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MANUFACTURE IN THE U. S.

A BILLION DOLLAR STATE

Nearly a billion dollars, or more nearly exactly, \$943,808,000 is the factory value of the manufactured products of North Carolina in 1919. And this total does not cover hand trades, building trades, and neighborhood industries, that is to say, domestic industries not organized in factory systems.

Factory industries alone considered, only fourteen states made a better showing than North Carolina, and only one of these was a Southern state. But then, Texas is not a state—it is an empire, with nearly twice the population and more than five times the area of North Carolina.

The simple fact is that we were among the fifteen foremost states of the Union in manufacturing industries in 1919. See the table elsewhere in this issue.

Twenty years ago twenty-seven states outranked North Carolina in the value of manufactured output. Among the states that stood ahead of us at that time were Maryland, Virginia, Rhode Island, Maine, New Hampshire, Iowa, Kansas, Nebraska, Kentucky, Tennessee, Georgia, Louisiana, and Colorado. But we have moved beyond these thirteen states in manufacturing industries during the last two decades. Which means that the Old North State is striding forward in seven-league boots; that she is moving out of the dominance of agriculture into the dominance of industry—out of a country into a town-and-factory civilization, not in the number of people involved, but in wealth and influence. The point we make becomes clear when we consider the influence of something like 2,000 people who are busy with the business of banking in North Carolina. They are few in number but their lightest whisper sounds like thunder, and the lifting or lowering of their eyebrows registers fair weather or foul day by day for two and a half million people. Of similar sort is the rapidly developing influence of manufacture in the state.

Twenty-Year Increases

During the first twenty years of the new century, our factory establishments rose from 3,465 to 5,999. They did not greatly miss doubling in number.

The factory wage earners of North Carolina rose from 72,000 to 158,000; which is to say, they were more than doubled in number.

But the volume of their annual wages rose from 14 million to 127 million dollars, which is almost exactly nine times as much.

The primary horsepowers used in our factories rose from 154,000 to 550,000.

The capital employed rose from 68 million dollars to 669 million dollars—in manufacturing industries alone, mind you. It is nearly ten times as much as twenty years ago.

The cost of the materials consumed, including mill supplies and rent of power and heat, increased from 45 million to 527 million dollars; which is eleven times as much.

The total value of products rose from 85 million to 944 million dollars. Here again the value is eleven-fold.

And, finally, the value added by manufacture to raw materials rose from 40 million dollars in 1899 to 416 million dollars in 1919, which is nearly exactly ten times as much.

The table of twenty-year increases follows, and the details of it are worth a thoughtful consideration.

N. C. Factory Establishments:		
	1899	1919
Number.....	3,465	5,999
Wage earners....	72,322	157,659
Cap. employed \$68,283,005		\$669,144,000
Wages paid....	\$14,051,784	\$126,753,000
Materials used \$44,854,224		\$526,906,000
Val. of products \$85,274,083		\$943,808,000
Value added		
by mfrs. \$40,419,859		\$416,902,000

Our Primacy in the South

North Carolina led the South in 1919 in the number of factory establishments, with 5,999 against 5,603 in Virginia, her nearest competitor.

In the number of wages and salary earners she led Georgia, her nearest competitor, by 34,000.

In the capital employed she led Texas by more than 100 million dollars, and Georgia by 230 million dollars, and Georgia by 250 million dollars.

In the total value of manufactured products Texas was the only Southern state that outranked North Carolina in 1919, and her lead was only 57 million

dollars. Our next nearest competitor was Georgia which fell behind by 250 million dollars.

And in values added to raw materials in the processes of manufacture North Carolina far and away led the South—with 417 million dollars against 298 million dollars in Texas, 269 million dollars in Virginia, and 253 millions in Georgia. But even more significant is the percent of value added to raw materials by manufacture in North Carolina. In this particular we led the whole United States, Wyoming alone excepted—at least so far as reported by the census authorities. Our ratio of increase, in value contributed by the processes of manufacture was 249 percent. The only other Southern state that was in sight of us in this detail was South Carolina, with a ratio of 220 percent increase in the value of raw materials added by manufacture.

North Carolina, in a word, has a clear lead in the South in manufacturing industries.

We lead the world in tobacco manufacture. The 33 tobacco factories of the state consume a fourth of all the leaf tobacco used in manufacture in the entire United States, and pay a full fourth of all the tobacco taxes of the Union. In tobacco production we are not far behind Kentucky the leading tobacco growing state in America. Kentucky stands ahead of us in the pounds of tobacco produced in average years, but North Carolina stands first in the total farm value of her tobacco crops.

We lead the South in the cotton textile industry in almost every detail—in the number of mills, in the number of spindles and knitting machines, in the number of new looms installed year by year, in the number of operatives employed, in the total capital in use, in the volume of wages paid, in the gross value of textile products, in the variety of cotton textiles produced, and even more significantly in the ratio of values added to raw cotton in the processes of manufacture. Our own mills consume a half million bales of cotton more than the state produces in average years.

There are now 513 textile mills in the state, compared with 180 in South Carolina and 173 in Georgia.

North Carolina has more mills that dye and finish their own product than any other Southern state.

The largest hosiery mills in the world are located at Durham, N. C.

The largest towel mills in the world are located at Kannapolis, N. C.

The largest denim mills in the United States are located at Greensboro, N. C.

The largest damask mills in the United States are located at Roanoke Rapids, N. C.

Winston-Salem contains the largest underwear factory in America.

Gaston county, with around 100 mills, is the center of fine-combed yarn in the South.

Moreover, we lead the South in the number of furniture factories, in the amount of capital invested, in the number of operatives employed, in the variety of products, and in the total value of the annual output.

The Look Ahead

But what North Carolina shall be as an industrial state in the years to come does not yet appear. The way ahead lies wide open.

"Ten years more at the present rate of progress", says the Greensboro News, "and it will be nip and tuck between North Carolina and Massachusetts for first place in the manufacture of cotton. In twenty years by the exercise of reasonable intelligence North Carolina ought to lead both Massachusetts and Lancashire, and to hold an undisputed position as mistress of the cotton trade. Everything works in our favor. The cotton is at our doors. Electric power to drive machinery is available, and waterpower to generate electricity exists in many places in the state that have not as yet been invaded by the construction gang. The state's population numbers two and a half millions, and it is an industrious stock capable of developing the highest degree of manual skill. The situation could hardly be improved had it been made to order for the development of a great textile industry."

The editor might have named another factor related to the future development of cotton mill industries in North Carolina—namely, the white farm tenants and their families who are still struggling with economic hazards and social disadvantages in her country

areas. Counting only those who are fifteen years old and over, they number 227 thousand. Our factory employees numbered only 158,000 in 1919. In short, the available, untouched source of white wage labor in the state is larger than the grand total of wage earners employed today in our factory industries of all sorts, plus all other wage earners in the various mechanical trades. Which means that our cotton mills have a one hundred percent chance to expand in labor force during the next ten years—a basis on which to increase machine production in something like a ten-fold ratio.

Cotton mills in the South, be it remembered, have flourished in densely populated areas of white farm tenants. Outside these particular areas successful cotton mills are so few as to be negligible in number anywhere in the South. Nobody sees this fundamental fact more clearly than cotton mill promoters in the East. We ran across seven of these keen-witted men on the train to Texas last fall. They have an eye on Texas, but they are not in the least in doubt about the future cotton mill territory of that state. We are spying out the land of densely populated white farm tenants, said they, and their map of this area was perfectly drawn by the social engineering expert in the party. It set us to wondering how many men in the South were given to painstaking, competent prospecting in this fashion.

A Great Industrial Area

The industrial area of North Carolina lies in the coastal plain and foothill country—a reap hook in shape, with a broad blade and handle, the point of the blade in Raleigh, the curve following the bend of the Southern Railway to Charlotte, and the handle reaching westward through Gaston and Lincoln counties to Rutherford. In this area of cotton and tobacco farming and excessive farm tenancy are 48 counties, and in these counties are nearly three-fourths of our factory enterprises, more than four-fifths of all the bank capital of the state, and right around six-sevenths of all the business in bank loans and discounts.

Naturally the bulk of the manufactured products of North Carolina is turned out in our rapidly growing cities with their suburban clusters of industrial enterprises. Multiplying industries mean rapidly growing cities everywhere. The towns without factory industries must be content to remain small, or to mark time in population increases, or to dwindle and disappear from the map.

Our fourteen cities with 10,000 inhabitants or more contain within their corporate limits more than a fourth of all the factory workers of the state, and their factory output was right around two-fifths of the state total in 1919. But if we include the mills just outside city limits, then nearly half the factory wage earners of the state and more than half the manufactured output must be credited to these fourteen larger cities in North Carolina.

Winston-Salem with 200 million dollars' worth of factory products in 1919 was far in the lead, followed by Durham with 71 million dollars. Charlotte came next with 43 million dollars. If suburban industries be included, Greensboro easily ranks fourth as an industrial center.

The census totals of all the cities of the state would be increased by including the nearby mills and factories beyond city limits, but with the exception named their relative rank would remain about the same.

The table below refers to the industrial products and the wage earners within city incorporation lines.

Rank	City	Products	Wage Earners
1	Winston	\$200,485,000	14,030
2	Durham	70,659,000	6,673
3	Charlotte	43,096,000	5,966
4	High Point	14,869,000	4,441
5	Gastonia	12,013,000	3,100
6	Wilmington	10,537,000	2,134
7	Greensboro	7,458,000	1,930
8	Asheville	7,091,000	1,313
9	Raleigh	6,871,000	1,430
10	New Bern	5,702,000	1,838
11	Wilson	5,689,000	752
12	Salisbury	5,127,000	1,144
13	Rocky Mount	4,904,000	1,682
14	Goldsboro	4,143,000	1,239
Total		\$398,644,000	47,612

The Changing Order

The Federal Census of Industries covering the year 1919 makes it clear that North Carolina is rapidly moving out of the hand-made, home-spun civilization of an agricultural state, into the machine-made civilization of an industrial-urban state—out of a simple into a complex social order.

To be sure a majority of the people

THE UNIVERSITY COMES TO YOU



Do you know that you can remain at home and at the same time attend a University? Sounds impossible, but it is true. How? Read on.

The University of North Carolina through its Extension Division offers you regular University courses by mail. This year it offers eighteen correspondence courses covering the following subjects: Economics, Commercial English, Principles of Secondary Education, High School Methods, Educational Psychology, Public School Education in the South, Freshman English, Sophomore English, The Short Story, Modern European History, American History, Freshman Latin, Latin Composition, Algebra, Trigonometry, and Community Organization.

Any person in North Carolina may make application for a correspondence course, but only those who can satisfy University entrance requirements will receive credit toward a degree. On this same basis credit toward state teachers' certificates will also be given by the State Department of Public Instruction.

of North Carolina still live in the country, but the ratio of country dwellers steadily dwindles. They increased in number during the last census period nine percent while the city increase was fifty-four percent.

A majority of people of the state engaged in gainful occupations are still engaged in agriculture, forestry, and animal husbandry, but the ratio decreases. Our farm workers increased seven percent in number during the last census period, while the workers in manufacturing and mechanical industries increased fifty-eight percent.

Our cities are still few in number and small in size—only fourteen had ten thousand inhabitants or more in 1919, and only two, Winston-Salem and Charlotte, were near the fifty thousand mark; but the industrial-urban development of North Carolina is now so pronounced, and the way ahead is so clearly open to enterprisers, that the next quarter century will see the state mapped with the Great Industrial Area of the United States.

The changing order in North Carolina means great industries and great cities in rapidly multiplying number.

You are wondering by what method the University enables you to study its courses at home. Each correspondence course is made out by a University instructor and contains from 10 to 30 lessons, called assignments. Each assignment contains: (a) Full directions for study, including references to textbooks by chapter and page; (b) suggestions and remarks of the instructor; (c) questions for the student to answer in writing. At the University each set of answers is corrected by an instructor and returned to the student along with new assignments.

If you wish to use your spare hours to better your educational training or to work toward a degree or state teachers' certificate, here is your opportunity. All correspondence courses, together with the method of enrollment, are described in a new bulletin called Correspondence Courses for 1921-22. This bulletin goes free to anybody in North Carolina who wants it and writes for it promptly. Address: University Extension Division, Chapel Hill, N. C.

It also means greater wealth and a greater concentration of wealth. Forty-eight persons in North Carolina enjoyed a net taxable income of more than nine million dollars in 1919, and they paid into the federal treasury more than four and a half million dollars of taxes. Which was nearly half of all the federal taxes paid on incomes in the entire state; also it was nearly twice as much money as all the general property tax payers of the state paid into the state treasury the same year.

The day of great fortunes is only just beginning in North Carolina. It is the inevitable result of urban-industrial expansion everywhere. If only wealth can be rightly related to wealth, and the Commonwealth to the common weal, then we can have greater progress and less poverty, greater magnificence and less misery in our beloved mother state.

But it cannot be so if the state follows the immemorial way of aimless drift. The reasoned way is better and it is the task of the North Carolina Club to find it, if by diligent search it can be found by a thoughtful group of University students.—E. C. Branson, a North Carolina Club study.

MANUFACTURE IN THE UNITED STATES

Covering Factory systems in the year 1919. Based on the preliminary statement of the Census Bureau. Building trades, hand trades, and neighborhood industries excluded.

Department of Rural Social Science, University of North Carolina

Rank	State	Value of Products	Rank	State	Value of Products
1	New York	\$8,875,007,000	25	Tennessee	\$558,253,000
2	Pennsylvania	7,312,333,000	26	Alabama	492,731,000
3	Illinois	5,874,007,000	27	West Virginia	471,871,000
4	Ohio	5,100,299,000	28	Maine	456,822,000
5	Massachusetts	4,007,452,000	29	New Hampshire	407,205,000
6	New Jersey	3,686,775,000	30	Oklahoma	401,363,000
7	Michigan	3,447,984,000	31	Kentucky	395,660,000
8	California	1,981,410,000	32	South Carolina	381,454,000
9	Indiana	1,901,846,000	33	Oregon	366,783,000
10	Wisconsin	1,883,608,000	34	Colorado	275,622,000
11	Minnesota	1,599,264,000	35	Florida	213,327,000
12	Connecticut	1,394,898,000	36	Arkansas	200,313,000
13	Missouri	1,218,130,000	37	Mississippi	197,747,000
14	Texas	999,996,000	38	Vermont	168,108,000
15	North Carolina	943,808,000	39	Montana	166,664,000
16	Kansas	913,667,000	40	Delaware	165,073,000
17	Maryland	873,945,000	41	Utah	156,933,000
18	Washington	809,623,000	42	Arizona	120,769,000
19	Rhode Island	747,823,000	43	Wyoming	81,445,000
20	Iowa	745,473,000	44	Idaho	80,511,000
21	Georgia	693,556,000	45	South Dakota	62,171,000
22	Louisiana	676,190,000	46	North Dakota	57,374,000
23	Virginia	641,810,000	47	Nevada	22,874,000
24	Nebraska	596,042,000	48	New Mexico	17,857,000