

**Testimony for U.S.-China Economic and Security Review Commission Hearing on
“China’s Impact on the North Carolina Economy: Winners and Losers”**

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China’s Impact on North Carolina’s Major Industries

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North Carolina in the Global Economy

In many ways, North Carolina is a microcosm of the U.S. economy. The main industries in the state are remarkably diverse: traditional manufacturing, such as textiles, apparel, and furniture; a multitude of knowledge-intensive industries, including information technology (semiconductors, laptop and mainframe computers, customized and open-source software), biotechnology (pharmaceuticals, biomanufacturing, medical devices), and nanotechnology; business services, like banking and finance; and agriculture and resource-based sectors, such as tobacco and hog farming, respectively. To be successful, each of these industries has required supportive government policies, strong and visionary corporate leadership, and dynamic labor markets in order to adjust to the rapid pace of economic change in recent decades.

Globalization has profoundly affected North Carolina, as it has other parts of the United States and indeed every region of the world. The growth of international trade has meant greater competition from imports, but also increased export opportunities; direct foreign investment has been a boon to our technology-oriented industries, and it also has been a conduit for many North Carolina firms to expand their overseas operations; and immigration has attracted both low-wage and high-skilled workers and professionals, which have helped to fuel the state’s economic growth while placing additional demands on educational and social service institutions.

NCGE website

To sort out the complex effects of globalization on the North Carolina economy, Duke University has created a North Carolina in the Global Economy (NCGE) website <http://www.soc.duke.edu/NC_GlobalEconomy/> that has grown in scope and sophistication

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over the past several years. Initially launched in 2004 by Gary Gereffi, Professor of Sociology at Duke, the NCGE website provides systematic, reliable, and comparative information on the main firms, employment trends, patterns of industrial organization, and public policies in seven of North Carolina's most important industries. Currently, the seven industries featured in the website are: textiles and apparel, furniture, information technology, biotechnology, banks and finance, tobacco, and hog farming.

During the summer of 2007, a major upgrade of the NCGE website was undertaken by the Center on Globalization, Governance & Competitiveness (CGGC) at Duke University <<http://www.cggc.duke.edu/>>, with assistance from Duke's Center for Instructional Technology. Under the rubric "Visualizing Economic Development," this project is using new visualization tools to enhance the display of the data contained on the website. In addition, the NCGE website is supplementing the employment statistics it uses from state sources, such as the Employment Security Commission of North Carolina, with establishment-level data available via Reference USA, which has detailed information on 10.5 million businesses across the United States in terms of company name, ownership, products made, size, location, and other relevant variables.

Global value chains and local clusters

The most distinguishing methodological feature of the NCGE website is its focus on global value chain analysis. This approach can be counter posed to cluster analysis, a favorite tool of many economic development specialists, whereby concentrations of firms providing similar goods or services are identified in terms of geographic proximity. The main idea is that economic development prospers when "clusters" of related and supporting industries can be established. The global value chain approach has a different premise: most industries today are globally organized and geographically fragmented, and the keys to economic development often depend on capturing or retaining the high-value activities in these industries, such as advanced manufacturing, research and development, design, branding, or logistics (for more information about this approach, see <http://www.globalvaluechains.org/>). In the NCGE website, a core contribution is to show how North Carolina is positioned in terms of its areas of relative strength in each industrial value chain, nationally and globally, and how these have changed over time.

One of the most significant improvements to the NCGE website in the "Visualizing Economic Development" project has been to define the value chains for each of North Carolina's major industries in a more rigorous and empirically grounded fashion. The CGGC research team linked NAICS (North American Industrial Classification System) codes to each segment of the value chains for all North Carolina industries in the NCGE website. This permits us to identify with relative precision the main economic characteristics of North Carolina's industries, including where firms and jobs are located in the value chain.

This same procedure can be used to compare North Carolina's industries with its main competitors elsewhere in the United States and around the world. In 2008, we will add to the NCGE website an analysis of how North Carolina's value chain "footprint" in each of these seven industries compares with other U.S. states, and also how these key U.S. states match up with their leading international competitors in global value chain terms.

Assessing China's Impact on the North Carolina Economy

The relationship between the United States and China has become vital to both sides in recent years, given China's rapid ascent as a global economic powerhouse as well as its growing geopolitical prominence within Asia. North Carolina's most salient issues in its relationship with China overlap with broader U.S.-China relations. Concern in the highest U.S. political circles has focused on the mushrooming trade deficit with China, the undervalued Chinese currency, the need for more stringent protection of intellectual property rights in China, and most recently, a series of quality complaints about Chinese imports ranging from lead paint in children's toys to tainted food products.

Within North Carolina, the precipitous decline of jobs in traditional manufacturing industries like textiles, apparel, and furniture has had the greatest economic impact in recent years, and much of this job loss can be attributed to intense international competition from low-cost offshore production in countries like China and Mexico. However, North Carolina has also engaged China on a number of other levels associated with the state's shift toward high-technology and knowledge-oriented industries, based on two-way foreign direct investment, collaboration in research and development (R&D), the upgrading of infrastructure to facilitate trade and investment, and new educational programs to upgrade skill sets in North Carolina (see Table 1).

[Table 1 about here]

We can assess the impact of China on North Carolina's economy through diverse kinds of global interconnectedness involving flows of goods, capital, people, and ideas. In more conventional terms, these can be considered four dimensions of globalization: international trade, foreign direct investment, immigration, and education. In each area, North Carolina is moving beyond its previous areas of comparative advantage and is establishing new bases of international competitiveness.

International Trade. This factor has generated the greatest controversy in terms of U.S.-China relations. In 2006, the United States had a record bilateral trade deficit with China of \$232.6 billion, which was comprised of \$287.8 billion in imports and \$55.2 billion in exports (U.S. Bureau of the Census, Foreign Trade Statistics). However, these figures are deceptive because China's exports of consumer products rely heavily on imported inputs from U.S. and other foreign companies. Up to two-thirds of China's manufactured exports come from foreign-invested firms (Gereffi, 2007), and four Asian economies (Japan, South Korea, Taiwan, and Hong Kong) account for 70% of the total direct foreign investment in China (Hamilton, 2005).

China is the world's factory and the U.S. is its supermarket, but China's role in many of these export-oriented industries has mainly been to assemble products of components made elsewhere. In the case of Apple's enormously popular iPod, researchers at the University of California, Irvine calculated how the \$299 retail value of the 30-gigabyte video iPod is distributed between Apple and all the companies that make the 450 parts that go into the iPod, which is assembled in China. The conclusion was startling: Apple was the biggest winner (\$80 of the retail value, for the conception and design of the product), and Toshiba's hard drive was the most expensive component (\$63); American companies and workers captured a total of \$163 (about 55% of the

retail value), while the cost of the final assembly done in China was about \$4 per unit. Thus, “even though Chinese workers contribute only about 1% of the value of the iPod, the export of a finished iPod to the United States directly contributes about \$150 to our bilateral trade deficit with the Chinese” (Varian, 2007).

Although the statistical magnitude of the U.S. trade deficit with China may be open to debate, the manufacturing export boom in China over the last two decades is a reality, and it has to a large degree been scripted by U.S. companies like Apple, Nike and Mattel. Big U.S. retailers have been especially influential in bringing Chinese goods to the U.S. market (Hamilton, 2005). Wal-Mart, the biggest of them all, makes more than 70% of the goods it sells in Wal-Mart stores worldwide in China (Gereffi and Ong, 2007: 48).

North Carolina has absorbed its share of imports from China, but the biggest negative effect of trade has probably been indirect: U.S. imports of textile products and furniture made in China have displaced North Carolina’s domestic sales of these items, at one time the cornerstone of the state’s economy. Sharp declines in manufacturing employment have been the result.

Currently, North Carolina is moving traditional manufacturing sectors like textiles in a more high-tech direction (Gereffi, 2006b), and China is now one of the state’s growing export markets. Glen Raven Custom Fabrics, for example, which made pantyhose, luggage fabric, and yarn for apparel in the early 1990s, has refocused on expensive, customized industrial fabrics for outdoor furniture, boats, and awnings, and now sells growing volumes of its products to China (Goodman, 2007). In 2006, North Carolina exported \$52 million of textiles and fabrics to China, up from less than \$8 million five years earlier. Nonetheless, most of North Carolina’s textile exports go to Mexico and Central America as inputs for apparel plants located there, which will send finished clothes back to the U.S. market.¹

Foreign Direct Investment. A number of important multinational corporations have significant foreign direct investment (FDI) in both North Carolina and China. Table 2 provides a partial listing. These firms are pioneering the development of high technology sectors, like computers (Dell, IBM, Lenovo), open-source software (Red Hat), the Internet (Google), and advanced manufacturing (GE). While this may seem like an obvious strategy for North Carolina, which is transitioning out of labor-intensive manufacturing, it is noteworthy that China is also placing a high priority on R&D centers (of which it now has over 1,000) as part of its own industrial upgrading shift to more high-value activities (Gereffi, 2006a).

[Table 2 about here]

Immigration. North Carolina has experienced a dramatic upsurge in immigration since the early 1990s, and this has affected the state’s economy in profound ways. There are two very distinct flows of immigrants. One is the south-to-north wave of low-wage, primarily Hispanic immigrants coming from Mexico and Central America, who have played a major role in North Carolina’s agro-based industries (tobacco, hog farming), labor-intensive manufactures (textile

¹ North Carolina’s textile exports to Honduras, its leading export market, were \$500 million in 2006, more than 10 times the amount sent to China. See NCGE website < http://www.soc.duke.edu/NC_GlobalEconomy/>, Textiles and Apparel, Table 4a.

and apparel, furniture), and a wide range of services. The second immigrant stream are the high-skilled professionals from India, China, and other Asian and European settings who have entered the state's high-technology industries, such as information technology, biotechnology, and banking. Both immigrant flows have been important, but obviously they contribute to the state's economy in different ways.

A recent series of studies at Duke University has highlighted the importance of immigrant entrepreneurs in the U.S. economy. The results show that in 25.3% of technology and engineering companies started in the United States from 1995 to 2005, at least one key founder was foreign-born. Nationwide, these immigrant-founded companies produced \$52 billion in sales and employed 450,000 workers in 2005. Of all immigrant-founded companies, 26% have founders from India. Chinese (Mainland- and Taiwan-born) entrepreneurs are heavily concentrated in California. Over half (52.4%) of Silicon Valley startups had one or more immigrants as a key founder (compared with the California average of 38.8%); in Research Triangle Park, NC a much smaller percentage of firms, 18.7% of startups, had an immigrant as a key founder (compared with the North Carolina average of 13.9%). Indians constitute the largest immigrant founding group in North Carolina (25% of startups), followed by Germany and the United Kingdom (15% each) (Wadhwa et al., "America's new immigrant entrepreneurs, part I," 2007).

Thus immigration plays an important role in high-technology development and entrepreneurship in much of the United States, with Indians and Chinese at the forefront, but North Carolina is below the national average in this regard.

Education. Research Triangle Park was created in 1959 and the North Carolina Biotechnology Center in 1985 as collaborative ventures involving state and local government, nearby universities, and local businesses. North Carolina's top-flight universities and community college system have been keys to its economic success, especially in creating the diverse array of industries around which the state economy has been built. China's influence is apparent in the large number of Chinese students and faculty in the state's main universities, and also in the growing number of Chinese researchers in North Carolina's high-technology firms.

One component of education involves the quantity and quality of engineers being trained in the United States versus China and India. A recent study on this topic concludes that while the number of four-year bachelor's degree engineers coming out of India and China is not as large as some earlier reports have indicated, China in particular is racing ahead of the United States and India in its production of engineering and technology Ph.D.'s, which will clearly enhance its ability to carry out basic as well as more advanced research² (Wadhwa et al., "Where the engineers are," 2007). Some U.S. universities are trying to produce more "dynamic" engineers, who have good technical training but also a strong background in communication, teamwork, leadership and business skills critical for innovation and entrepreneurship.

² In 2006, 16.8% of international patent applications from the United States had an inventor or co-inventor with a Chinese-heritage name (an increase from 11.2% in 1998). The contribution of inventors with Indian-heritage names increased to 13.7% from 9.5% in the same period (Wadhwa et al., "Intellectual property, the immigration backlog, and a reverse brain drain: America's new immigrant entrepreneurs, part III," 2007, p. 3).

The Key Challenge for U.S. Manufacturing: Not Output, But Employment

North Carolina embodies many of the forces that are remaking American manufacturing employment. Surprisingly to many, the United States remains by far the largest manufacturing economy in the world. With one-quarter of global manufacturing capacity, the United States is well ahead of second-place Japan, which is losing ground, and it is still far larger than rapidly growing China, which represents one-tenth of world manufacturing output. The problem is not that American manufacturing output is declining, but that American manufacturing employment has been shrinking from its peak of 19 million workers in 1979 to just 14 million today, the lowest level since 1950 (Goodman, 2007).

North Carolina mirrors this trend. Between 2001 and 2006, employment in North Carolina's two top manufacturing sectors, textiles and furniture-making, fell by 90,000 jobs. Textile employment in North Carolina fell from 110,000 to 60,000, apparel from 40,000 to 21,000, and furniture from 72,000 to 52,000. However, the state has also shown significant job growth in a number of lucrative high-technology sectors, such as biotechnology, pharmaceuticals, banking and finance, software and computer system design, and data processing.³ In biosciences, for example, the number of firms established in the state has risen from 131 to 386, and the number of workers has grown from 20,000 to 47,000.⁴

What is the role of China in this transformation? The impact of China on selected North Carolina industries is highlighted in Table 3, which summarizes some of the main headlines garnered by these industries in the past couple of years. In all cases, there is a mix of positive and negative factors. In the manufacturing sector, we see a shift to relatively high-technology production in North Carolina, with Chinese firms like Lenovo also making important contributions. North Carolina-based companies like Cree and GE are making investments in China that complement their current investments in the state.

[Table 3 about here]

Nanotechnology is an emerging high-technology industry in both North Carolina and China. North Carolina firms are among the leaders in the commercialization of nanotechnology products, while China hopes to use nanotechnology as a case of "technological leapfrogging" that will stimulate world-class innovation, at least in certain specialized areas like nanomaterials (such as carbon nanotubes).

Education focuses on the new skills needed for North Carolina to compete effectively in the global economy with emerging powers such as China. Initiatives are occurring at all educational levels, including elementary and secondary schools, community colleges, and universities. All of the major North Carolina universities have extensive academic collaborations with their Chinese counterparts, and exchange programs are growing.

³ See employment tables for each industry in the NCGE website, http://www.soc.duke.edu/NC_GlobalEconomy/.

⁴ Data from the North Carolina Biotechnology Center, cited in Goodman (2007).

Successful Cases of Innovation and Adaptation in North Carolina

To give a flavor of a few of these North Carolina initiatives, some capsule case studies are provided below.

IBM-Lenovo in Research Triangle Park

In 2005, IBM sold its PC-division to China-based Lenovo Group for a deal valued at \$1.75 billion. Following the deal, the Lenovo Group relocated their international headquarters from Purchase, NY to Research Triangle Park, NC, home of IBM's ThinkPad offices, to help with business integration. More important, however, is the fact that Lenovo has decided to remain in North Carolina. Enticed by state and local incentives totaling \$11 million, Lenovo is currently building an \$84 million campus in Morrisville which will add 400 jobs with an average annual salary of \$70,000 over five years (Jones, 2005). The government incentives are not the only reason. Amelio, Lenovo's CEO, considers Raleigh "a key part for the Innovation Triangle partly because of the well educated workforce" and also the universities in the area (Smith, 2007). IBM hopes to use their relationship with Lenovo to tap into the Chinese market while North Carolina seeks a better "understanding of the benefits and risks that come with Chinese investment" so they may attract more investment (Cox, 2006).

Google in Lenoir, NC

Although relatively small, Lenoir, NC is the site of a \$600 million investment by Internet giant, Google. The arrival of the high tech company is a relief to the town which has been hit hard with traditional manufacturing moving to China. Just in the past three years, seven furniture factories in town have closed, resulting in the loss of more than 2,100 jobs. When tentatively approached by Google, the government reacted by pulling together a package of state and local tax incentives and infrastructure valued at \$212 million over 30 years (Gray, 2007). Government actions reflect the realization that the future is not in manufacturing, but in technology. Google's server farm "put [Lenoir] on the map" and will bring much needed jobs to the town (*Business Week*, 2007). More than that, it is raising people's morale and giving "people a reason to stay, build a prosperous life and make a contribution" (Hicks, 2007).

North Carolina China Center

Although the North Carolina China Center (NCCC) opened recently in February of 2006, it is already making headway in North Carolina-China relations. The NCCC facilitates visits of business leaders from China, both to look at opportunities in North Carolina, particularly in the Research Triangle Park area, and also to discuss opportunities in China. Last October, they secured two major agreements. China Everbright International agreed to develop a research center for environmental science and technology jointly with the NCCC (Pasek, 2006). In addition, the Suzhou Industrial Park is opening its North American headquarters in the Triangle in association with the NCCC. Many hope that "the opening of the business park headquarters could lead to more Chinese investment in North Carolina and opportunities for N.C.-based businesses to expand their efforts in China" (*Triangle Business Journal*, 2006).

Educational Initiatives

North Carolina is responding proactively to the growing importance of relations with China. Companies that are forced to close, like the GE plant in Henderson County, are offering their employees tuition reimbursement and other tools to help get better jobs (Kelley, 2007). While this type of knowledge upgrading is common among businesses, the unexpected action is coming from educational institutions that are working not only to improve North Carolina-China relations, but also to actively expand them. North Carolina State University, with over 50 students currently studying in China, is setting up an exchange program with three major Chinese universities (*News & Observer*, 2006). The goal is to indirectly promote interest in the Research Triangle.

The Glenwood Elementary School of Chapel Hill is getting their students ready to make the most of China's increasingly significant role in the global economy with a "dual immersion" program that teaches students lessons in both Chinese and English since kindergarten. Hopefully, by expanding knowledge and skills, and strengthening relations with China, America can stay competitive with the next generation who can "use [their] Chinese language skills someday to run a Lego factory in China" (Fiske, 2006).

Conclusion

North Carolina has an ambitious economic agenda, and it faces a daunting set of challenges as its three major traditional industries – textiles and apparel, furniture making, and tobacco – simultaneously deal with dramatic employment downturns and intense international competition. Fortunately, there are other industries in the state based on novel technologies and innovative firms that are expanding rapidly. In some cases, as with nonwoven textiles, a more advanced segment has the potential to eclipse its predecessor by redefining the technological frontiers in the industry.

China is a formidable economic competitor, but it also can be a strong partner if North Carolina companies and policymakers take advantage of their unique assets. The state has top-notch research universities and a strong and dynamic set of community colleges, coupled with an expanding labor market with high-level skills and diverse experiences. However, responding to the China challenge will require North Carolina's companies and industries to continually upgrade their strategies with a global perspective. Manufacturing firms need to develop new areas of competitive strength, including design, logistics, and branding, and R&D-based companies and advanced business service firms are competing with global talent pools. North Carolina can become a model for promoting a vision of the future based on global learning and adaptation, while integrating the human, technological and institutional resources needed to compete effectively at home and abroad.

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Table 1

**North Carolina as a Subset of
Broader U.S.-China Relations**

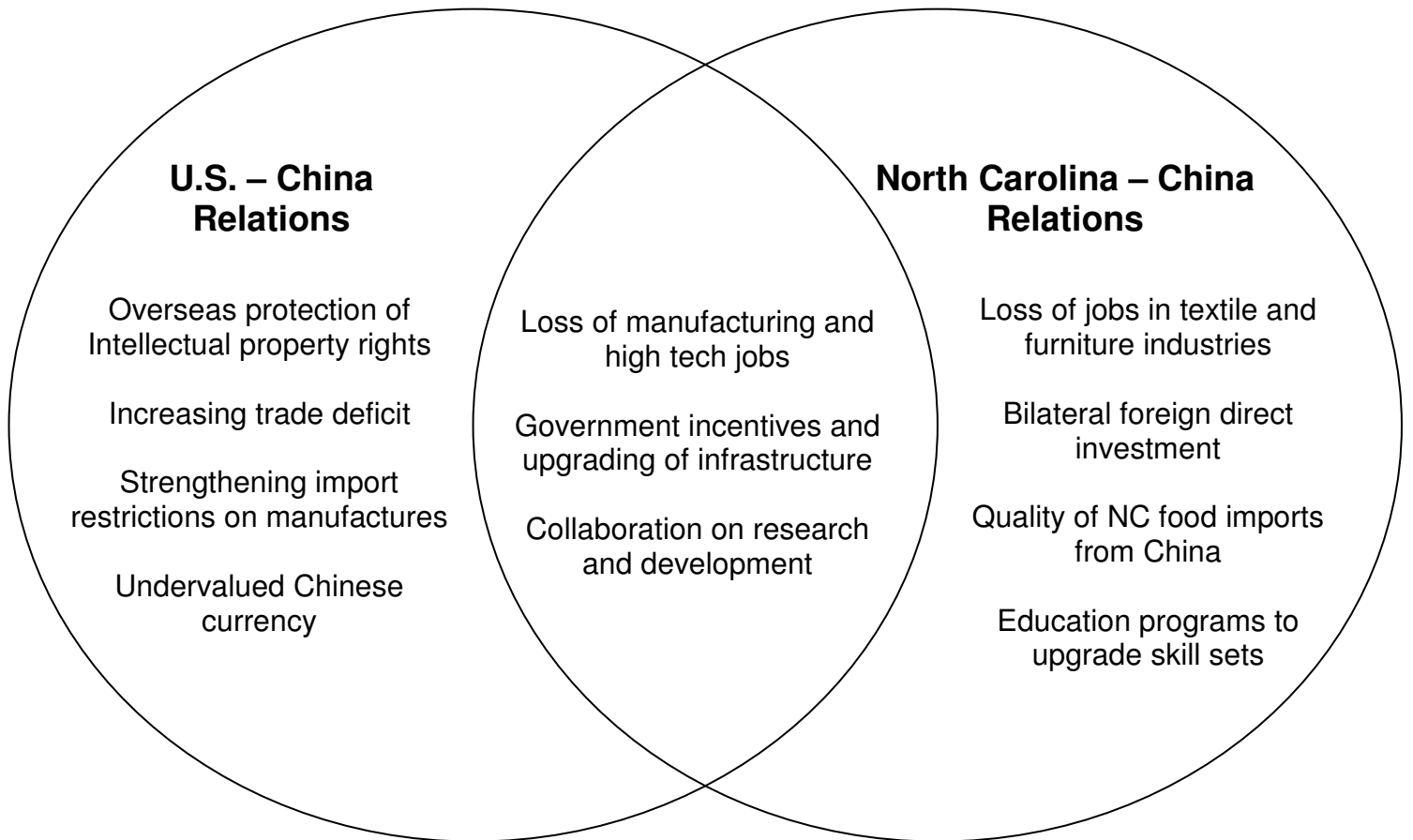


Table 2

Recent Bilateral Foreign Direct Investment by North Carolina and Chinese Firms

Company	North Carolina	China
Lenovo	<p>Headquarters: Morrisville, NC \$70 million / 500,000 sq ft (opening 2009)</p> <p>Fulfillment Center: Guilford County \$10 million / 200,000 sq ft (opening January 2008)</p>	<p>Research and development (R&D) centers: Beijing, Huiyang, Shanghai, and Shenzhen</p> <p>Plans to branch out to consumer segment</p>
Google	<p>Data Center: Lenoir, NC \$600 million / 200 people (announced March 2007)</p>	<p>Research Lab: Beijing 150 engineers (opened April 2006)</p> <p>R&D Center: Shanghai (opened June 2007)</p>
Dell	<p>Manufacturing Facility: Winston-Salem \$100 million / 750,000 sq ft (opened October 2005)</p> <p>NC Center for 21st Century Skills \$50,000 gift (announced April 2005)</p>	<p>China Design Center: Shanghai (opened July 2000) 200 people expansion (announced March 2006)</p> <p>Manufacturing Center: Xiamen 594,000 sq ft (opened May 2006)</p> <p>Command Center: Xiamen 50 people (announced January 2005)</p> <p>Call Center: Xiamen</p>
IBM	<p>R&D and manufacturing facility: Research Triangle Park, NC</p> <p>Customer Financing</p> <p>\$180 million China Investment Fund with Lehman Brothers</p>	<p>Manufacturing Facility: Shanghai \$300 million (announced October 2000)</p> <p>IBM Research Lab: Beijing Doubling in size to include the SMB Innovation Center (October 2004)</p> <p>Operations Center: Chengdu (announced November 2006)</p>
GE	<p>GE Nuclear Energy: Wilmington, NC \$4 million expansion / 200 jobs (expanding through 2005)</p> <p>Manufacturing Plant: Durham, NC</p> <p>Smiths Aerospace (Subsidiary): Asheville, NC \$16 million / 90,000 sq ft (announced March 2007)</p> <p>GE Foundation \$500,000 grant for Wake County Public Schools and NC State University to fund Recognizing Accelerated Math Potential in Under-Represented People, (January 2004)</p>	<p>GE China Learning Center: Shanghai 47,000 sq ft (announced October 2004)</p> <p>Smiths Engine Facility: Suzhou Expanding to double size (Opened June 2005)</p> <p>Quartz Manufacturing Facility: Wuxi \$23 million (July 2005)</p> <p>GE Healthcare: Shanghai \$37.5 million expansion (announced September 2005)</p> <p>GE Toshiba Silicones: Shanghai \$25 million (opened September 2001)</p> <p>GE Energy: Shenyang \$50 million including two pre-existing facilities in Shenyang (opened June 2006)</p>
Red Hat	<p>Headquarters: Research Triangle Park, NC</p>	<p>Red Hat Office: Beijing</p> <p>Goal is to better serve the growing market for Linux and Open Source Software in China. Works with partners such as IBM, HP, Intel, and Oracle. (opened November 2004)</p>

Table 3

Impact of China on Selected North Carolina Industries

Industry	Positive	Negative	Headlines
<p>Traditional and Advanced Manufacturing</p>	<ul style="list-style-type: none"> • Shift to higher-value manufacturing and information technology • Growing Chinese economy also investing in U.S. technology • Some manufacturers are taking advantage of fast-growing Chinese economy and expanding middle class 	<ul style="list-style-type: none"> • Loss of traditional manufacturing jobs, particularly in textiles and furniture • Cheap, low-quality imports entering US • Recent manufacturing scares included: dog food, toothpaste, children's toys 	<p><i>VF Corporation, a Greensboro-based apparel manufacturer, expanded into China while taking losses until finally turning a profit (9/17/2006)¹</i></p> <p><i>Wal-Mart branching out in China with the strategy of regional catering, but also selling domestic products like North Carolina-based Hanesbrands, Inc. (8/10/2007)²</i></p> <p><i>Most articles on textiles were focused on job losses to Mexico, not China</i></p> <p><i>Tainted toothpaste found (8/14/2007)³</i></p> <p><i>GE is producing an engine to power certain Chinese aircrafts. Initially, all engines will be produced at plant in Durham, NC (8/24/2007)</i></p> <p><i>Job cuts at the Henderson County GE plant will be reassigned to another supplier in China, Japan, or the U.S but GE is offering tuition reimbursement for displaced workers (8/18/2007)⁴</i></p> <p><i>Durham-based company, Cree will triple manufacturing capacity in China which represents a quarter of the world's demand for high-brightness LEDs (8/24/2007)⁵</i></p>
<p>Food</p>	<ul style="list-style-type: none"> • Spurring better quality control and initiatives for more domestic products 	<ul style="list-style-type: none"> • Cheap, low-quality imports entering US 	<p><i>More stringent food imports inspection aimed at helping NC fishermen and consumers who eat Chinese seafood in U.S. supermarkets (7/27/2007)⁶</i></p> <p><i>Investment in offshore aquaculture would create new jobs, help the domestic fish supply, and thereby reduce trade deficit from seafood trade (8/25/2007)⁷</i></p>
<p>Information Technology</p>	<ul style="list-style-type: none"> • China's presence in NC's high-tech industries is increasing the flows of outbound Chinese investment 	<ul style="list-style-type: none"> • Concerns (in the U.S. and elsewhere) about Chinese investment in high-tech as a long-term threat 	<p><i>Suzhou Industrial Park is opening their American headquarters in Raleigh in association with North Carolina China Center (10/25/2006)⁸</i></p> <p><i>SPX to provide expertise and highly engineered products for nuclear power plants in China (7/30/2007)⁹</i></p>

	<ul style="list-style-type: none"> • North Carolina government tax incentives used to lure more high-tech firms • Lenovo – an important study for the Commission as they seek to understand how China impacts local/state economies 		<p><i>North Carolina plans to use their connection to Lenovo strategically to attract more foreign investment (9/16/2006)¹⁰</i></p> <p><i>The new Lenovo fulfillment center in Guilford County will create 45 full time jobs and 85 contractor jobs (7/27/2007)¹¹</i></p> <p><i>China Everbright International with North Carolina China Center are setting up a research center for environmental science and technology (10/30/2006)¹²</i></p>
Nanotechnology	<ul style="list-style-type: none"> • North Carolina launches a nanotechnology initiative in 2006, including a website listing 50 local firms (www.ncnanotechnology.com) 	<ul style="list-style-type: none"> • China makes nanotechnology one of the four mega projects in its 15-year Science & Technology Plan (2006-2020), raising concerns about nano-risks and future competitive threat 	<p><i>Duke University (Center on Globalization, Governance & Competitiveness) holds a 2-day conference on “Nanotechnology and the Emerging Global Knowledge Economy,” with a focus on NC firms and China (3/29-30/2007)¹³</i></p>
Education	<ul style="list-style-type: none"> • Acceptance of globalization and preparative education at diverse levels • More programs sponsoring language training and exchange programs 	<ul style="list-style-type: none"> • Increasing numbers of foreign students at institutions of higher education study here and return home (“reverse brain drain”) 	<p><i>Glenwood Elementary in Chapel Hill is offering “dual immersion” program which uses Chinese and English in classes (10/16/2006)¹⁴</i></p> <p><i>Lenoir started an Early College program at high schools to equip students with degrees without the cost of higher education (8/5/2007)¹⁵</i></p> <p><i>North Carolina State University is planning a student exchange program with three major Chinese universities (10/12/2006)¹⁶</i></p>
Immigration	<ul style="list-style-type: none"> • Chinese scientists and entrepreneurs make major contributions to the NC economy and contribute to our system of higher education, allowing it to remain one of the best in the country. 	<ul style="list-style-type: none"> • Visa restrictions in the United States for high-skilled immigrants make it difficult for the USA to capitalize and retain its best immigrant entrepreneurs. 	<p><i>“America’s New Immigrant Entrepreneurs,” 3-part Duke University study focusing on the impact of current educational programs and immigration policies on U.S. innovation and entrepreneurship (2007)¹⁷</i></p>

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