



**Inter-Industry Trends: North Carolina Industry in the US and Global Contexts**

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**May 2006**

**Paper #2**

## Introduction

The North Carolina in the Global Economy Web site intensively studies seven industries and their activities in North Carolina in order to gain leverage on such issues as industrial structure and its relation to the activities of industry and public actors, economic development at the local level, the impacts of globalization at the local level, and the available strategies to promote the positive effects of participation in global industries. The key motivation behind this endeavor is to build understanding of where North Carolina fits into the national and global economy, and how this has changed over time. This research paper attempts to trace these issues through a comparison between these seven industries as they are situated in North Carolina. General and specific trends are established for the North Carolina economy in the spheres of employment, the location of production, global participation through trade, and the specific nature of North Carolina's participation in national and global industries.

This paper is descriptive in nature and utilizes a variety of quantitative data sources to explicitly map industrial activities as they exist in North Carolina. This effort is comparative in nature, as North Carolina is measured against national averages and key states. Two industries, the hog farming and processing industry and the tobacco farming and manufacturing industry, possess components that are only partially addressed with the data used in this paper. Agricultural activities are not substantially addressed in this paper due to substantial differences between data sources. Preceding the bulk of the paper is a review of the methods employed and data sources utilized.

## Data and Methods

### ***Data Sources***

Data for this paper come from several sources. The primary source for employment, establishment, and wage information is the *Quarterly Census of Employment and Wages* (QCEW), conducted by the Bureau of Labor Statistics on a quarterly basis [available at <http://www.bls.gov/cew/home.htm/>]. Beginning in 2001, the data were collected on a NAICS industrial classification basis, though data have been reconstructed for NAICS from the former SIC basis for 1990-2001. The data provide a comparable collection methodology across the United States and are available at the national, state, and county levels, and this information represents the longest running source of data using the NAICS classification system.

In order to capture the value of industrial and service production, data from the *Economic Census* [available at <http://www.census.gov/census02/>] were collected. The US Department of Census conducts the *Economic Census* every five years and utilizes the NAICS classification system in 1997 and 2002. The *Economic Census* collects data at the MSA and county level, and provides this data at the 6-digit NAICS level. This data is supplemented for agricultural industries with the *Census of Agriculture*, conducted by the US Department of Agriculture every five years [available at

<http://www.nass.usda.gov/census/>], and with the *Annual Survey of Manufacturers* [available at <http://www.census.gov/asm>] for 2003 data on manufacturing activity. For purposes of this paper, data used are collected for agricultural products, not NAICS industry components. The data are also available at the national, state, and county levels.

The *County Business Patterns* data set, also conducted by the US Census Bureau, disaggregates employment at the county level according to sizes of business establishments. Inclusion of this source allows for a more detailed picture of employment in large versus small businesses and allows for an understanding of the scale of operations across locations. However, it is only available on an NAICS classification basis from 1998 to 2003.

Finally, in order to capture international linkages, merchandise trade information is included from the *TradeStats Express* web application, provided by the US Department of Commerce [available at <http://tse.export.gov/>]. This application utilizes information from the *Origin of Movement* series, explicitly designed to trace the origin of exports at the state level and conducted by the US Census Bureau. Data is available for merchandise trade as classified by 3-digit NAICS category for 1999-2005.

## ***Methods***

Industries studied in this paper are classified according to the North American Industrial Classification System (NAICS). The NAICS classification system was used in order to achieve higher levels of precision over the previous system, the Standard Industrial Classification (SIC) system. Additionally, as government data collection has switched over to the NAICS system, utilization of this system allows for the inclusion of the most recent data, albeit at the sacrifice of longer periods of study. Over the period under review, the NAICS system went through one revision. The definitions of the industries are provided in Appendix Table 1.

[Table Appendix 1 about here]

It should be noted that these sources collect much of the same information. Where applicable, similar data across sources are compared in order to compare the applicability of information from different sources to one another. However, data will not always match for any given year, geographic entity, or industry. A comparison of US-level data by source is provided in Appendix Table 2, and a comparison of North Carolina-level data is provided in Appendix Table 3. The appendix contains a discussion of these tables. In addition, adjustments for inflation are made to value and wage data using values listed in Appendix Table 4.

[Table Appendix 2 about here]

[Table Appendix 3 about here]

[Table Appendix 4 about here]

Of key interest in an assessment of industries in North Carolina, and the competitiveness of North Carolina relative to other states. For this reason, both national and state-level data are necessary. It is also the case that many industries are concentrated within smaller county-city-level clusters, and where illustrative, information on these clusters is presented to gauge North Carolina industry and its location in the state. Key variables collected are employment, wages, establishments, and total value of shipments or receipts of establishments. After detailing these industries as they exist in North Carolina, comparisons along key dimensions vis-à-vis other states are presented. Finally, North Carolina's importance to the export market in these industries is discussed.

### Industry Trends – North Carolina, Cross Industry

#### ***Employment***

*North Carolina contains prominent proportions of its employment and national employment across most of the industries studied.*

North Carolina contains sizable proportions of national employment across many of the industries studied in this site. Though the importance of many of these industries to North Carolina's economy has declined, these industries remain critical as sources of employment. Table 1 displays employment information for the seven industries at the national and state levels. North Carolina possesses a sizable percentage of national employment across most of the industries displayed and high national rankings in all but the banking and information technology industries. In addition, the proportions of national employment contained in this state are larger for many of these industries than for the workforce as a whole, suggesting concentration and favorable conditions for production in the state.

[Table 1 about here]

North Carolina was ranked first in tobacco employment in 2005; second in textiles, apparel, and furniture employment; sixth in biotechnology, and seventh in hog farming. While the textiles, apparel, and furniture rankings slipped over the previous decade from first to second, North Carolina is still ranked first in textile employment. However, across both of these industries, the proportion of national employment located in North Carolina has fallen. The biotechnology industry rose in rank over the previous decade, while tobacco has held steady at first. North Carolina's prominence has declined slightly over the last decade, but it rose in the biotechnology and hog farming industries. The textiles, apparel, and furniture industries both employed at least 500,000 nationally in 2005, while the hog farming, biotechnology, and tobacco industries each employed less than 300,000.

Within the United States, only the information technology and banking industries employ at least one million as of 2005. North Carolina is not ranked highly, nor does it possess a large proportion of national employment, in either of these industries. The banking and finance industry shows evidence of rising national importance, while the information technology industry is mixed between growing importance in the manufacturing and information components of the industry and declining importance in IT services.

*Many of the industries studied are growing more quickly in North Carolina than in the United States. However, declining industries are shrinking more rapidly in North Carolina than in the United States.*

Table 2 compares national and state growth rates for the industries studied and details the importance of these industries to North Carolina as sources of employment. Most of these industries are disproportionately represented in North Carolina, but the importance of these industries to North Carolina's economy varies across industries and over time. In sum, the seven industries listed accounted for 19.2% of employment in North Carolina in 1995, but only 12.9% of employment in 2005. The largest component of this decline is the decline in the textiles and apparel industry, from 8.7% of statewide employment in 1995 to 3.1% in 2005. The furniture industry has also declined appreciably, from 2.8% to 1.8% of statewide employment. In addition, the tobacco and information technology industries have also declined in their percentage of statewide employment, but by smaller amounts than either the textiles and apparel, or furniture industries. The biotechnology, hog farming, and banking and finance industries have grown in importance as employers within North Carolina. The largest rise is in banking, which now employs 2.7% of North Carolina workers, followed by smaller rises in hog farming and biotechnology.

[Table 2 about here]

The relative performance of North Carolina, as measured against the United States, is informative. Employment is declining more rapidly in North Carolina than in the United States within the declining industries of tobacco, textiles and apparel, and furniture. On the other hand, employment is growing more quickly in North Carolina than for the nation as a whole within the growing industries of biotechnology, hog farming, and banking and finance.

The information technology industry occupies an indeterminate position, as North Carolina employment grew more slowly than for the nation from 1995 to 2000, and fell more quickly than in the United States from 2000 to 2005. As shown in Table 1, the manufacturing component of the information technology industry has declined at both the national and state levels. Manufacturing declined more quickly in North Carolina than in the United States. However, North Carolina has gained ground in the information component of the industry and lost ground in IT services. This accounts for the mixed performance of the industry as it exists in North Carolina.

### *Establishment Size*

Though employment statistics are useful in assessing the types of economic activities located in North Carolina, they do not fully answer the question of what specific competitive advantages North Carolina possesses. For a more complete assessment of competitive advantage, additional indicators of industrial performance and the nature of production are discussed. Specifically, I include an assessment of the size of producing establishments, the value of production of the industry, and average wages. In comparison with the United States, these indicators will help to identify key differences of production as it takes place in North Carolina.

*North Carolina firms are, on average, much larger than those in the United States as a whole in many industries.*

Table 3 displays the average number of employees per industry establishment for North Carolina and the United States for these seven industries. The average firm size in terms of employment has fallen over the last decade in every industry except hog farming for the United States and for North Carolina. In the case of North Carolina, hog farming establishment size has increased due to the increasing proportion of employment in the manufacturing component of the industry. As shown, both components of the industry have actually decreased in average employment per establishment. Finally, the last column of the table shows the sheer size of growth in the number of establishments for these industries at the national level. The tobacco, textiles and apparel, biotechnology, banking and finance, and information technology industries have all experienced establishment growth rates higher than the growth in employment or decline rates smaller than concurrent declines in employment, accounting for the decline in average establishment size.

[Table 3 about here]

Of more interest are the sheer differences in average establishment sizes between the United States and North Carolina for many of these industries. At the industry level, North Carolina contains larger firms than for the nation as a whole for the tobacco, textiles and apparel, furniture, biotechnology, and information technology industries for both 1995 and 2005. While hog farming establishments are larger in North Carolina than in the United States for each component of the industry, North Carolina's focus on farming activities pulls the establishment size average down for the industry as a whole. In contrast, North Carolina contains smaller firms than the United States as a whole in the banking and finance industries.

Though manufacturing establishments have declined in average size, in all cases (tobacco manufacturing, textiles and apparel, furniture, biotechnology, hog farming manufacturing, and information technology manufacturing), these establishments are larger in North Carolina than in the nation as a whole. In addition, for tobacco manufacturing, apparel production, and hog farming manufacturing, average

establishment size has declined more slowly or grown more quickly than for the United States as a whole. Farming activities illustrate no clear trends, as tobacco farms tend to be smaller in North Carolina, while hog farms are larger. Finally, service establishments (banking and finance, information establishments in IT, and information services) are smaller in North Carolina in 2005, but those located in the IT industry are slightly larger in 1995.

*Across most industries, North Carolina has a greater proportion of large establishments than the United States as a whole. North Carolina is particularly large in manufacturing industries.*

Large establishments compose a greater proportion of all establishments in North Carolina than in the United States across most of the industries studied, especially in the cases of manufacturing industries. Table 4 compares North Carolina's and the United States' proportion of industry establishments composed of large establishments. These establishments are categorized at two levels: those employing at least 20 people, and those employing at least 100 people. The tobacco manufacturing, textiles and apparel, furniture, biotechnology, hog processing, and information technology manufacturing industries are generally more highly represented by large establishments in North Carolina than in the United States. Additionally, the banking industry achieved parity with the United States in 2003, and the information and services component of the information technology are similar in structure in the United States and North Carolina.

[Table 4 about here]

Most industries have become increasingly populated by smaller establishments between 1999 and 2003, with increases in the proportion of industries composed of establishments smaller than 20 employees in all but the biotechnology, hog processing, and information technology services industries. Changes in establishment composition generally reflect these national industry trends, though significant departures are present in the biotechnology, banking, and finance industries.

Finally, Table 5 provides North Carolina's proportion of all national establishments by employment size. North Carolina contains significant proportions of the largest establishments in the United States across several industries. More than one-quarter of all tobacco establishments employing at least 100 were located in North Carolina as of 2003, along with 22% of the largest textile establishments, one-eighth of apparel establishments, 14% of furniture establishments, and 6.8% of biotechnology establishments. Only in the cases of the investment component of the banking and finance industry and the information and services components of the information technology industry does North Carolina contain a smaller proportion of large establishments than of all establishments. Though a number of these industries are underrepresented by North Carolina, this information indicates the presence of large employers in the state across most of the industries studied.

[Table 5 about here]

As previously mentioned, the tobacco, textiles and apparel, and furniture industries have declined in importance to North Carolinian employment since 1995, with additional declines in information technology manufacturing. Further evidence of decline in these industries is indicated by North Carolina's shrinking or stagnant proportion of national establishments across all establishment classes shown for most of these industries. In contrast, growth in North Carolina's proportion of all establishments is present in the biotechnology, hog processing, investment, and information technology services industry. The cases of biotechnology and banking differ from these two general patterns. In the case of biotechnology, North Carolina has gained relative to the United States in small establishments, but not large employers. In contrast, banking has seen growth in large employers, but decline in smaller establishments. In both cases, Table 4 identifies these changes as, at least in part, internal to North Carolina, rather than purely a divergence with larger changes in these industries in the United States.

In sum, manufacturing appears to be in decline in North Carolina, but North Carolina remains a central location for these activities. Biotechnology, hog farming, and the services industries are somewhat mixed, ranging from strong growth in hog processing to slight growth or decline in the information technology industry. However, cause for optimism exists in some of these industries. For example, an increase in small establishments in the biotechnology industry or large establishments, in banking may ultimately indicate competitiveness relative to other states.

### ***Industry Production Value***

Employment and establishment sizes do not capture the value of production that takes place within North Carolina and the United States. Significant departures from employment and establishment trends would not only indicate the reliability of these measures, but would also help to pinpoint North Carolina competitive advantages and roles within these industries.

*North Carolina contains large-scale manufacturing industries as ranked by industry value, but smaller services-oriented industries.*

Table 6 displays industry sizes in terms of value of production for the United States and North Carolina for the years where NAICS categories are used to define industries. Largely, North Carolina's national rank and proportions of national industry value mirror its proportions of employment, but significant differences exist in a few cases.

[Table 6 about here]

In 1997, textiles and apparel production was the largest North Carolina industry of those included in this paper, at \$31.4 billion, followed by information technology at \$29.8 billion and banking and finance at \$25.6 billion. These three industries each contained at



least 75,000 North Carolina employees in 1995 and 2000 (see Table 2), which helps to explain the size of these industries. In contrast, both the biotechnology and tobacco industries, given the number of employees, are unusually large, at \$12.4 billion and \$19.5 billion in 1997 respectively. Finally, hog farming and furniture are the two smallest industries studied as ranked by value and are roughly similar in proportion of US production value as they are in proportion of national employment.

At the national level, the tobacco, textiles and apparel, and hog farming industries declined in real value between 1997 and 2003. North Carolina has felt the impact of some of these declines, with a 45% decline in the value of textiles and apparel production, a 11% decline in the furniture industry, 6% decline in the hog farming industry, and a 23% decline in the information technology industry, including a 69% decline in IT manufacturing.

In contrast to national trends, the North Carolina tobacco industry increased in value, while the furniture and information technology industries declined. In addition, the tobacco and biotechnology industries have grown more quickly in North Carolina than in the nation as a whole, and the hog farming industry has declined more slowly. Despite these developments, North Carolina continues to produce a disproportionate share of national production in every industry shown except for the banking and information technology industries. However, the sheer size of these two industries and the large share occupied by service activities may account for the lack of prominence for North Carolina.

*North Carolina has made strides toward increasing value behind manufacturing activities, and compares favorably to the United States in several industries.*

The value added of productive activities is available for manufacturing industries for both North Carolina and the United States. A comparison allows for a relative assessment of the performance of activities located within North Carolina. Table 7 identifies one industry where North Carolina's proportion of total value of products composed of value added production is higher than this proportion for the United States in 1997, the biotechnology industry. In cases like the tobacco industry, where North Carolina composes a sizable share of the national market, lower values do not point to industry difficulties, but instead cast many producers in other states as specialty, rather than mass-market, producers. However, generally lower proportions across these industries point to manufacturing activity that generate less value.

[Table 7 about here]

While it is not known to what extent the lower proportions in North Carolina are due to potentially lower productivity or the types of products generated by manufacturing in this state, substantial changes occurred between 1997 and 2003. These changes have raised the value of manufacturing activities conducted in the state. In 2003, increases in the proportion of total industry value composed of value added activities increased by greater amounts in North Carolina than in the United States for all industries except the furniture

industry. Additionally, several of these industries saw declines in the total value composed of value added activities at the national level, but none saw declines within North Carolina. By 2002, the tobacco, apparel, biotechnology, and hog processing industries held higher proportions of value added activities in North Carolina than for the nation as a whole, while the textile, furniture, and information technology manufacturing industries continue to lag behind national averages.

### ***Wages***

*Wages are generally lower in North Carolina than in the United States, and except in a few cases, wages have grown more slowly over the last decade in North Carolina.*

Table 8 presents average annual wages for seven industries studied for the United States and North Carolina. NC establishments, on average, paid lower wages in the furniture, biotechnology, hog farming, banking and finance, and information technology industries in 1995 than those in the United States. Additionally, from 1995 to 2005, tobacco, textiles, and apparel wages grew more slowly in North Carolina than in the United States. In 2005 wages in all seven industries were lower in North Carolina than in the United States as a whole.

[Table 8 about here]

At the level of individual industry products and activities, North Carolina wages are higher in 2005 than the national average in the cases of apparel, hog farming activities, banking, and information technology manufacturing. Additionally, a comparison of wage growth rates shows NC wages rising faster than the national averages in only a handful of cases. The most consistent North Carolina advantage is in the banking and finance industry, where wages have increased by 54% in North Carolina, compared with 40% nationally. Finally, NC wage growth is higher than the national average in tobacco manufacturing, apparel production, hog farming activities, banking, and information technology manufacturing and information activities.

### **Industry Trends – North Carolina and State Competition**

#### ***Employment***

*North Carolina has seen steeper than average employment declines within declining industries, but has not fared as badly as other states. In all cases, North Carolina remained first or second in the nation in 2005.*

The tobacco, textiles, apparel, and furniture industries have declined in employment at the national level. These same industries are disproportionately located within North Carolina. Table 9 displays the top declining states with substantial employment in these industries. Across the three industries, North Carolina employment losses are substantial,

ranging from 27.3% in furniture employment to 61.4% in textiles and apparel employment over the ten-year period.

[Table 9 about here]

Interestingly, the fastest declining states are among the smallest in the nation as measured by employment. While North Carolina is not one of the five fastest declining states in the textiles and apparel industry, it is the fourth-fastest declining state in the tobacco industry and the fourth fastest declining state in the furniture industry. The fastest declining state in tobacco, Kentucky, was ranked fourth in the nation in 2005, while the fastest declining states in the furniture industry, Arkansas, Tennessee, and Michigan, were ranked 18, 9, and 6, respectively. This indicates that across these industries, employment losses cannot be attributed purely to shifting geography within the US or consolidation into fewer states, but are widespread.

*North Carolina is one of the fastest growing locations for industries growing at the national level. However, states that are growing rapidly are diverse, with some substantial locations of activity, and others, including North Carolina, relatively minor players in national industries.*

Four industries studied are growing at the national level, and North Carolina is one of the five fastest growing locations for employment in three of these (Table 10). North Carolina is the fifth-fastest growing location for hog farming and processing, the fifth for biotechnology, and the third for banking and finance. In the cases of hog farming and banking and finance, growth rates exceed national averages, and in hog farming and biotechnology, manufacturing activities exist. Strength in these activities have allowed North Carolina to improve its national rank to seventh in hog farming and sixth in biotechnology, as measured by employment.

[Table 10 about here]

However, information technology has failed to match national industry growth, despite the inclusion of manufacturing activities. As previously discussed, this is a combination of lagging growth in information and services and some decline in manufacturing employment. Though North Carolina has failed to keep pace with growth in the information technology industry, the sheer size of the industry, at both the national and state levels, makes these two industries important to statewide employment and difficult to possess proportions of national employment comparable to the other industries studied. Large populations are correlated with major national roles in these industries.

### ***Industry Value***

*North Carolina also compares favorably with other states in terms industry value. North Carolina is a top location for production in manufacturing and resource-based industries.*

Three of the four manufacturing and resource-based industries listed in Table 11 are declining not only in terms of employment, but also in terms of industry value. Interestingly, while employment in the furniture industry has fallen nationally, the value of furniture production has increased. In addition, hog farming and processing has increased in employment, but has fallen in value between 1997 and 2003. North Carolina is a prominent participant in each of these industries, and is nationally ranked in terms of value at least as favorably as its rank in employment.

[Table 11 about here]

*However, North Carolina's lead in these industries has deteriorated.*

As of 2003, North Carolina ranked first in tobacco industry value; second in textiles, apparel, and furniture industry value, and sixth in hog farming industry value. Except in the case of tobacco farming and hog farming, North Carolina's proportion of national industry value has fallen over the 6-year period. In light of strong performance from some state competitors, this decline raises concern regarding the strength of NC industry and the reasons behind the variation in industrial decline across the listed states. For example, Georgia surpassed North Carolina as the leading producer of textiles and apparel, as measured by value, by 2003. Though this industry declined in every state listed, decline is substantially larger in North Carolina than in Georgia or California. California is also an important location for furniture production. More generally, a narrowing of North Carolina's lead across these industries has taken place.

*High technology and service-oriented industries have met with some success, but evidence is mixed.*

North Carolina became the second-largest location for biotechnology manufacturing in 2003, as measured by value (Table 12). Though North Carolina managed to exceed the national growth rate, its success comes largely at the cost of production in New Jersey, which declined more than 14% between 1997 and 2003, and North Carolina's two closest competitors, Pennsylvania and New York, possess much higher growth rates over the same period. Given North Carolina's rank in employment (6<sup>th</sup>), this performance is both encouraging and indicative of high-value activities within the state.

[Table 12 about here]

In contrast, North Carolina has declined in its national placement in the information technology industry and moved only one place up in the banking and investment industry. As shown in Table 5, the IT decline is largely the result of decline in

manufacturing activities in North Carolina. However, the industry is also largely a service-oriented industry, so states with large populations will generally possess large IT industries. The top five states, California, Texas, New York, Massachusetts, and Florida, seem to support this assertion. However, the sheer differences in proportion of national industry value are striking. California contains 17% of the national IT industry, less than the 20% it contained in 1997. The second largest state, Texas, contained 9% of the industry, and North Carolina contained 2% in 2003. In the case of banking and finance, New York contained at least one-eighth of the national industry in 2003, while North Carolina approached 3%.

### Industry Trends – North Carolina and the Global Economy

*The textiles, apparel, furniture, and information technology industries compose substantial proportions of North Carolina's trade. International competitiveness is evident across several of these industries.*

North Carolina's ability to not only compete with other states for the national market, but to also export to other nations, is critical to the retention and growth of employment opportunities in the state. State level information presented in Tables 13 and 14 point to strength in international markets not evident in the information presented thus far. Three of the industries contain available trade information: textiles and apparel, furniture, and information technology. These three industries produced roughly one-third of North Carolina's exports in 1999 and 2005. The largest of these, computers and electronics, represented 18% of North Carolina's exports in 1999 and 16.1% in 2005.

[Table 13 about here]

[Table 14 about here]

North Carolina has expanded its international exports in textiles and furniture, but exports of textile products, apparel, and computers and other electronic equipment have fallen in real dollar terms between 1999 and 2005. While North Carolina's exports increased by 1.2% between 1999 and 2005, textile exports increased by more than 44% and furniture by nearly 14%. In contrast, non-apparel textile exports have fallen by over half, apparel fell by 39%, and computers and electronics by 9%. This information points to differences in success at adapting to competition and reaching wider markets.

*North Carolina is one of the most important producers for international markets across most of the manufacturing industries. However, North Carolina's performance only compares favorably relative to other states in the cases of textiles and apparel.*

Table 14 identifies top five states in exports for each of the industries where export information is available. North Carolina ranks first in textile exports, second in apparel, third in furniture, fourth in non-apparel textiles, and twelfth in computers and electronic equipment in 2005. In textiles, apparel, computers and electronic equipment, and

furniture, North Carolina's proportion of national exports increased over the period. North Carolina is relatively more active in international production in the textiles industry, especially as measured against Georgia and California, significant domestic competitors (Table 11). In contrast, though Michigan is ranked third in furniture industry value in 2003 (Table 11), it leads furniture exports with sizable increases in trade between 2002 and 2005. In the case of apparel, concentration has developed within a few key states, including North Carolina. The two largest exporters in 2005, California and North Carolina, account for more than 41% of US exports in 2005, in contrast to 25% in 1999.

Like apparel, exports in non-apparel textile products and computer and electronic products have fallen at the national level. However, North Carolina's proportion of exports of these products has remained stable, and relatively little movement within the group of important exports has changed little over the period. Less diversity is apparent in computers and electronic products exports, as the five most highly valued locations in the United States (Table 12) are also the top five exporters in 2005. California and Texas, the two largest locations for the IT industry, are also the two largest exports of products in this industry. Top five exporters of non-apparel textile products are also of importance to national production. However, the dramatic swings of North Carolina and New York over the brief period indicate differences in the local experiences of declining industries and the ability to compete internationally.

### Conclusion

This paper attempts to trace out underlying strengths and weaknesses in industrial activities located in North Carolina through comparisons at the industry level over time and across states. Multiple measures, including employment, industry value, establishment size, and export competitiveness, are used. Overall, North Carolina appears to demonstrate considerable strength in manufacturing activities. North Carolina has managed to retain a leading position in textiles, apparel, tobacco, and furniture, and has managed to achieve important placement in hog processing and biotechnology manufacturing. Unfortunately, except for these last two, manufacturing is in a state of decline, resulting in fewer jobs in North Carolina and the United States. Slow wage growth in these industries is largely apparent.

Service oriented industries are both large providers of employment and major growth industries in the state over the last ten years. However, North Carolina has not achieved national prominence in the banking and finance or the information technology industry, though North Carolina is one of the fastest growing locations for banking activity in the United States. These industries largely depend on the presence of large populations, as evidenced by the leading positions of California, New York, and Texas. However, even in the manufacturing component of the IT industry, North Carolina's performance has fallen in recent years.

Though exports do not appear to be a large proportion of total industrial value in the manufactured goods studied, they are an indicator of international competitiveness and a means of measuring North Carolina's performance relative to other states. North Carolina's sizable proportion of US exports in several of the industries studied provides optimism. In declining industries, many states have faced more severe economic dislocations from trade and productivity improvements. On the other hand, North Carolina's leading role across these industries raises the question of whether these declines will intensify in the state, or whether North Carolina possesses advantages that will enable it to, at least in part, weather these declines. North Carolina's less visible strength in service-oriented industries, coupled with its strong presence in biotechnology, point to a state-specific strength in manufacturing. Coupled with lower than average wages and costs of living, North Carolina has the potential to be the beneficiary of shifts in where production takes place in the United States.

## Appendix

A variety of government data sources were collected in order to fully explore components of industry strength at the state and national levels for as long a time period as possible. Most of these sources collect similar information, though each contributes important variables, levels of analysis, or periods. Appendix Table 2 tabulates differences in variables common to all data sources used for the United States, while Appendix Table 3 compares data sources used in the North Carolina-specific portion of this paper across variables held in common for all data sets. This information points to significant discrepancies between data sources, especially in the cases of establishments and average wages.

The initial decision to use the *Quarterly Census of Employment and Wages* for employment and average annual wage information rested on two foundations: data availability for at least the last decade in NAICS industry format and across states, and comparability with the North Carolina Employment Security Commission data set, which was used in the original version of the North Carolina in the Global Economy web site. The *Economic Census* was included only to provide industry value and value added data, while the County Business Patterns data set allowed for a more detailed understanding of differences in the distribution of firm size across states. These differences may be associated with differences in industrial performance and the development and perpetuation of competitiveness. In both cases, the inclusion of information from these sources was used to compare states to one another or across time. It is believed that this strategy will minimize the impact of differences in survey methodologies. One source is used for each type of information (employment, wages, value, etc.) discussed in this paper.



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**Table 1: National Ranking of North Carolina Industries by Employment, Selected Industries, 1995 and 2005\***

		1995			2005*		
	NC Rank	% of US Employment, NC	Total US Employment	NC Rank	% of US Employment, NC	Total US Employment	
<b>Tobacco</b>	<b>1</b>	<b>44.5%</b>	<b>41,854</b>	<b>1</b>	<b>43.7%</b>	<b>30,610</b>	
Farming	1	47.5%	5,424	1	42.9%	4,106	
Manufacturing	1	44.1%	36,430	1	43.8%	26,504	
<b>Textiles and Apparel</b>	<b>1</b>	<b>16.6%</b>	<b>1,518,838</b>	<b>2</b>	<b>14.5%</b>	<b>671,967</b>	
Textiles	1	25.1%	688,649	2	17.9%	401,431	
Apparel	3	9.6%	830,189	3	9.4%	270,536	
<b>Furniture</b>	<b>1</b>	<b>12.8%</b>	<b>626,711</b>	<b>2</b>	<b>10.3%</b>	<b>567,009</b>	
<b>Biotechnology</b>	<b>7</b>	<b>7.5%</b>	<b>227,955</b>	<b>6</b>	<b>7.5%</b>	<b>272,402</b>	
<b>Hog Farming</b>	<b>6</b>	<b>4.8%</b>	<b>270,893</b>	<b>7</b>	<b>5.2%</b>	<b>293,047</b>	
Farming	1	25.6%	15,936	1	20.2%	24,062	
Manufacturing	7	3.5%	254,957	9	3.8%	268,985	
<b>Banking and Finance</b>	<b>12</b>	<b>2.3%</b>	<b>2,976,390</b>	<b>9</b>	<b>2.6%</b>	<b>3,702,094</b>	
Banking	11	2.7%	2,312,652	9	3.0%	2,835,876	
Investment	19	1.0%	663,738	12	1.6%	866,218	
<b>Information Technology</b>	<b>15</b>	<b>2.7%</b>	<b>3,858,596</b>	<b>15</b>	<b>2.6%</b>	<b>4,132,375</b>	
Manufacturing	10	3.0%	1,690,708	11	3.0%	1,312,690	
Information	15	2.5%	1,444,971	14	2.6%	1,651,466	
Services	16	2.3%	722,917	16	2.0%	1,168,219	
<i>Workforce, US</i>		<i>100.0%</i>	<i>96,813,394</i>		<i>100.0%</i>	<i>109,550,605</i>	
<i>Workforce, NC</i>	<i>12</i>	<i>3.0%</i>	<i>2,894,087</i>	<i>11</i>	<i>2.9%</i>	<i>3,176,943</i>	

\* 2005 represents the period from the third quarter 2004 through the second quarter 2005.

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>

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**Table 2: Employment in North Carolina and the United States, Selected Industries, 1995-2005\***

	1995	2000	2005*	Δ 95-00 (%)	Δ 00-05* (%)
<b>Tobacco</b>					
United States	41,854	36,997	30,610	-11.6%	-17.3%
North Carolina	18,462	15,313	13,374	-17.1%	-12.7%
% US Employment, NC	44.1%	41.4%	43.7%		
<b>% NC Employment</b>	<b>0.6%</b>	<b>0.5%</b>	<b>0.4%</b>		
<b>Textiles and Apparel</b>					
United States	1,518,838	1,099,982	671,967	-27.6%	-38.9%
North Carolina	252,696	175,220	97,466	-30.7%	-44.4%
% US Employment, NC	16.6%	15.9%	14.5%		
<b>% NC Employment</b>	<b>8.7%</b>	<b>5.4%</b>	<b>3.1%</b>		
<b>Furniture</b>					
United States	626,711	685,665	567,009	9.4%	-17.3%
North Carolina	80,103	78,705	58,198	-1.7%	-26.1%
% US Employment, NC	12.8%	11.5%	10.3%		
<b>% NC Employment</b>	<b>2.8%</b>	<b>2.4%</b>	<b>1.8%</b>		
<b>Biotechnology</b>					
United States	227,955	261,074	272,402	14.5%	4.3%
North Carolina	16,991	18,427	20,478	8.5%	11.1%
% US Employment, NC	7.5%	7.1%	7.5%		
<b>% NC Employment</b>	<b>0.6%</b>	<b>0.6%</b>	<b>0.6%</b>		
<b>Hog Farming</b>					
United States	270,893	293,029	293,047	8.2%	0.0%
North Carolina	12,991	14,740	15,104	13.5%	2.5%
% US Employment, NC	4.8%	5.0%	5.2%		
<b>% NC Employment</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.5%</b>		
<b>Banking and Finance</b>					
United States	2,976,390	3,437,313	3,702,094	15.5%	7.7%
North Carolina	68,510	81,039	98,003	18.3%	20.9%
% US Employment, NC	2.3%	2.4%	2.6%		
<b>% NC Employment</b>	<b>2.4%</b>	<b>2.5%</b>	<b>2.7%</b>		
<b>Information Technology</b>					
United States	3,858,596	5,210,354	4,132,375	35.0%	-20.7%
North Carolina	104,100	135,914	105,915	30.6%	-22.1%
% US Employment, NC	2.7%	2.6%	2.6%		
<b>% NC Employment</b>	<b>3.6%</b>	<b>4.2%</b>	<b>3.3%</b>		
<b>Total</b>					
United States	9,521,237	11,024,414	9,669,504	15.8%	-12.3%
North Carolina	553,853	519,358	408,538	-6.2%	-21.3%
<b>% NC Employment</b>	<b>19.2%</b>	<b>16.0%</b>	<b>12.9%</b>		

\* 2005 represents the period from the third quarter 2004 through the second quarter 2005.

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>

**Table 3: Employees per Establishment for North Carolina and the United States, Selected Industries, 1995 and 2005\***

	1995		Estab., US	2005*		Estab., US	Estab., US Δ95-05* (%)
	Employment per Estab., NC	Employment per Estab., US		Employment per Estab., NC	Employment per Estab., US		
<b>Tobacco</b>	<b>64.7</b>	<b>55.6</b>	<b>753</b>	<b>44.9</b>	<b>39.5</b>	<b>774</b>	<b>2.8%</b>
Farming	10.3	11.3	478	6.6	8.1	510	6.7%
Manufacturing	411.9	132.5	275	374.5	100.4	264	-4.0%
<b>Textiles and Apparel</b>	<b>113.1</b>	<b>41.4</b>	<b>36,678</b>	<b>69.7</b>	<b>28.0</b>	<b>24,011</b>	<b>-34.5%</b>
Textiles	127.7	45.0	15,287	72.5	33.0	12,149	-20.5%
Apparel	90.6	38.8	21,391	63.0	22.8	11,862	-44.5%
<b>Furniture</b>	<b>60.0</b>	<b>23.7</b>	<b>26,426</b>	<b>49.3</b>	<b>23.5</b>	<b>24,093</b>	<b>-8.8%</b>
<b>Biotechnology</b>	<b>308.9</b>	<b>127.6</b>	<b>1,787</b>	<b>296.8</b>	<b>122.9</b>	<b>2,216</b>	<b>24.0%</b>
<b>Hog Farming</b>	<b>33.0</b>	<b>49.8</b>	<b>5,438</b>	<b>33.7</b>	<b>52.5</b>	<b>5,579</b>	<b>2.6%</b>
Farming	14.4	11.9	1,341	13.3	12.0	2,007	49.7%
Manufacturing	81.0	62.2	4,097	124.9	75.3	3,572	-12.8%
<b>Banking and Finance</b>	<b>14.8</b>	<b>16.8</b>	<b>177,308</b>	<b>12.5</b>	<b>13.5</b>	<b>274,287</b>	<b>54.7%</b>
Banking	15.5	17.9	128,997	13.9	15.1	188,169	45.9%
Investment	10.4	13.7	48,311	7.9	10.1	86,118	78.3%
<b>Information Technology</b>	<b>38.4</b>	<b>28.3</b>	<b>136,550</b>	<b>20.2</b>	<b>16.9</b>	<b>245,186</b>	<b>79.6%</b>
Manufacturing	145.8	79.2	21,341	101.4	66.4	19,770	-7.4%
Information	34.3	28.7	50,393	31.1	21.3	77,507	53.8%
Services	12.7	11.2	64,816	6.9	7.9	147,909	128.2%

\* 2005 represents the period from the third quarter 2004 through the second quarter 2005.

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>

**Table 4: Large Establishments as a Proportion of All Establishments, US and NC, 1999 and 2003**

	1999			2003		
	All Estab.	20+ Employees	100+ Employees	All Estab.	20+ Employees	100+ Employees
<b><i>Tobacco Manufacturing*</i></b>						
United States	118	61.0%	36.4%	130	46.2%	26.2%
<i>North Carolina</i>	<i>19</i>	<i>94.7%</i>	<i>57.9%</i>	<i>18</i>	<i>66.7%</i>	<i>50.0%</i>
<b><i>Textiles and Apparel</i></b>						
Textiles, United States	11,739	32.4%	12.3%	11,129	27.7%	9.8%
<i>Textiles, North Carolina</i>	<i>1,006</i>	<i>63.7%</i>	<i>17.4%</i>	<i>919</i>	<i>52.9%</i>	<i>25.9%</i>
Apparel, United States	16,721	31.8%	7.7%	13,376	23.8%	4.7%
<i>Apparel, North Carolina</i>	<i>694</i>	<i>57.1%</i>	<i>22.6%</i>	<i>491</i>	<i>45.6%</i>	<i>17.3%</i>
<b><i>Furniture</i></b>						
United States	20,226	24.2%	6.3%	21,716	21.4%	5.1%
<i>North Carolina</i>	<i>1,132</i>	<i>39.2%</i>	<i>16.3%</i>	<i>1,153</i>	<i>34.8%</i>	<i>13.6%</i>
<b><i>Biotechnology</i></b>						
United States	1,607	47.3%	20.4%	1,598	51.0%	23.1%
<i>North Carolina</i>	<i>54</i>	<i>64.8%</i>	<i>48.1%</i>	<i>50</i>	<i>68.0%</i>	<i>50.0%</i>
<b><i>Hog Processing*</i></b>						
United States	3,655	31.8%	11.9%	3,464	32.7%	12.5%
<i>North Carolina</i>	<i>107</i>	<i>42.1%</i>	<i>13.1%</i>	<i>107</i>	<i>42.1%</i>	<i>14.0%</i>
<b><i>Banking and Finance</i></b>						
Banking, United States	173,807	13.4%	1.9%	202,063	12.7%	1.8%
<i>Banking, North Carolina</i>	<i>5,471</i>	<i>9.2%</i>	<i>1.6%</i>	<i>6,126</i>	<i>12.2%</i>	<i>2.2%</i>
Investment, United States	68,348	9.9%	1.6%	88,296	7.8%	1.4%
<i>Investment, North Carolina</i>	<i>1,222</i>	<i>8.6%</i>	<i>0.6%</i>	<i>1,951</i>	<i>7.0%</i>	<i>0.9%</i>
<b><i>Information Technology**</i></b>						
Manufacturing, United States	17,279	42.8%	16.0%	15,426	41.5%	14.0%
<i>Manufacturing, North Carolina</i>	<i>316</i>	<i>46.2%</i>	<i>22.8%</i>	<i>293</i>	<i>40.6%</i>	<i>16.4%</i>
Information, United States	56,185	20.5%	5.2%	80,980	20.8%	5.5%
<i>Information, North Carolina</i>	<i>1,462</i>	<i>21.8%</i>	<i>4.7%</i>	<i>1,959</i>	<i>20.4%</i>	<i>4.0%</i>
Services, United States	93,798	9.8%	2.0%	101,536	9.3%	1.7%
<i>Services, North Carolina</i>	<i>2,144</i>	<i>9.6%</i>	<i>1.9%</i>	<i>2,377</i>	<i>8.9%</i>	<i>1.2%</i>

\* Tobacco and hog farming apply to manufacturing firms only; farming is not included.

\*\* The Information component is defined as the following NAICS codes for the above years:

1999 - NAICS 1997 codes: 5112, 5133, 51419; 2003 - NAICS 2002 codes: 5112, 516, 517, 518

Source: *County Business Patterns* <<http://www.census.gov/epcd/cbp/view/cbpview.html>>

*NCESC Employment and Wages* <<http://www.ncesc.com/lmi/industry/industryMain.asp>>

**Table 5: North Carolina's Proportion of National Establishments, Selected Industries, 1999 and 2003, by Establishment Size**

Industry	1999			2003				
	All Estab., US	NC Proportion of US Establishments		All Estab., US	NC Proportion of US Establishments			
		All Estab.	20+ Emp.	100+ Emp.		All Estab.	20+ Emp.	100+ Emp.
<b><i>Tobacco Manufacturing*</i></b>	118	16.1%	25.0%	25.6%	130	13.8%	20.0%	26.5%
<b><i>Textiles and Apparel</i></b>								
Textiles	11,739	8.6%	16.9%	12.1%	11,129	8.3%	15.8%	21.9%
Apparel	16,721	4.2%	7.5%	12.2%	13,376	3.7%	7.0%	13.4%
<b><i>Furniture</i></b>	20,226	5.6%	9.1%	14.5%	21,716	5.3%	8.6%	14.1%
<b><i>Biotechnology</i></b>	1,607	3.4%	4.6%	7.9%	1,598	3.1%	4.2%	6.8%
<b><i>Hog Processing*</i></b>	3,655	2.9%	3.9%	3.2%	3,464	3.1%	4.0%	3.5%
<b><i>Banking and Investment</i></b>								
Banking	173,807	3.1%	2.2%	2.7%	202,063	3.0%	2.9%	3.6%
Investment	68,348	1.8%	1.5%	0.6%	88,296	2.2%	2.0%	1.4%
<b><i>Information Technology**</i></b>								
Manufacturing	17,279	1.8%	2.0%	2.6%	15,426	1.9%	1.9%	2.2%
Information	56,185	2.6%	2.8%	2.3%	80,980	2.4%	2.4%	1.8%
Services	93,798	2.3%	2.2%	2.2%	101,536	2.3%	2.3%	1.7%

\* Tobacco and hog farming apply to manufacturing firms only; farming is not included.

\*\* The Information component is defined as the following NAICS codes for the above years:

1999 - NAICS 1997 codes: 5112, 5133, 51419; 2003 - NAICS 2002 codes: 5112, 516, 517, 518

Source: *County Business Patterns* <<http://www.census.gov/epcd/cbp/view/cbpview.html>>

*NCESC Employment and Wages* <<http://www.ncesc.com/lmi/industry/industryMain.asp>>

**Table 6: Industry Value, North Carolina and the United States, 1997 and 2003, 2003 Dollars**

		1997				2003*			
		NC Rank	NC Value, \$ bn	NC % of US Value	US Value, \$ bn	NC Rank	NC Value, \$ bn	NC % of US Value	US Value, \$ bn
<b>Tobacco</b>		<b>1</b>	<b>19.5</b>	<b>43.7%</b>	<b>44.7</b>	<b>1</b>	<b>21.6</b>	<b>53.2%</b>	<b>40.6</b>
	Farming	1	1.3	38.5%	3.4	1	0.6	37.5%	1.6
	Manufacturing	1	18.2	44.1%	41.4	1	21.0	53.8%	39.0
<b>Textiles and Apparel</b>		<b>1</b>	<b>31.4</b>	<b>17.3%</b>	<b>180.9</b>	<b>2</b>	<b>17.2</b>	<b>15.0%</b>	<b>114.4</b>
	Textiles	1	23.1	22.4%	102.9	2	13.1	17.7%	73.8
	Apparel	3	8.3	10.6%	78.0	3	4.1	10.1%	40.6
<b>Furniture</b>		<b>1</b>	<b>8.4</b>	<b>11.4%</b>	<b>73.7</b>	<b>2</b>	<b>7.5</b>	<b>10.0%</b>	<b>75.6</b>
<b>Biotechnology**</b>		<b>3</b>	<b>12.4</b>	<b>11.6%</b>	<b>106.5</b>	<b>2</b>	<b>18.0</b>	<b>12.3%</b>	<b>146.6</b>
<b>Hog Farming and Processing</b>		<b>8</b>	<b>5.1</b>	<b>4.7%</b>	<b>108.8</b>	<b>6</b>	<b>4.8</b>	<b>4.8%</b>	<b>99.9</b>
	Hog Farming	2	2.9	18.6%	15.9	2	2.2	17.6%	12.7
	Meat Processing*	12	2.2	2.3%	93.0	11	2.5	2.9%	87.2
<b>Banking and Finance</b>		<b>14</b>	<b>25.6</b>	<b>2.0%</b>	<b>1,261.6</b>	<b>13</b>	<b>39.9</b>	<b>2.8%</b>	<b>1,426.7</b>
	Banking***	13	23.0	2.5%	927.3	10	33.3	3.1%	1,079.8
	Investment	18	2.6	0.8%	334.3	15	6.6	1.9%	346.9
<b>Information Technology</b>		<b>10</b>	<b>29.8</b>	<b>3.0%</b>	<b>1,008.2</b>	<b>17</b>	<b>22.9</b>	<b>2.0%</b>	<b>1,140.7</b>
	Manufacturing	4	19.0	3.8%	503.7	17	5.9	1.7%	353.8
	Information***	15	8.6	2.3%	379.5	15	13.0	2.1%	609.6
	Professional Services	17	2.2	1.8%	124.9	14	4.1	2.3%	177.4

\* Data for all services and agriculture are for 2002. Services are located in the *Economic Census* ; agriculture is located in the *Census of Agriculture* .

All manufacturing items are for 2003 and are located in the *Annual Survey of Manufacturers*, except for Meat Processing (2002).

\*\* Biotechnology is defined as NAICS 3254.

\*\*\* Banking (NAICS 522) and Telecommunications (NAICS 517; part of Information) did not contain industry values at the state level. This information was produced by taking each state's share of employment as its percentage of national industry value.

*Table Note* : Where industry values were not disclosed, estimates were derived from industry value remaining after removal of accounted for states.

This value was divided by the proportion of each unaccounted for state's share of employment.

Inflation values used in table: 1997-2003: 14.64%; 1997-2002: 12.09%; 2002-2003: 2.28%

Sources: *Economic Census* <<http://www.census.gov/econ/census02/>>

*Annual Survey of Manufacturers* <<http://www.census.gov/mcd/asmhome.html>>

*Census of Agriculture* <<http://www.nass.usda.gov/>>

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**Table 7: Manufacturing Value Added, North Carolina and the United States, Selected Industries, 1997 and 2003, 2003 Dollars**

		1997				2003*			
		NC Value Added, \$ bn	% NC Total Value	US Value Added, \$ bn	% US Total Value	NC Value Added, \$ bn	% NC Total Value	US Value Added, \$ bn	% US Total Value
<b>Tobacco</b>	Manufacturing	12.9	70.6%	30.6	74.0%	18.7	89.2%	33.6	86.1%
<b>Textiles and Apparel</b>		<b>12.5</b>	<b>39.8%</b>	<b>81.5</b>	<b>45.1%</b>	<b>7.4</b>	<b>43.2%</b>	<b>52.4</b>	<b>45.8%</b>
	Textiles	8.7	37.5%	42.8	41.6%	5.3	40.6%	32.1	43.5%
	Apparel	3.8	46.2%	38.7	49.7%	2.1	51.5%	20.3	50.0%
<b>Furniture</b>		4.5	53.3%	39.9	54.2%	4.0	53.0%	42.5	56.3%
<b>Biotechnology**</b>		9.0	72.6%	73.5	69.0%	14.7	81.5%	109.9	75.0%
<b>Hog Farming and Processing</b>									
	Meat Processing*	0.03	1.4%	20.7	22.3%	1.0	39.2%	22.1	25.3%
<b>Information Technology</b>									
	Manufacturing	6.6	34.9%	289.6	57.5%	3.2	54.4%	203.6	57.6%

\* Data for manufacturing are for 2003, except for meat processing. 2002 items are located in the *Economic Census* ; 2003 items are located in the *Annual Survey of Manufacturers*.

\*\* Biotechnology is defined as NAICS 3254.

*Table Note* : Inflation values used in table: 1997-2003: 14.64%; 1997-2002: 12.09%; 2002-2003: 2.28%

Sources: *Economic Census* <<http://www.census.gov/econ/census02/>>  
*Annual Survey of Manufacturers* <<http://www.census.gov/mcd/asmhome.htm>>

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**Table 8: Average Real Wages, North Carolina and the United States, Selected Industries, 1995 and 2005, 2005 dollars\***

	1995		2005*		Real Wage Change	
	Avg. Wage NC	Avg. Wage US	Avg. Wage NC	Avg. Wage US	NC Wages Δ95-05 (%)	US Wages Δ95-05 (%)
<b>Tobacco</b>	<b>53,240</b>	<b>54,921</b>	<b>66,954</b>	<b>68,151</b>	<b>25.8%</b>	<b>24.1%</b>
Farming	13,431	14,079	15,408	16,715	14.7%	18.7%
Manufacturing	59,626	61,002	74,780	76,120	25.4%	24.8%
<b>Textiles and Apparel</b>	<b>26,554</b>	<b>25,540</b>	<b>30,545</b>	<b>30,866</b>	<b>15.0%</b>	<b>20.9%</b>
Textiles	28,356	29,868	30,423	32,260	7.3%	8.0%
Apparel	22,643	21,950	30,887	28,798	36.4%	31.2%
<b>Furniture</b>	<b>26,763</b>	<b>29,722</b>	<b>29,500</b>	<b>32,831</b>	<b>10.2%</b>	<b>10.5%</b>
<b>Biotechnology**</b>	<b>60,371</b>	<b>66,912</b>	<b>72,592</b>	<b>85,055</b>	<b>20.2%</b>	<b>27.1%</b>
<b>Hog Farming and Processing</b>	<b>27,374</b>	<b>30,933</b>	<b>27,236</b>	<b>31,584</b>	<b>-0.5%</b>	<b>2.1%</b>
Hog Farming	24,741	25,517	28,267	26,961	14.3%	5.7%
Meat Processing	28,580	31,271	26,746	31,997	-6.4%	2.3%
<b>Banking and Finance</b>	<b>44,144</b>	<b>55,918</b>	<b>68,114</b>	<b>78,346</b>	<b>54.3%</b>	<b>40.1%</b>
Banking	39,206	41,535	61,965	54,934	58.0%	32.3%
Investment	90,311	106,034	104,191	154,996	15.4%	46.2%
<b>Information Technology</b>	<b>54,628</b>	<b>59,549</b>	<b>70,690</b>	<b>74,116</b>	<b>29.4%</b>	<b>24.5%</b>
Manufacturing	53,419	56,487	79,068	74,766	48.0%	32.4%
Information	51,123	59,369	65,621	70,342	28.4%	18.5%
Professional Services	66,092	67,070	66,183	78,721	0.1%	17.4%

\* 2005 represents the period from the third quarter 2004 through the second quarter 2005.

\*\* 1995 North Carolina value is represented by NAICS 3254.

Table Note: Inflation rate used to calculate real dollars was 28.15%, as provided by the BLS Inflation Calculator <<http://www.bls.gov>>

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>

**Table 9: States with the Most Significant Employment Declines by Industry, 1995 and 2005\***

State	1995		2005		Total Employment 1995-05 (%)
	Rank	% of US Employment	Rank	% of US Employment	
<i>Tobacco Farming and Manufacturing</i>					
Kentucky	3	10.0%	4	4.8%	-65.2%
Virginia	2	19.9%	2	17.5%	-35.4%
South Carolina	7	1.7%	9	1.5%	-34.6%
<b>North Carolina</b>	<b>1</b>	<b>44.5%</b>	<b>1</b>	<b>43.7%</b>	<b>-28.3%</b>
<i>United States</i>		41,854		30,610	-26.9%
States with at least 1% national employment in 1995 or 2005: <b>9</b>					
<i>Textiles and Apparel</i>					
Mississippi	13	2.2%	15	1.1%	-77.2%
Tennessee	8	4.5%	10	2.8%	-72.2%
Texas	9	4.5%	8	3.2%	-68.1%
Kentucky	12	2.2%	14	1.6%	-66.8%
Virginia	10	3.6%	9	2.9%	-64.5%
<b>North Carolina</b>	<b>1</b>	<b>16.6%</b>	<b>2</b>	<b>14.5%</b>	<b>-61.4%</b>
<i>United States</i>		1,518,838		671,967	-55.8%
States with at least 2% national employment in 1995 or 2005: <b>15</b>					
<i>Furniture</i>					
Arkansas	18	2.0%	18	1.3%	-38.8%
Tennessee	5	4.8%	9	3.5%	-35.4%
Michigan	3	6.2%	6	4.6%	-32.6%
<b>North Carolina</b>	<b>1</b>	<b>12.8%</b>	<b>2</b>	<b>10.3%</b>	<b>-27.3%</b>
Virginia	7	4.2%	10	3.5%	-25.5%
<i>United States</i>		626,711		567,009	-9.5%
States with at least 2% national employment in 1995 or 2005: <b>19</b>					

\* Only states with at least 2% national employment in either 1995 or 2005 are included.

2005 represents the period from the third quarter 2004 through the second quarter 2005.

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>

**Table 10: States with Most Significant Employment Increases by Industry, 1995 and 2005\***

State	1995		2005		Total Employment 1995-05 (%)
	Rank	% of US Employment	Rank	% of US Employment	
<i>Hog Farming and Processing</i>					
Oklahoma	19	1.4%	11	3.1%	148.6%
Minnesota	11	3.4%	9	4.2%	31.7%
California	9	3.8%	8	4.2%	20.1%
Indiana	18	2.1%	15	2.3%	19.9%
<b>North Carolina</b>	<b>7</b>	<b>4.8%</b>	<b>7</b>	<b>5.2%</b>	<b>16.3%</b>
<i>United States</i>		270,893		293,047	8.2%

States with at least 2% national employment in 1995 or 2005: **19**

*Biotechnology*

California	2	11.6%	2	13.4%	38.2%
Indiana	8	6.4%	8	7.2%	33.9%
Connecticut	10	3.2%	10	3.5%	33.0%
Texas	11	3.2%	11	3.3%	24.6%
<b>North Carolina</b>	<b>7</b>	<b>7.6%</b>	<b>6</b>	<b>7.5%</b>	<b>18.3%</b>
<i>United States</i>		227,955		272,402	19.5%

States with at least 2% national employment in 1995 or 2005: **13**

*Banking and Finance*

Arizona	16	1.6%	13	2.3%	79.5%
Texas	3	6.1%	3	7.3%	48.8%
<b>North Carolina</b>	<b>12</b>	<b>2.3%</b>	<b>11</b>	<b>2.6%</b>	<b>43.0%</b>
Minnesota	15	1.9%	15	2.2%	42.1%
Florida	5	5.1%	4	5.8%	40.1%
<i>United States</i>		2,976,390		3,702,094	24.4%

States with at least 2% national employment in 1995 or 2005: **16**

*Information Technology*

Virginia	9	3.4%	5	4.6%	44.0%
Washington	17	2.2%	12	2.8%	36.5%
Maryland	16	2.2%	16	2.5%	21.3%
Florida	6	4.4%	4	4.9%	20.0%
Colorado	12	2.7%	11	2.9%	12.6%
<b>North Carolina</b>	<b>15</b>	<b>2.7%</b>	<b>15</b>	<b>2.6%</b>	<b>1.7%</b>
<i>United States</i>		3,858,596		4,132,375	7.1%

States with at least 2% national employment in 1995 or 2005: **21**

\* Only states with at least 2% national employment in either 1995 or 2005 are included.

2005 represents the period from the third quarter 2004 through the second quarter 2005.

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>

**Table 11: Top States by Industry Value, 2003, Traditional Manufacturing and Resource Industries, 2003 Dollars**

	Rank	1997 % of US Value	Value, \$ bn	Rank	2003* % of US Value	Value, \$ bn	1997-03 (%)
<i>Tobacco Farming and Manufacturing</i>							
<b>North Carolina</b>	<b>1</b>	<b>43.7%</b>	<b>19.5</b>	<b>1</b>	<b>53.1%</b>	<b>21.6</b>	<b>10.5%</b>
Virginia	2	25.1%	11.2	2	26.1%	10.6	-5.4%
Kentucky	3	12.2%	5.4	3	2.4%	1.0	-81.8%
Florida	7	1.4%	0.6	4	1.5%	0.6	-6.6%
Pennsylvania	8	1.1%	0.5	5	0.8%	0.3	-37.0%
<i>United States</i>		<i>100.0%</i>	<i>44.7</i>		<i>100.0%</i>	<i>40.6</i>	<i>-9.1%</i>
<i>Textiles and Apparel</i>							
Georgia	2	13.5%	24.4	1	15.8%	18.0	-25.9%
<b>North Carolina</b>	<b>1</b>	<b>17.3%</b>	<b>31.4</b>	<b>2</b>	<b>15.0%</b>	<b>17.2</b>	<b>-45.2%</b>
California	3	10.4%	18.8	3	14.2%	16.2	-13.9%
South Carolina	4	8.7%	15.8	4	8.2%	9.4	-40.9%
New York	5	8.7%	15.7	5	7.0%	8.1	-48.7%
<i>United States</i>		<i>100.0%</i>	<i>180.9</i>		<i>100.0%</i>	<i>114.4</i>	<i>-36.8%</i>
<i>Furniture</i>							
California	2	10.4%	7.6	1	10.1%	7.6	-0.2%
<b>North Carolina</b>	<b>1</b>	<b>11.4%</b>	<b>8.4</b>	<b>2</b>	<b>10.0%</b>	<b>7.5</b>	<b>-9.9%</b>
Michigan	3	9.0%	6.7	3	8.5%	6.4	-3.8%
Indiana	6	4.5%	3.3	4	5.4%	4.1	24.9%
Mississippi	5	4.5%	3.3	5	4.9%	3.7	10.7%
<i>United States</i>		<i>100.0%</i>	<i>73.7</i>		<i>100.0%</i>	<i>75.6</i>	<i>2.5%</i>
<i>Hog Farming and Processing</i>							
Nebraska	2	11.0%	11.9	1	13.4%	13.1	10.0%
Iowa	1	11.4%	12.4	2	11.1%	10.9	-12.5%
Texas	3	9.4%	10.3	3	8.9%	8.8	-14.6%
Kansas	4	8.1%	8.9	4	8.5%	8.3	-5.9%
Illinois	5	6.2%	6.7	5	6.6%	6.4	-4.5%
<b>North Carolina</b>	<b>8</b>	<b>4.7%</b>	<b>5.1</b>	<b>6</b>	<b>4.8%</b>	<b>4.7</b>	<b>-7.8%</b>
<i>United States</i>		<i>100.0%</i>	<i>108.8</i>		<i>100.0%</i>	<i>97.9</i>	<i>-10.0%</i>

\* Data for agriculture are for 2002 and are located in the *Census of Agriculture*. Data for manufacturing are for 2003 and are located in the *Annual Survey of Manufacturers*, except for Meat Processing (2002).

*Table Note*: Where industry values were not disclosed, estimates were derived from industry value remaining after removal of accounted for states. This value was divided by the proportion of each unaccounted for state's share of employment.

Inflation values used in table: 1997-2003: 14.64%; 1997-2002: 12.09%; 2002-2003: 2.28%

*Sources*: *Economic Census* <<http://www.census.gov/econ/census02/>>

*Annual Survey of Manufacturers* <<http://www.census.gov/mcd/asmhome.html>>

*Census of Agriculture* <<http://www.nass.usda.gov/>>

**Table 12: Top States by Industry Value, 2003, High-Technology and Banking/Finance Industries, 2003 Dollars**

	Rank	1997 % of US Value	Value, \$ bn	Rank	2003* % of US Value	Value, \$ bn	Δ97-02 (%)
<i>Biotechnology**</i>							
Pennsylvania	2	12.1%	12.9	1	14.2%	20.8	61.3%
<b>North Carolina</b>	<b>3</b>	<b>11.6%</b>	<b>12.4</b>	<b>2</b>	<b>12.3%</b>	<b>18.0</b>	<b>45.9%</b>
New York	6	6.5%	6.9	3	11.7%	17.1	147.8%
California	4	8.9%	9.5	4	9.7%	14.2	49.7%
New Jersey	1	14.4%	15.4	5	9.0%	13.2	-14.1%
<i>United States</i>		<i>100.0%</i>	<i>106.5</i>		<i>100.0%</i>	<i>146.6</i>	<i>37.6%</i>
<i>Banking and Finance***</i>							
New York	1	25.5%	321.1	1	12.4%	176.9	-44.9%
California	2	10.3%	130.0	2	9.9%	141.3	8.8%
Illinois	3	5.7%	72.1	3	6.8%	97.0	34.4%
Texas	4	4.8%	60.1	4	5.6%	80.3	33.7%
Virginia	9	3.0%	37.4	5	5.3%	75.1	100.6%
<b>North Carolina</b>	<b>14</b>	<b>2.0%</b>	<b>25.6</b>	<b>13</b>	<b>2.8%</b>	<b>39.9</b>	<b>56.0%</b>
<i>United States</i>		<i>100.0%</i>	<i>1,261.5</i>		<i>100.0%</i>	<i>1,426.7</i>	<i>13.1%</i>
<i>Information Technology***</i>							
California	1	20.5%	206.6	1	17.2%	196.4	-4.9%
Texas	2	9.4%	94.6	2	9.4%	107.4	13.6%
New York	3	5.5%	55.8	3	5.1%	58.2	4.3%
Massachusetts	4	4.5%	45.3	4	4.7%	53.5	18.1%
Florida	6	3.9%	39.1	5	4.5%	51.5	31.6%
<b>North Carolina</b>	<b>10</b>	<b>3.0%</b>	<b>29.8</b>	<b>17</b>	<b>2.0%</b>	<b>22.9</b>	<b>-23.1%</b>
<i>United States</i>		<i>100.0%</i>	<i>1,008.1</i>		<i>100.0%</i>	<i>1,140.7</i>	<i>13.2%</i>

\* Data for all services are for 2002 and are located in the *Economic Census*. All manufacturing is for 2003 and is located in the *Annual Survey of Manufacturers*.

\*\* Biotechnology is defined as NAICS 3254.

\*\*\* Banking (NAICS 522) and Telecommunications (NAICS 517; part of Information) did not contain industry values at the state level. This information was produced by taking each state's share of employment as its percentage of national industry value.

*Table Note*: Where industry values were not disclosed, estimates were derived from industry value remaining after removal of accounted for states. This value was divided by the proportion of each unaccounted for state's share of employment.

Inflation values used in table: 1997-2003: 14.64%; 1997-2002: 12.09%; 2002-2003: 2.28%

Sources: *Economic Census* <<http://www.census.gov/econ/census02/>>

*Annual Survey of Manufacturers* <<http://www.census.gov/mcd/asmhome.html>>

**Table 13: North Carolina Exports, Selected Industries, 1999-2005, 2005 Dollars**

Industry	NAICS	1999		2002		2005		$\Delta$ 99-05 (%)
		Value, \$mn	% State Exports	Value, \$mn	% State Exports	Value, \$mn	% State Exports	
Textiles	313	1,191.3	6.2%	1,408.0	8.8%	1,719.6	8.8%	44.3%
Non-Apparel Textiles	314	271.5	1.4%	159.1	1.0%	121.5	0.6%	-55.2%
Apparel	315	1,317.5	6.9%	1,252.5	7.8%	808.2	4.2%	-38.7%
Computers and Electronics	334	3,452.5	18.0%	2,605.5	16.3%	3,141.6	16.1%	-9.0%
Furniture	337	186.0	1.0%	166.1	1.0%	211.7	1.1%	13.8%
<i>Total Exports, NC</i>		<i>19,231.6</i>	<i>100.0%</i>	<i>15,978.4</i>	<i>100.0%</i>	<i>19,463.3</i>	<i>100.0%</i>	<i>1.2%</i>

*Table Note* : Inflation values used in table: 1999-2005: 28.15%; 2002-2005: 8.56%

*Source*: TradeStats Express <<http://tse.export.gov>>

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**Table 14: Top Exporters for Selected Industries, 1999-2005, 2005 Dollars**

	% National Exports			Rank, 1999	Rank, 2005	<i>Δ</i> 199-05 (%)
	1999	2002	2005			
<b>Textiles</b>						
<b>North Carolina</b>	<b>15.4%</b>	<b>17.0%</b>	<b>19.6%</b>	<b>2</b>	<b>1</b>	<b>44.4%</b>
Texas	20.0%	18.3%	15.1%	1	2	-14.7%
California	6.7%	8.0%	8.5%	3	3	42.3%
Georgia	4.3%	6.1%	8.1%	6	4	110.0%
South Carolina	6.3%	6.0%	6.7%	5	5	20.9%
<i>United States, \$bn</i>	7.8	8.3	8.8			12.8%
<b>Non-Apparel Textiles</b>						
Georgia	20.6%	18.4%	18.3%	1	1	-20.1%
Texas	10.5%	9.1%	11.4%	2	2	-2.4%
California	6.4%	7.6%	6.9%	4	3	-3.3%
<b>North Carolina</b>	<b>9.6%</b>	<b>7.4%</b>	<b>4.8%</b>	<b>3</b>	<b>4</b>	<b>-55.2%</b>
New York	3.1%	4.5%	4.6%	9	5	33.5%
<i>United States, \$bn</i>	2.8	2.2	2.5			-10.1%
<b>Apparel</b>						
California	12.4%	18.6%	25.2%	4	1	-5.4%
<b>North Carolina</b>	<b>12.5%</b>	<b>19.2%</b>	<b>16.5%</b>	<b>2</b>	<b>2</b>	<b>-38.7%</b>
Texas	12.4%	12.3%	9.9%	3	3	-63.1%
New York	4.3%	5.8%	8.4%	6	4	-8.1%
Alabama	3.1%	5.1%	6.2%	9	5	-7.2%
<i>United States, \$bn</i>	10.5	6.5	4.9			-53.3%
<b>Computers and Electronic Equipment</b>						
California	30.6%	27.2%	24.6%	1	1	-34.1%
Texas	13.9%	18.3%	18.3%	2	2	8.1%
Florida	4.4%	5.0%	5.7%	4	3	7.2%
New York	3.7%	4.3%	4.3%	5	4	-6.0%
Massachusetts	5.0%	4.8%	4.1%	3	5	-32.2%
<b>North Carolina</b>	<b>1.7%</b>	<b>1.6%</b>	<b>1.8%</b>	<b>14</b>	<b>12</b>	<b>-9.0%</b>
<i>United States, \$bn</i>	207.0	158.3	170.0			-17.9%
<b>Furniture</b>						
Michigan	12.6%	12.4%	13.3%	1	1	-13.8%
California	9.9%	11.2%	9.3%	2	2	-22.8%
<b>North Carolina</b>	<b>5.7%</b>	<b>6.6%</b>	<b>6.7%</b>	<b>3</b>	<b>3</b>	<b>-2.8%</b>
Ohio	3.6%	5.4%	5.1%	7	4	17.1%
Florida	4.9%	4.7%	5.1%	5	6	-15.2%
<i>United States, \$bn</i>	3.3	2.5	3.2			-21.1%

*Table Note* : Inflation values used in table: 1999-2005: 28.15%; 2002-2005: 8.56%

*Source*: TradeStats Express <<http://tse.export.gov>>

### Appendix 1: NAICS Classification Codes for Industries

Industry Description	2002 NAICS Codes	1997 NAICS Codes	Classification
<b>Textiles and Apparel</b>			
Textiles	313	313	Manufacturing
Non-Apparel Textile Products	314	314	Manufacturing
Apparel	315	315	Manufacturing
<b>Furniture and Related Products</b>	337	337	Manufacturing
<b>Banking and Finance</b>			
Credit Intermediation	522	522	Services
Securities and Investment	523	523	Services
Funds and Trusts	525	525	Services
<b>Tobacco</b>			
Tobacco Farming	11191	11191	Agriculture
Stemming and Redrying	31221	31221	Manufacturing
Cigarette Manufacturing	312221	312221	Manufacturing
Other Tobacco Manufacturing	312229	312229	Manufacturing
<b>Hog Farming</b>			
Hog Farming	1122	1122	Agriculture
Animal (ex. Poultry) Slaughtering	311611	311611	Manufacturing
Meat Processed from Carcasses	311612	311612	Manufacturing
Meat Byproduct Processing	311613	311613	Manufacturing
<b>Biotechnology</b>			
Medicinal and Botanical Manufacturing	325411	325411	Manufacturing
Pharmaceutical Preparation Manufacturing	325412	325412	Manufacturing
Biological Product (ex. Diagnostic) Manuf.	325414	325414	Manufacturing
<b>Information Technology</b>			
Computer and Electronic Product Manuf.	334	334	Manufacturing
Software Publishers	5112	5112	Information
Internet Publishing and Broadcasting	516	NA	Information
Telecommunications	517	5132, 5133	Information
ISPs, Web Search Portals, and Data Processing	518	51419	Information
Computer Systems Design and Related	5415	5415	Services

Source: North American Industrial Classification System <<http://www.census.gov/epcd/www/naics.html>>

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**Appendix Table 2: Data Source Comparison, US Level Information\***

Industry	1997 - Data Sources		2002 - Data Sources		
	Total Emp. QCEW	% Difference EC	Total Emp. QCEW	% Difference CBP	EC
<b>Employment</b>					
<i><b>Tobacco</b></i>					
Tobacco Manufacturing	36,256	-7.3%	32,359	-25.7%	-24.1%
Tobacco Farming	5,649	-	4,077	-	-
<i><b>Textiles and Apparel</b></i>					
Textiles and Products	657,266	-4.6%	486,027	-7.0%	-7.7%
Apparel	707,401	0.5%	354,454	-1.1%	-3.6%
<i><b>Furniture</b></i>					
	633,805	-4.8%	601,929	-4.5%	-1.0%
<i><b>Biotechnology</b></i>					
	233,390	-29.4%	279,573	-30.0%	-19.5%
<i><b>Hog Farming</b></i>					
Hog Farming	20,929	-	24,189	-	-
Hog Processing	260,815	-7.7%	273,093	-5.6%	-3.6%
<i><b>Banking and Finance</b></i>					
Banking	2,423,727	13.3%	2,668,892	12.6%	21.0%
Finance	721,215	2.8%	874,445	19.3%	2.4%
<i><b>Information Technology</b></i>					
Manufacturing	1,795,644	-5.8%	1,498,244	-13.2%	-15.8%
Information	1,627,432	8.3%	1,891,423	19.1%	23.8%
Services	919,539	-16.8%	1,140,411	-4.5%	-2.9%

Appendix Table 2, continued

Industry	1997 - Data Sources		2002 - Data Sources		
	Total Est. QCEW	% Difference EC	Total Est. QCEW	% Difference CBP	EC
<b>Establishments</b>					
<i><b>Tobacco</b></i>					
Tobacco Manufacturing	312	-66.3%	438	-69.6%	-74.0%
Tobacco Farming	510	-	498	-	-
<i><b>Textiles and Apparel</b></i>					
Textiles and Products	15,360	-18.0%	13,629	-16.5%	-17.9%
Apparel	19,709	-13.8%	14,182	-5.8%	-8.0%
<i><b>Furniture</b></i>					
	26,135	-20.7%	25,033	-11.8%	-10.0%
<i><b>Biotechnology</b></i>					
	1,946	-21.2%	2,238	-29.7%	-30.1%
<i><b>Hog Farming</b></i>					
Hog Farming	1,613	-	1,965	-	-
Hog Processing	4,077	-28.3%	3,695	-10.0%	-7.0%
<i><b>Banking and Finance</b></i>					
Banking	138,890	20.2%	167,654	17.0%	17.2%
Finance	54,627	2.5%	78,023	9.2%	-3.0%
<i><b>Information Technology</b></i>					
Manufacturing	21,976	-20.7%	21,397	-25.8%	-26.1%
Information	58,695	-20.3%	83,776	-3.8%	-16.7%
Services	90,369	-20.0%	145,793	-29.4%	-27.5%

Appendix Table 2, continued

Industry	1997 - Data Sources		2002 - Data Sources		
	Avg. Wage QCEW	% Difference EC	Avg. Wage QCEW	% Difference CBP	EC
<b>Wages</b>					
<i><b>Tobacco</b></i>					
Tobacco Manufacturing	49,521	-4.1%	63,954	-10.2%	-13.2%
Tobacco Farming	13,508	-	15,130	-	-
<i><b>Textiles and Apparel</b></i>					
Textiles and Products	25,687	-6.0%	29,837	-5.6%	-7.7%
Apparel	18,788	-5.8%	25,108	-7.4%	-13.8%
<i><b>Furniture</b></i>					
	25,862	-4.0%	30,082	-2.9%	-3.2%
<i><b>Biotechnology</b></i>					
	60,610	-19.3%	73,871	-9.7%	-26.4%
<i><b>Hog Farming</b></i>					
Hog Farming	21,765	-	24,935	-	-
Hog Processing	25,478	-4.4%	30,195	-5.5%	-5.3%
<i><b>Banking and Finance</b></i>					
Banking	36,964	-2.7%	48,683	-6.9%	-5.7%
Finance	104,631	-6.3%	130,610	-13.8%	-8.4%
<i><b>Information Technology</b></i>					
Manufacturing	50,691	-15.4%	65,440	-15.7%	-22.1%
Information	51,845	-8.0%	63,626	-7.7%	-9.8%
Services	59,073	-6.7%	73,568	-7.9%	-11.4%

\* Data source abbreviations: QCEW - Quarterly Census of Employment and Wages; EC - Economic Census; CBP - County Business Patterns.

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>

*Economic Census* <<http://www.census.gov/econ/census02/>>

*County Business Patterns* <<http://www.census.gov/epcd/cbp/view/cbpview.htm>>

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**Appendix Table 3: Data Source Comparison, North Carolina Information\***

Industry	1997 - Data Sources		2002 - Data Sources		
	Total Emp. QCEW	% Difference EC	Total Emp. QCEW	% Difference CBP	EC
<b>Employment</b>					
<i><b>Tobacco</b></i>					
Tobacco Manufacturing	14,782	-17.0%	13,551	-33.5%	-29.4%
Tobacco Farming	2,733	-	1,648	-	-
<i><b>Textiles and Apparel</b></i>					
Textiles and Products	156,145	-12.7%	97,263	-9.9%	-10.3%
Apparel	63,937	13.8%	34,020	8.1%	4.0%
<i><b>Furniture</b></i>					
	77,314	5.3%	66,331	1.9%	5.7%
<i><b>Biotechnology</b></i>					
	14,267	-38.2%	16,857	-23.4%	-16.8%
<i><b>Hog Farming</b></i>					
Hog Farming	4,820	-	4,364	-	-
Hog Processing	6,952	48.0%	10,364	10.7%	12.7%
<i><b>Banking and Finance</b></i>					
Banking	71,395	18.0%	79,003	66.6%	40.8%
Finance	7,898	7.0%	12,561	-1.0%	3.0%
<i><b>Information Technology</b></i>					
Manufacturing	57,418	-10.8%	46,454	-17.6%	-24.0%
Information	40,525	-13.3%	66,331	-26.5%	-23.1%
Services	19,190	-25.9%	23,576	22.8%	19.9%

Appendix Table 3, continued

Industry	1997 - Data Sources		2002 - Data Sources		
	Total Est. QCEW	% Difference EC	Total Est. QCEW	% Difference CBP	EC
<b>Establishments</b>					
<i><b>Tobacco</b></i>					
Tobacco Manufacturing	38	-47.4%	37	-54.1%	-56.8%
Tobacco Farming	253	-	249	-	-
<i><b>Textiles and Apparel</b></i>					
Textiles and Products	1,353	-19.9%	1,183	-22.3%	-22.3%
Apparel	756	0.1%	520	-1.2%	-4.2%
<i><b>Furniture</b></i>					
	1,324	-11.0%	1,289	-10.1%	-7.8%
<i><b>Biotechnology</b></i>					
	41	14.6%	63	-19.0%	-17.5%
<i><b>Hog Farming</b></i>					
Hog Farming	336	-	364	-	-
Hog Processing	56	58.9%	97	1.0%	13.4%
<i><b>Banking and Finance</b></i>					
Banking	4,419	19.1%	5,846	2.3%	2.2%
Finance	911	17.5%	1,734	3.0%	175.9%
<i><b>Information Technology</b></i>					
Manufacturing	381	-13.9%	496	-39.9%	-40.9%
Information	1,329	4.4%	2,275	-14.7%	-16.4%
Services	1,885	-14.2%	3,693	-34.8%	-33.9%

Appendix Table 3, continued

Industry	1997 - Data Sources		2002 - Data Sources		
	Avg. Wage QCEW	% Difference EC	Avg. Wage QCEW	% Difference CBP	EC
<b>Wages</b>					
<i><b>Tobacco</b></i>					
Tobacco Manufacturing	50,030	-8.7%	60,634	-1.7%	-5.9%
Tobacco Farming	12,332	-	14,503	-	-
<i><b>Textiles and Apparel</b></i>					
Textiles and Products	24,854	-4.1%	28,696	-6.2%	-6.3%
Apparel	19,901	-7.1%	26,838	-17.5%	-20.8%
<i><b>Furniture</b></i>					
	22,585	-1.4%	26,222	-1.5%	-0.2%
<i><b>Biotechnology</b></i>					
	56,526	-29.4%	70,192	-29.1%	-34.4%
<i><b>Hog Farming</b></i>					
Hog Farming	21,964	-	26,030		
Hog Processing	20,066	4.4%	25,584	-0.1%	0.9%
<i><b>Banking and Finance</b></i>					
Banking	35,438	-6.5%	50,325	-11.9%	3.6%
Finance	89,145	-14.6%	105,311	-39.2%	-28.2%
<i><b>Information Technology</b></i>					
Manufacturing	51,785	-38.7%	69,545	-34.3%	-32.0%
Information	44,900	-5.9%	41,595	16.2%	22.4%
Services	51,386	1.6%	62,542	-13.0%	-14.7%

\* Data source abbreviations: QCEW - Quarterly Census of Employment and Wages; EC - Economic Census; CBP - County Business Patterns.

Source: *Quarterly Census of Employment and Wages* <<http://www.bls.gov/cew/home.htm>>  
*Economic Census* <<http://www.census.gov/econ/census02/>>  
*County Business Patterns* <<http://www.census.gov/epcd/cbp/view/cbpview.htm>>

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#### Appendix 4: Inflation Adjustments

Base Year	Converted Year	Inflation Value (Converted Year = \$1)	
1997	1993	11.1%	\$0.900
2002	1993	24.5%	\$0.803
2003	1993	27.3%	\$0.785
2002	1997	12.1%	\$0.892
2003	1997	14.6%	\$0.872
2003	2002	1.0%	\$0.990
1999	2002	8.0%	\$0.926
1999	2005	28.2%	\$0.780

Source: BLS Inflation Calculator <<http://www.bls.gov>>

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