5	99.1
Missouri	1,586,981	85.4	98.4	1,733,343	87.9	98.4	1,542,113	89.9	98.8
North Dakota	312,917	94.1	98.9	275,672	95.5	99.4	202,736	96.8	99.7
South Dakota	391,818	90.1	97.6	288,116	94.2	98.5	209,325	96.6	99.6
Nebraska	662,270	85.7	97.4	587,812	84.5	97.6	502,801	91.7	99.0
Kansas	948,952	91.2	98.5	952,454	90.9	98.5	771,468	94.2	99.2

South Atlantic	5,505,218	89.0	98.8	5,610,580	89.1	98.9	4,671,918	89.7	99.0
Delaware	129,175	78.3	97.7	130,363	86.9	98.0	111,510	88.6	98.3
Maryland	812,278	85.7	97.3	890,860	82.7	97.2	745,597	82.2	97.2
District of Columbia	357,417	84.1	96.6	399,243	84.8	96.2	402,473	83.2	94.0
Virginia	840,847	90.0	99.0	877,164	91.0	99.1	757,287	93.0	99.3
West Virginia	590,495	91.2	99.0	738,353	89.9	98.7	580,091	91.1	99.1
North Carolina	843,883	90.5	99.2	819,047	92.2	99.4	656,824	91.2	99.6
South Carolina	592,498	90.7	99.0	504,835	93.0	99.4	370,368	95.5	99.7
Georgia	993,350	91.0	99.1	886,172	91.9	99.4	711,983	93.7	99.6
Florida	345,275	88.4	98.7	364,543	86.9	98.6	335,785	89.6	99.0
East South Central	2,757,798	90.2	99.1	2,708,211	91.5	99.3	2,369,713	93.6	99.5
Kentucky	820,074	90.0	98.9	878,923	90.8	99.1	769,094	92.7	99.3
Tennessee	707,951	87.9	99.0	738,155	89.3	99.1	678,532	92.5	99.4
Alabama	697,947	92.9	99.4	663,546	93.2	99.5	566,020	94.7	99.7
Mississippi	531,826	90.4	99.2	427,587	94.3	99.7	356,067	96.2	99.8
West South Central	4,194,989	88.0	98.6	4,445,404	90.1	98.8	3,685,949	93.3	99.3
Arkansas	558,497	91.1	99.1	517,520	93.6	99.4	424,575	94.4	99.6
Louisiana	626,139	84.8	98.6	664,180	87.5	98.7	586,995	90.8	99.1
Oklahoma	921,026	89.0	98.5	934,198	88.0	98.5	714,855	93.0	99.3
Texas	2,089,327	87.7	98.6	2,329,506	91.0	98.7	1,959,524	93.9	99.3
Mountain	1,902,423	91.0	98.3	2,033,944	93.3	98.8	1,752,442	95.0	99.2
Montana	313,040	93.6	98.8	323,530	95.3	99.1	277,054	96.4	99.5
Idaho	241,299	92.3	98.3	240,913	95.5	99.1	202,946	97.8	99.7
Wyoming	150,670	90.8	97.8	160,795	94.5	98.6	145,942	95.1	99.0
Colorado	551,319	87.4	97.6	610,480	90.1	98.1	552,831	92.3	98.8
New Mexico	156,861	94.5	99.2	162,801	95.8	99.4	143,521	97.3	99.4
Arizona	205,090	91.0	98.2	233,353	94.3	98.7	175,518	96.5	99.4
Utah	220,114	92.1	98.7	232,878	92.8	98.8	196,193	93.8	99.2
Nevada	64,030	94.1	98.3	69,194	95.2	98.3	58,437	94.2	98.4
Pacific	3,710,843	85.2	97.2	4,335,168	86.5	96.8	4,195,788	89.0	97.8
Washington	854,296	88.5	97.8	918,840	91.8	98.8	891,502	94.0	99.0
Oregon	493,051	87.8	97.9	507,265	89.8	98.1	455,416	91.4	98.6
California	2,363,496	83.5	96.7	2,909,063	84.4	96.0	2,848,870	87.2	97.1

TABLE N.—DISTRIBUTION OF THE NATIONAL TOTAL CURRENT INCOME RECEIVED BY THE POPULATION WITHIN SPECIFIED INCOME CLASSES BY GEOGRAPHIC DIVISIONS

1919

Geographic Division	Per Cent of National Total in Each Class Received by the Inhabitants of Each Division		
	All Income Classes	Income Classes Below $10,000	Income Classes Below $5,000
United States	100.00	100.00	100.00
New England	8.09	7.92	7.94
Middle Atlantic	26.45	25.18	25.05
East North Central	22.05	22.48	22.53
West North Central	12.04	11.71	11.60
South Atlantic	9.53	9.86	10.02
East South Central	4.53	4.96	5.02
West South Central	7.97	7.62	7.63
Mountain	2.75	3.44	3.46
Pacific	6.59	6.83	6.75

We see that, while the people of the Middle Atlantic division received 26.45 per cent of the total current income of the country, when all incomes are considered, only 25.05 per cent of all the current income falling in classes below $5,000 is received in that division. On the other hand, in the Mountain division, where only 2.75 per cent of the total current income of the country is accounted for, the inhabitants received 3.46 per cent of the national total disbursed in the form of smaller incomes below $5,000.

Per Capita Current Income of the 95 Per Cent of the People Included in the Lower Income Classes.

In line with the discussion of Tables L and LI of the preceding sections, we may examine Chart 17 which shows an array of the States according to the estimated per capita income received in 1921 by the 95 per cent of the non-farm population with lowest incomes. The estimates have been computed with the aid of the data presented for each State in the *Statistics of Income* of the United States Bureau of Internal Revenue. It is obvious that the blank space in each of the bars in the diagram is not the per capita income received by the 5 per cent of the population with highest incomes.

CHART 17

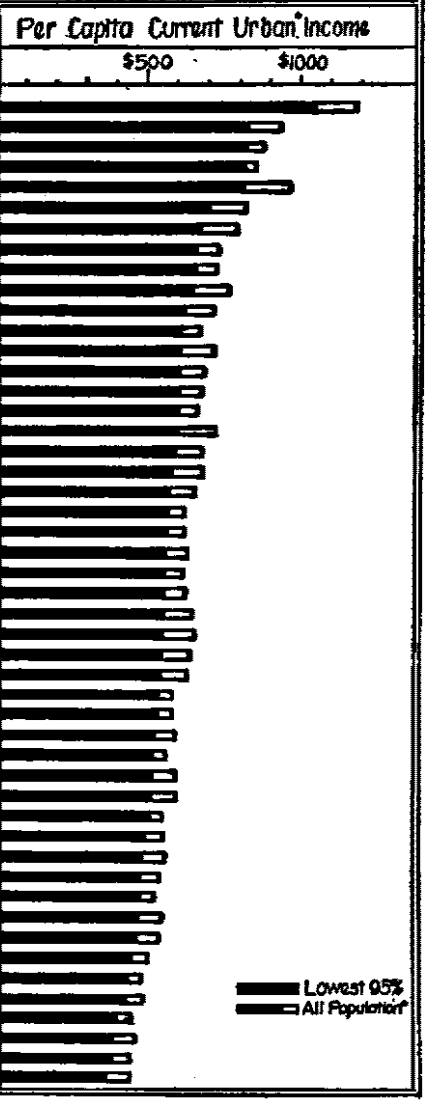
THE PER CAPITA CURRENT INCOME OF THE NON-FARM POPULATION

ALL URBAN* INCOMES AND THE LOWEST 95% OF ALL URBAN* INCOMES

1921

STATES ARRAYED ACCORDING TO THE SIZE OF THE PER CAPITA CURRENT INCOME OF THE POPULATION IN THE LOWEST 95% OF ALL URBAN* INCOMES

Per Capita Current Urban* Income: Rank of State for Lowest 95%	Rank of State for Total	Amount in Dollars: Lowest 95%	Amount in Dollars: Total	State
1	1	1,045	1,176	Dist. of Columbia
2	3	817	926	California
3	4	816	874	Wyoming
4	5	808	859	Nevada
5	2	805	958	New York
6	6	698	814	Illinois
7	7	672	788	Massachusetts
8	9	654	729	Colorado
9	10	654	716	Washington
10	8	642	759	Rhode Island
11	12	618	708	Missouri
12	17	603	669	Texas
13	13	598	705	New Jersey
14	14	597	678	Oregon
15	16	593	670	Nebraska
16	19	589	652	Kansas
17	11	588	716	Maryland
18	18	576	667	Delaware
19	15	572	672	Pennsylvania
20	20	562	647	Minnesota
21	27	555	611	Montana
22	28	553	610	Indiana
23	24	549	621	Iowa
24	29	547	606	Kentucky
25	25	545	620	New Hampshire
26	22	544	628	Michigan
27	21	539	641	Connecticut
28	23	538	626	Ohio
29	26	538	617	Maine
30	33	522	569	South Dakota
31	34	522	567	Arizona
32	31	509	579	Oklahoma
33	35	508	551	Idaho
34	30	504	585	Vermont
35	32	498	579	Wisconsin
36	39	497	536	New Mexico
37	37	484	543	Utah
38	36	471	546	West Virginia
39	40	463	529	Tennessee
40	42	463	512	North Dakota
41	38	459	540	Louisiana
42	41	452	528	Virginia
43	43	429	487	Georgia
44	45	419	470	Mississippi
45	44	416	478	Arkansas
46	47	387	458	South Carolina
47	46	373	459	Florida
48	49	372	430	Alabama
49	48	351	431	North Carolina



* Population not residing on farms.

It is rather the per capita excess income due to the fact that some incomes are higher than those received by the 95 per cent of the population with lowest incomes. In other words, if all the population received, on the average, as much as the 95 per cent with lowest incomes, there would be an additional sum left over which, when distributed equally among all the inhabitants, would be represented by the length of the blank portion of the bars for the different States. The residues may also be viewed as the errors in the per capita income of the 95 per cent of the people with lowest incomes when represented by averages resulting from the division of *all* the income (including higher incomes) by the total population. We see, for instance, that the per capita error in New York was $153, while in New Mexico it was only $39.

It should be remembered that, as shown in Tables L and LI, in 1921 the lower incomes were unusually favored in comparison with the higher ones and that, normally, the divergence between the per capitas computed for the 95 per cent of the population with lowest incomes and those based on the total income and the total population would in most instances be greater than shown in the chart. In New York, for example, the 1919 per capita income of the lowest 95 per cent of urban incomes was $720, or $208 less than the per capita based on all urban incomes in the State.

But even though Chart 17 represents a rather unusual year, we may draw from it conclusions of interest which in a large measure also apply to conditions in other years. It would seem that the length of the blank spaces in the bars of the diagram are good indicators of the nature of the distribution of income among the people in the various States. As already explained, these spaces represent the per capita excess income, going to the richest 5 per cent, over and above the amounts they would obtain under a distribution for the entire population similar to that for the 95 per cent of the population with lowest incomes. In other words, the larger the blank space, the larger the *excess* received by the rich, and, consequently, the less even the distribution. A glance at the chart shows that the most even distribution (which does not necessarily coincide with the highest per capita income) is found in the Mountain States, and the greatest disparity in the Eastern States, particularly those with large cities.

The practical significance of this chart is, perhaps, that it may serve as a warning to those interested in the figures of income in connection with special problems. The chart makes clear the fact that per capita income, when based upon the entire population, might not at all fit in with the problem at hand. For instance, in 1921 the per capita income of the entire population in New York was about 13 per cent higher than that of Nevada. However, for the 95 per cent of the population with lowest incomes, the per capita income in Nevada was slightly higher than in New York. Similarly, when the entire population is considered, the per capita income in Maryland in 1921 was identically the same as in Washington. Nevertheless, it would be wrong to imply from this that the majority of the people in the two States were equally prosperous. A further examination of the figures discloses the fact that the per capita income of the 95 per cent of the population in Washington was $66 greater, in other words over 11 per cent higher, than in Maryland. Again, we see from the chart that the per capita income of the entire population in Connecticut was higher than in Michigan, New Hampshire, Kentucky, Iowa, Indiana, and Montana. But in all of these States, the bulk of the population (the 95 per cent with lowest incomes) apparently received higher per capita incomes than in Connecticut. It therefore follows that in making use of figures of income extreme care must be exercised in selecting the data to correspond with the conditions of the particular problem under consideration.

TABLE LII.—OWNERSHIP AND TENANCY OF URBAN HOMES IN EACH STATE, JAN. 1, 1920[a]

State and Geographic Division	Per Cent of Total			
	Owned		Rented	Total
	Free[b]	Mortgaged		
Continental United States	27.304	9.601	63.095	100.000
New England				
Maine	34.104	6.195	59.701	100.000
New Hampshire	30.657	7.239	62.104	100.000
Vermont	30.354	7.432	62.214	100.000
Massachusetts	21.797	10.875	67.328	100.000
Rhode Island	21.053	8.881	70.066	100.000
Connecticut	17.623	11.270	71.107	100.000
Middle Atlantic				
New York	14.838	7.703	77.459	100.000
New Jersey	20.418	11.934	67.648	100.000
Pennsylvania	28.545	10.973	60.482	100.000
East North Central				
Ohio	32.403	11.754	55.843	100.000
Indiana	34.408	11.093	54.499	100.000
Illinois	26.431	10.339	63.230	100.000
Michigan	35.924	13.461	50.615	100.000
Wisconsin	37.976	12.133	49.891	100.000
West North Central				
Minnesota	37.112	11.009	51.879	100.000
Iowa	43.617	10.865	45.518	100.000
Missouri	25.565	8.488	65.947	100.000
North Dakota	36.350	9.754	53.896	100.000
South Dakota	41.901	11.021	47.078	100.000
Nebraska	39.920	12.310	47.770	100.000
Kansas	42.607	10.545	46.848	100.000
South Atlantic				
Delaware	26.130	12.589	61.281	100.000
Maryland	33.650	11.151	55.199	100.000
Dist. of Columbia	20.589	9.105	70.306	100.000
Virginia	26.897	5.818	67.285	100.000
West Virginia	33.992	7.756	58.252	100.000
North Carolina	31.400	5.314	63.286	100.000
South Carolina	25.884	4.721	69.395	100.000
Georgia	22.524	4.374	73.102	100.000
Florida	27.144	5.627	67.229	100.000

TABLE LII.—OWNERSHIP AND TENANCY OF URBAN HOMES IN EACH STATE, JAN. 1, 1920[a]—*Continued*

STATE AND GEOGRAPHIC DIVISION	PER CENT OF TOTAL			
	OWNED		RENTED	TOTAL
	Free[b]	Mortgaged		
East South Central				
Kentucky	30.233	6.040	63.727	100.000
Tennessee	29.262	5.477	65.261	100.000
Alabama	24.314	4.795	70.891	100.000
Mississippi	30.566	4.182	65.252	100.000
West South Central				
Arkansas	35.235	7.524	57.241	100.000
Louisiana	24.081	4.270	71.649	100.000
Oklahoma	34.867	9.706	55.427	100.000
Texas	33.089	6.605	60.306	100.000
Mountain				
Montana	33.684	7.097	59.219	100.000
Idaho	39.905	11.527	48.568	100.000
Wyoming	32.746	9.270	57.984	100.000
Colorado	34.060	9.314	56.626	100.000
New Mexico	38.772	6.290	54.938	100.000
Arizona	29.022	6.465	64.513	100.000
Utah	39.910	10.445	49.645	100.000
Nevada	37.831	5.336	56.833	100.000
Pacific				
Washington	36.650	11.697	51.653	100.000
Oregon	36.013	10.056	53.931	100.000
California	29.500	8.842	61.658	100.000

[a] Based on Census figures.—See *Census of Population*, 1920, Vol. II, p. 1302.

[b] To the Total Homes owned free, as reported by the Census, were added 0.447 of the Homes reported as owned encumbered. The ratio of 0.447 is an estimate by Dr. W. I. King (based on a study in Milwaukee, Wisconsin) of the average equity of owners in mortgaged urban homes.

TABLE LIII. — AVERAGE FARM PRICES OF GROWN HORSES, 1919, 1920, AND 1921, AND RATIOS OF THESE PRICES TO PRICES OF ANIMALS ON FARM AS OF JANUARY 1 OF EACH YEAR.*

	1919			1920			1921		
	Farm Price 15th of Month (Horses)	Monthly Receipts at 8 Principal Livestock Markets (000)	Product (000)	Farm Price 15th of Month (Horses)	Monthly Receipts at 8 Principal Livestock Markets (000)	Product (000)	Farm Price 15th of Month (Horses)	Monthly Receipts at 8 Principal Livestock Markets (000)	Product (000)
January	$120	50	6,000	$118	75	8,850	$96	35	3,360
February	121	43	5,203	123	63	7,749	98	41	4,018
March	124	36	4,464	127	48	6,096	101	44	4,444
April	127	26	3,302	131	22	2,882	100	25	2,500
May	129	17	2,193	132	19	2,508	98	18	1,764
June	127	26	3,302	130	17	2,210	98	14	1,372
July	127	34	4,318	127	21	2,667	94	11	1,034
August	125	49	6,125	124	42	5,208	93	17	1,581
September	119	77	9,163	119	32	3,808	89	22	1,958
October	114	68	7,752	112	20	2,240	85	36	3,060
November	113	71	8,023	103	10	1,030	82	29	2,378
December	113	40	4,520	97	8	776	81	25	2,025
Weighted Average and Totals	120	557	64,365	122	377	46,024	93	317	29,494
Ratio of Average-for-year Price to January 1 Price....	120 + 98.5 = 1.218			122 + 94.5 = 1.291			93 + 84 = 1.107		

*Source: *Year Books* of the Department of Agriculture — 1919, pp. 654–656; 1920, pp. 724, 725, and 727; 1921, pp. 685–687.

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